MEDIA RELEASE: Friday, June 14, 2013, 4:30 p.m.

REGIONAL MUNICIPALITY OF WATERLOO
PLANNING AND WORKS COMMITTEE
AGENDA

Tuesday, June 18, 2013
9:00 A.M.
Regional Council Chambers
150 Frederick Street, Kitchener

1. DECLARATIONS OF PECUNIARY INTEREST UNDER THE MUNICIPAL CONFLICT OF INTEREST ACT

2. DELEGATIONS

   i) Ross White

b) E-13-082, King Street and Weber Street Improvements, City of Waterloo
   i) Angelo Innocente, MTE Consultants Inc. speaking on behalf of Waterloo Inn and Parkway Ford

b) P-13-067, Update on Bike Sharing Projects in the Region of Waterloo (10:00 a.m.)
   i) Jane Snyder, The Working Centre

CONSENT AGENDA ITEMS

Items on the Consent Agenda can be approved in one motion of Committee to save time. Prior to the motion being voted on, any member of Committee may request that one or more of the items be removed from the Consent Agenda and voted on separately.

3. REQUEST TO REMOVE ITEMS FROM CONSENT AGENDA

4. MOTION TO APPROVE ITEMS OR RECEIVE FOR INFORMATION

a) E-13-079, GRT Customer Service Trends & Issues (Information) 24

b) E-13-060, Proposed Installation of an All-Way Stop at the Intersection of Bleams Road (Regional Road 4) and Queen Street (Regional Road 12), Township of Wilmot (Approval) 30

REGULAR AGENDA ITEMS

5. REPORTS – TRANSPORTATION AND ENVIRONMENTAL SERVICES

DESIGN AND CONSTRUCTION

a) E-13-032, Franklin Boulevard Improvements – Roundabout Design at Franklin Boulevard and Saginaw Parkway, City of Cambridge (Staff Presentation)

RAPID TRANSIT

b) E-13-061, Public Consultation Centres for ION Stop Design Concepts (Staff Presentation)

c) E-13-073, Northfield Drive at Highway 85 Interchange Modifications


TRANSPORTATION

e) E-13-064, Homer Watson Boulevard (Regional Road 28) and Block Line Road Roundabout Operational Review
f) **E-13-080**, Revised 2013 Transportation Base, System Expansion, and Airport Capital Budget

**INTER-DEPARTMENTAL REPORTS**

g) **P-13-068/E-13-087**, Response to the Coroner’s Reports on Cycling and Pedestrian Deaths

**REPORTS - PLANNING, HOUSING AND COMMUNITY SERVICES**

**COMMUNITY PLANNING**

h) **Memo: East Side Lands** Master Environmental Servicing Plan Report *(Presentation)*

i) **P-13-063**, King & Victoria Multimodal Transit Hub – Municipal Class Environmental Assessment Study Completion

**TRANSPORTATION PLANNING**

j) **P-13-070**, Regional Transit Supportive Strategy for the City of Cambridge – Proposed 2013 Implementation Plan

6. **INFORMATION AND CORRESPONDENCE**

a) Council Enquiries and Requests for Information Tracking List

7. **OTHER BUSINESS**

8. **NEXT MEETING** – August 13, 2013

9. **MOTION TO GO INTO CLOSED SESSION**

THAT a closed meeting of the Planning and Works, Administration and Finance and Community Services Committees be held on Tuesday, June 18, 2013 immediately following the Planning and Works Committee meeting in the Waterloo County Room, in accordance with Section 239 of the *Municipal Act*, 2001, for the purposes of considering the following subject matters:

a) receiving of legal advice that is subject to solicitor-client privilege related to an agreement
b) receiving of legal advice that is subject to solicitor-client privilege and proposed or pending acquisition of land in the City of Kitchener
c) proposed or pending litigation and receiving of legal advice that is subject to solicitor-client privilege related to an agreement
d) proposed or pending litigation and receiving of legal advice that is subject to solicitor-client privilege related to a matter before an administrative tribunal
e) receiving of legal advice that is subject to solicitor-client privilege and proposed or pending acquisition of land in the City of Cambridge
f) receiving of legal advice that is subject to solicitor-client privilege and proposed or pending disposition of land in the Cities of Cambridge, Kitchener and Waterloo
g) labour relations  
h) labour relations  
i) labour relations

10. **ADJOURN**

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### NEXT MEETINGS

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<tr>
<th>Date</th>
<th>Time</th>
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<tr>
<td><strong>Planning and Works Committee</strong></td>
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<tr>
<td>August 13, 2013</td>
<td>1:00 P.M. (Approx.)</td>
<td>Planning and Works Committee</td>
<td>Council Chamber 2nd Floor, Regional Administration Building 150 Frederick Street Kitchener, Ontario</td>
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<tr>
<td>September 10, 2013</td>
<td>1:00 P.M. (Approx.)</td>
<td>Planning and Works Committee</td>
<td>Council Chamber 2nd Floor, Regional Administration Building 150 Frederick Street Kitchener, Ontario</td>
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<td><strong>Planning, Housing and Community Services</strong></td>
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<td><strong>Transportation and Environmental Services</strong></td>
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<tr>
<td>Wed., June 19, 2013</td>
<td>4:00 P.M. – 8:00 P.M.</td>
<td>Rapid Transit Stop Design Concepts – Public Information Centre</td>
<td>Main Lobby, Regional Administration Building 150 Frederick Street, Kitchener, Ontario</td>
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<tr>
<td>Thur., June 20, 2013</td>
<td>4:00 P.M. – 8:00 P.M.</td>
<td>Rapid Transit Stop Design Concepts – Public Information Centre</td>
<td>Cambridge Chamber of Commerce 750 Hespeler Road, Cambridge, Ontario</td>
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<tr>
<td>Tue., June 25, 2013</td>
<td>4:00 P.M. – 8:00 P.M.</td>
<td>Rapid Transit Stop Design Concepts – Public Information Centre</td>
<td>Knox Presbyterian Church 50 Erb Street West, Waterloo, Ontario</td>
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<tr>
<td>Tue., June 25, 2013</td>
<td>7:00 P.M.</td>
<td>Notre Dame Drive and Snyder’s Road Reconstruction, Township of Wilmot - Public Input Meeting</td>
<td>Rebel Creek Golf Course, 1517 Snyder’s Road Petersburg, Ontario</td>
</tr>
<tr>
<td>Thur., June 27, 2013</td>
<td>4:00 P.M. – 8:00 P.M.</td>
<td>Northfield Drive at Highway 85 Interchange Modifications – Public Information Centre</td>
<td>Albert McCormick Community Centre 500 Parkside Drive, Waterloo, Ontario</td>
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TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: June 18, 2013          FILE CODE: L04-20

SUBJECT: SOUTHERN ONTARIO LOCOMOTIVE RESTORATION SOCIETY – EXTENSION OF AGREEMENTS FOR OPERATION OF TOURIST TRAIN

RECOMMENDATION:

THAT the Regional Municipality of Waterloo extend, for an additional one year term, the existing agreements to permit the Southern Ontario Locomotive Restoration Society to operate a tourist train and locomotive restoration operation on the Waterloo Spur Railway owned by the Regional Municipality of Waterloo as described in Report CR-RS-13-060/E-13-084 dated June 18th, 2013 with such agreements to be to the satisfaction of the Regional Solicitor.

SUMMARY:

NIL

REPORT:

The Region of Waterloo has entered into two agreements with Southern Ontario Locomotive Restoration Society (SOLRS), a non-profit corporation that operates the Waterloo Central Railway (WCR) between Waterloo and St. Jacobs. The recreational train service has been in operation since the summer of 2007.

The first agreement (the Operating Agreement) is an agreement that authorizes SOLRS to use the Waterloo Spur railway line owned by the Region to operate a tourist train service from the City-owned train station in Waterloo to St. Jacobs. This agreement expires on June 25, 2013. SOLRS has expressed an interest in renewing this agreement and City of Waterloo staff has advised that they intend to recommend the extension of the existing agreement between the City of Waterloo and SOLRS for use of the railway station for an additional one year period as well.

The second agreement (the Building License Agreement) is a license agreement permitting SOLRS to construct and operate a building on Region-owned lands in the Village of St. Jacobs adjacent to the Waterloo Spur railway. A building has been constructed on these lands by SOLRS which facilitates the operation of its recreational train service. This agreement, between the Region of Waterloo and SOLRS, expires on June 30th, 2013. Regional staff recommends extending the term of both agreements for a one year period until June 30th, 2014.

During the construction of the LRT commencing in 2014, and once the LRT is operational in 2017, rail operations on the Waterloo Spur will be restricted to late night hours which will preclude WCR’s current ability to use the Waterloo Train Station as a base for its current operations.
WCR has explored a number of options for providing an alternate tourist train service within Waterloo Region. It believes that an operation based near the LRT station at Northfield Drive in Waterloo serving the St. Jacob's market to the north and Elmira would be sustainable. A key aspect of making this service viable after 2014 will be for WCR to acquire rights to use land in the vicinity of their proposed platform within the rail corridor near the Northfield Drive LRT station. In addition to a vehicle parking area near this station, additional track and a suitable platform will need to be constructed. Regional staff has had ongoing discussions with members of the WCR board of directors regarding proposals for accommodating these requirements. One option that has been discussed is an arrangement whereby WCR ticket holding passengers might be able to ride the LRT at no cost to access the WCR platform on days that the WCR service is offered. The Region and WCR could also collaborate with one another in jointly marketing the WCR service. The details of such a proposal have yet to be finalized and such an arrangement would be subject to approval of Regional Council.

CORPORATE STRATEGIC PLAN:

These agreements support the strategic objective “optimize the use of existing infrastructure and ensure it is adequately maintained”.

FINANCIAL IMPLICATIONS:

The Region of Waterloo is reimbursed by SOLRS for any direct costs incurred in supporting the operations of the tourist train service and receives an annual fee of $1,500 for use of the Regional lands in St. Jacobs.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

NIL

ATTACHMENTS:

NIL

PREPARED BY: John Hammer, Director, Transportation
               Jeff Schelling, Solicitor (Corporate)

APPROVED BY: Gary Sosnoski, Commissioner, Corporate Resources
              Thomas Schmidt, Commissioner, Transportation and Environmental Services
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: June 18, 2013

FILE CODE: C04-30, 5633, 7042 and 5489

SUBJECT: KING STREET AND WEBER STREET IMPROVEMENTS, CITY OF WATERLOO

RECOMMENDATION:

THAT the Regional Municipality of Waterloo take the following actions with respect to proposed improvements on King Street (Regional Road 15), Weber Street to Highway 85, and on Weber Street (Regional Road 8), Forwell Creek Road to Blythwood Road, in the City of Waterloo:

a) approve the Recommended Design Alternative for King and Weber Streets as outlined in Report E-13-082; and

b) amend Traffic and Parking By-law 06-072, as proposed herein, upon completion of construction to accommodate the following modifications:

   i) Remove to Schedule 1, Weber Street (Regional Road 8), King Street (Regional Road 15) to Kitchener City Limits;

   ii) Add to Schedule 1, No Parking Anytime on both sides of King Street (Regional Road 15), Weber Street to Highway 85, and on Weber Street (Regional Road 8), Blythwood Road to Kitchener City Limits, in the City of Waterloo; and

   iii) Add to Schedule 24, Reserved Lane Anytime on Both Sides of Weber Street (Regional Road 8) from Forwell Creek Road to Blythwood Road for Bicycles.

SUMMARY:

The Region of Waterloo is planning road improvements on King Street, Weber Street to Highway 85, and Weber Street, Forwell Creek Road to Blythwood Road, in the City of Waterloo. Please refer to Appendix ‘A’ for an area map and limits of the proposed work.

In 2012, a Project Team was established to provide direction on these improvements consisting of staff from the Region of Waterloo and the City of Waterloo, as well as City of Waterloo Councillors Diane Freeman and Jeff Henry. McCormick Rankin Corporation (MRC) was retained by the Region for consulting services to complete the engineering design and construction administration for these improvements.

A Public Consultation Centre (PCC) was held at St. David Catholic Secondary School, 4 High Street, Waterloo on Tuesday, October 23, 2012. Approximately twenty-five (25) people attended the PCC with seventeen (17) signing the attendance register. Six (6) comment sheets were received. The predominant concern that was noted in four of the comments sheets was that not enough is being done at the King Street intersection with King Street North Service Road to address delays and
collisions at this location. A new northbound left-turn lane is proposed at this location to reduce collisions and to improve traffic operations at this unsignalized intersection; however staff have again reviewed the most recent traffic data and forecasts at this location and has confirmed that signalization or a roundabout at this location is not warranted based on the Region’s warrant criteria.

Other public comments included: concern with an adjacent commercial access and its adverse impact on queuing in the southbound left-turn lane on King Street at the Weber Street intersection; a request to implement now the “possible future” multi-use trail on King Street; and a request to consult with St. David Catholic Secondary School staff throughout the detailed design process.

Based on a review of the public comments received and technical information gathered during the preliminary design phase of the project, the Project Team is recommending that Regional Council approve the following improvements for King Street and Weber Street in the City of Waterloo:

**King Street** - pavement rehabilitation, underground infrastructure replacement or repair (storm sewer, sanitary sewer, watermain) where warranted, lengthening the southbound left-turn lane at Weber Street by shortening the northbound left-turn lane to the commercial access opposite Blue Springs Drive, road widening for a new northbound left-turn lane at King Street North Service Road, road realignment between King Street North Service Road and Highway 85, introduction of a landscape median, and construction of multi-use trails on both sides of King Street from Weber Street northerly through the Highway 85 interchange to Conestogo Road (west side) and to Conestoga Mall (east side) to connect to the future Rapid Transit station.

**Weber Street** - full depth road reconstruction, replacement of the road base, widening for bike lanes, widening for a pedestrian refuge island at Blythwood Road, widenings for construction of a westbound right-turn lane at King Street and extending the eastbound left-turn lane at King Street, installation of new sidewalk on the east side adjacent to vacant commercial land, underground infrastructure replacement (storm sewer, sanitary sewer, watermain), reconstruction of the driveway entrance to St. David Catholic Secondary School to a full movement entrance, and replacement/lengthening of the Grand River Transit school bus stop adjacent to the school.

Subject to Council approval of these recommended design improvements, staff will seek technical approvals from partnering agencies, specifically the Ministry of Environment (MOE) and Ministry of Transportation (MTO). The Ministry of Transportation has been contacted by Regional staff and the consultant McCormick Rankin Corporation regarding multi-use trails through the King Street and Highway 85 interchange. MTO staff has endorsed the design proposal in principle. A formal detailed design submission will be completed in the months ahead to secure final approvals under the MTO encroachment permit process.

Presently, construction is tentatively scheduled in the Transportation Capital Program for 2015 although staff are closely monitoring the timing of nearby work planned under the Rapid Transit project on King Street between Conestogo Road and Northfield Drive. As such, it is the intention of staff to accelerate the design process and complete the tender documents by the end of this year, to be in a position to advance construction on King Street between Weber Street and Highway 85 to 2014 if necessary, for traffic management reasons and to minimize construction disruption for the public.

The total Region of Waterloo project cost for improvements on King Street and Weber Street is $4,500,000 to be funded from the Roads Rehabilitation Reserve Fund. The City of Waterloo is responsible for funding the cost of the sanitary sewer / watermain improvements on Weber Street and King Street, and the new multi-use trails on King Street where sidewalk does not currently exist. The estimated cost for the City work is approximately $1,250,000. The City of Waterloo has
confirmed funding is available for the sanitary sewer and watermain work, and that a recommendation will be made to City Council to fund the City’s share of multi-use trails as part of their 2014 budget deliberations.

1. Background

King Street and Weber Street are arterial roads that provide important north-south transportation links through the City of Waterloo and provide local access to numerous businesses, a secondary school and a number of residential subdivisions / commercial properties. Both roads have been identified for improvements through the Region’s Transportation Capital Program, to address poor pavement condition, to expand and improve active transportation and transit facilities, to address safety and operational issues at intersections, and to replace or repair deteriorated underground services. Based on these needs, the Project Team established a preliminary design in 2012 which included the following proposed improvements:

King Street - pavement rehabilitation, underground infrastructure replacement or repair (storm sewer, sanitary sewer, watermain) where warranted, lengthening the southbound left-turn lane at Weber Street by shortening the northbound left-turn lane to the commercial access opposite Blue Springs Drive, road widening for a new northbound left-turn lane at King Street North Service Road and consideration of a multi-use trail on King Street from Weber Street northerly through the Highway 85 interchange to connect to the future Rapid Transit station.

Weber Street - full depth road reconstruction, replacement of the road base, widening for bike lanes, widening for a pedestrian refuge island at Blythwood Road, widenings for construction of a westbound right-turn lane at King Street and extending the eastbound left-turn lane at King Street, installation of new sidewalk on the east side adjacent to vacant commercial land, underground infrastructure replacement or repair (storm sewer, sanitary sewer, watermain) where warranted, reconstruction of the driveway entrance to St. David Catholic Secondary School to a full movement entrance, and replacement/lengthening of the Grand River Transit school bus stop adjacent to the school.

2. Public Consultation

A Public Consultation Centre (PCC) was held at St. David Catholic Secondary School, 4 High Street, Waterloo on Tuesday, October 23, 2012. Notices were placed in the local papers advertising the PCC. Signboards were erected on site in advance of the PCC and notices were hand delivered to area residents, property owners, and businesses directly adjacent to the road improvement limits.

Approximately twenty-five (25) people attended the PCC with seventeen (17) signing the attendance register. Six (6) comment sheets were received. Plans showing the proposed improvements were on display at the PCC and Project Team representatives were present to answer questions and receive feedback. Appendix ‘B.1’ shows the typical cross-sections presented at the PCC.

A summary of the written comments received at the PCC are included in Appendix ‘C’. The main issues raised by the public at the PCC were:

i) Intersection improvements at King Street and King Street North Service Road

Public Comments

Four comments were received requesting the Region to consider further improvements to the King Street intersection at King Street North Service Road because of concerns with delay and collisions. Two comments were provided by local residents and the other two comments were provided by representatives of the Waterloo Inn and Conference Centre (WICC).
Acting on behalf of WICC, MTE Consultants provided a detailed letter requesting the Region to consider the following additional improvements to the King Street design:

- Installation of traffic signals at King Street and King Street North Service Road, coordinating the signals with the nearby King Street and Blue Springs Drive intersection; or
- Installation of a roundabout at King Street and King Street North Service Road; or
- Installation of a roundabout at King Street and Blue Springs Drive (to allow northbound vehicles exiting King Street North Service Road to turn right and make a u-turn at Blue Springs Drive);  
- Improvements to the King Street North Service Road to provide additional storage for the northbound left-turn lane so that right-turn vehicles do not have to wait behind queuing vehicles; and
- Incorporate a ‘painted island refuge’ on King Street so that northbound vehicles making left-turn movements from King Street North Service Road only need to wait for a gap of traffic in one direction at a time.

**Project Team Response**

It had been recognized that operational improvements were needed at the King Street North Service Road intersection with King Street. Based on the type of collisions experienced at this location and the volume of traffic, a new left-turn lane on King Street is warranted and is proposed to be constructed as part of this project. The addition of this left-turn lane is intended to reduce the number of rear-end collisions and improve the operation of this unsignalized intersection.

It is Regional practice to consider the installation of traffic control signals or a roundabout if Regional intersection signal warrants have been met. Staff have reviewed the most recent traffic data and forecasts at this location and it has been confirmed that signalization or a roundabout at this location is not warranted based on the Region’s warrant criteria, which is modelled after provincial standards established by the Ontario Ministry of Transportation. Traffic volumes used in the warrant analysis are based on traffic counts during the busiest 8-hours of a weekday and are considered representative of a typical day. The criteria used to establish the need for traffic control signals includes collision history, vehicular / pedestrian volumes and a detailed assessment of the roadway characteristics.

It is recognized that much of the delay concerns at the King Street North Service Road intersection occur at the conclusion of events at the WICC. These event-based volumes and delays are not captured in a typical warrant analysis and are not therefore used to determine when signals or other improvements are required. It is also noted that an alternate exit is available for WICC patrons at the rear of the property to Weber Street. In addition, staff are discussing minor widening opportunities on King Street North Service Road with the City of Waterloo which would improve capacity for turning vehicles entering King Street. Any improvements on King Street North Service Road, a City road, would have to be endorsed and funded by the City. The WICC consultant has been advised of the warrant criteria and the basis for the Region’s recommendations at this intersection. A copy of the Region’s detailed response to all of the suggestions made by the WICC consultant is found in Appendix ‘D’.
ii) **Southbound Left-Turn Lane at the King Street / Weber Street Intersection**

**Public Comment**

One concern was raised regarding the southbound turning movements at the King Street and Weber Street intersection, specifically the queuing of southbound vehicles when other southbound motorists are turning left to enter the commercial plaza access just north of the intersection. The concern is that vehicles waiting to enter the plaza delay motorists attempting to turn left at the intersection.

**Project Team Response**

It is acknowledged by staff that queued vehicles waiting to turn into the commercial plaza access (100 metres north of the King Street / Weber Street intersection) do occasionally interrupt the flow of queued vehicles turning left at Weber Street. This commercial access is an enter-only condition that was approved by Regional staff when the development (that includes National Sports, Chapters and Wholesale Club) was constructed in the 1990’s. Since there are very few collisions attributed to this condition, staff recommend that the current condition be maintained without change.

iii) **Other Comments**

Two other comments were received as follows:

- A request to implement now the “possible future” multi-use trails on King Street from Weber Street northerly through the Highway 85 interchange to Conestogo Road and Conestoga Mall. The multi-use trails are now included as part of the Recommended Design Alternative as discussed in the next section of this report; and

- A request to consult with St. David Catholic Secondary School (SDCSS) staff throughout the detailed design process. Staff have committed to continue to work with SDCSS staff during the detailed design phase of the project.

3. **Active Transportation on King Street**

King Street in Waterloo has been identified as a critical link between major employment lands, the universities, residential developments and key destinations / attractions such as Conestoga Mall and the Region’s proposed Conestoga Mall Rapid Transit station (scheduled to be operational in 2017). It is the intent of Regional staff to integrate Rapid Transit stations with other forms of transit and active transportation infrastructure, to achieve a balanced transportation system and providing mode transportation choice for the public.

This particular section of King Street has been identified as an Urban Community Connector in the Region’s Corridor Design Guideline, of which the primary objective of this classification is to move goods and people effectively. The focus for Community Connectors is to accommodate vehicular traffic while at the same time considering higher order transit and active transportation facilities as part of the planning / engineering design process. Grand River Transit (GRT) currently provides conventional bus service along the King Street corridor and is also planning to integrate an iXpress route to enhance connectivity with Conestoga Mall, Manulife Financial and St. David Catholic Secondary School.

In terms of active transportation, the Project Team has considered various alternatives on King Street between Weber Street and Highway 85. Presently, on-road cycling facilities are proposed on the adjacent corridors of Weber Street and Northfield Drive in the years ahead. On-road cycling was
considered as part of the preliminary design process for King Street; however it was concluded that on-road cycling lanes would present too many points of conflict with traffic at the highway interchange ramps and therefore a consistent and user-friendly on-road cycling facility could not be achieved.

In addition, vehicular speed is excessive on this section of King Street and not conducive for the average cyclist. Regional studies have shown that the general population is comprised of people attracted to cycling by the significant advances the Region has made developing its network and supporting infrastructure. Some cyclists are comfortable sharing the road with motorists in high-speed conditions, but most prefer to cycle in off-road facilities separated from traffic when higher speeds exist.

Under these circumstances, the preferred approach for this project is a multi-use trail on both sides of King Street, supported by landscaped boulevards and improved active transportation crossing opportunities through the Highway 85 interchange. At the PCC, a multi-use trail on King Street was shown as a “possible future” improvement. Subsequent to the PCC, the Project Team has established a multi-use trail design that can be implemented with this project. It is now proposed that multi-use trails be extended on both sides of King Street through Highway 85 to Conestogo Road (west side) and to Conestoga Mall (east side) to provide cycling / pedestrian connections to the future Rapid Transit station at Conestoga Mall. In accordance with current Regional policy, the local municipality must fund multi-use trails where a sidewalk currently exists. City of Waterloo staff has committed to make a recommendation to City Council as part of their 2014 budget deliberations that the City fund their share of the cost for these trails to allow them to be constructed as part of this project.

The Project Team is also recommending other improvements on King Street that will encourage slower speeds and provide safe separation of pedestrians / cyclists from vehicular traffic. It is recommended that King Street be shifted slightly to the west (south of the Highway 85 interchange) to accommodate the 3.0m wide multi-use trail width on the east side where there is a steep drop-off to a low area. In addition, this shift in King Street will also allow for a grassed boulevard between the proposed trail and the road as well as a raised centre median island with grass and trees. These improvements would better accommodate pedestrians and alternate modes of travel through this corridor, would enhance the streetscape and the centre median would also provide a traffic calming and speed reduction effect. Appendix 'B.2' illustrates the existing road cross-section as well as the recommended modified cross-section on King Street that was developed following the PCC to incorporate the multi-use trails. This recommended modification to the King Street cross-section south of the Highway 85 interchange was communicated to all residents/owners and to those who attended the October 2012 PCC by way of a letter dated June 3, 2013, which also included a description of the Project Team’s other final recommendations as outlined in this report.

4. Ministry of Transportation (MTO) Approval

Presently, staff are seeking technical approvals from the Ministry of Transportation (MTO) for the proposed improvements on King Street through the Highway 85 interchange. The MTO have been contacted by Regional staff and the consultant, McCormick Rankin Corporation, regarding multi-use trails through the King Street and Highway 85 interchange. Ministry staff have responded and endorsed the preliminary design recommendation in principle although a formal design drawing submission will be required for final approvals under the MTO encroachment permit process. Subject to Ministry approval, it is the intent of staff to construct these improvements under the Region’s contract for King Street and Weber Street.
5. Recommended Design Alternative

Based on a review of the public comments received and technical information gathered during the preliminary design phase of the project, the Project Team is recommending therefore that Regional Council approve the following improvements for King Street and Weber Street in the City of Waterloo:

**King Street - Weber Street to Highway 85**

- Reconstruct the current four (4) lane urban cross-section, standardizing lane widths in accordance with Regional design specifications and planning policies (ie. 3.25m turning lanes, 3.35m inner lanes and 3.65m curb lanes);
- Enhance the King Street and Blue Springs Drive intersection by extending the storage of the southbound left-turn lane on King Street;
- Introduce a northbound left-turn lane at the King Street and King Street North Service Road intersection;
- Extend the southbound left-turn lane at the King Street and Weber Street intersection;
- Realign King Street between King Street North Service Road and the MTO signalized intersection at Highway 85 (near Manulife Financial) in order to provide for a 3.0m multi-use trail and 1.4m landscape boulevard on the east side of the roadway;
- Introduce a 2.8m centre landscape median between King Street North Service Road and the MTO signalized intersection at Highway 85 (near Manulife Financial) as recommended in the Context Sensitive Regional Transportation Corridor Design Guidelines (“Urban Community Connector” classification);
- Install boulevard and median landscaping where possible to enhance the appearance of the streetscape;
- Provide a 3.0m multi-use trail on both sides of King Street from Weber Street northerly through the Highway 85 interchange to Conestogo Road (west side) and to Conestoga Mall (east side) to connect to the future Rapid Transit station as shown in Appendix ‘B-2’;
- Install double-sided street lighting where illumination is currently not provided;
- Coordinate watermain valve and fire hydrant replacement with City of Waterloo Operations staff where required; and,
- Replace black pipe sanitary service connections on behalf of the City of Waterloo.

**Weber Street - Forwell Creek Road to Blythwood Road, City of Waterloo**

- Reconstruct the current four (4) lane urban cross-section, standardizing lane widths in accordance with Regional design specifications and planning policies (eg. 3.25m turning lanes and 3.35m through lanes);
- Widen the road allowance to accommodate 1.25m on-road reserved cycling lanes, as recommended in the Context Sensitive Regional Transportation Corridor Design Guidelines (“Neighbourhood Connector - Avenue” classification), increasing the width of the cycling lane to 1.50m at right-turn traffic lanes;
- Relocate existing utility hydro poles and aerial plant to accommodate on-road cycling lanes, new road alignments and widening for turning lanes;
- Enhance the Weber Street and King Street intersection by increasing storage capacity for the
southbound left-turn lane on King Street, the eastbound left-turn lane on Weber Street and the westbound right-turn lane on Weber Street;

- Introduce a channelized right-turn lane with pedestrian refuge for westbound Weber Street traffic at King Street;
- Modernize the traffic signals at the Weber Street and King Street intersection, considering options to enhance pedestrian crossings by considering ‘off-set’ crosswalk markings (which provide additional space for turning vehicles to wait while pedestrians are crossing);
- Reconstruct the existing pavement, replace granular base and hot mix asphaltic concrete;
- Introduce 2.1m wide sidewalks and infill a section of new sidewalk fronting vacant properties between Milford Avenue and Blythwood Road;
- Install a pedestrian refuge island at the Weber Street and Blythwood Road intersection;
- Maintain single-sided street lighting on the existing overhead hydro poles, providing double-sided fixtures at pedestrian crossings and sections of the road with five (5) lanes or more, as per the Region’s Illumination policy;
- Install boulevard landscaping to enhance the appearance of the streetscape; and
- Replace sanitary sewer and watermain on behalf of the City of Waterloo.

6. Project Cost

The Region is funding the cost of the Regional road improvements and new sidewalk on King Street and Weber Street. The estimated total cost for these improvements including engineering, construction and other project costs is $4,500,000. The City of Waterloo would be responsible for funding the cost of the sanitary sewer / watermain improvements on Weber Street and King Street, and the City’s share of multi-use trails on King Street between Weber Street and Conestogo Road. The estimated cost of the City’s contribution is $1,250,000.

7. Project Schedule

Subject to Council approval of the Recommended Design Alternative and confirmation of technical / financial approvals, construction of King Street and Weber Street is currently scheduled in the Transportation Capital Program for 2015. Staff are assessing the impact of this schedule in light of nearby work planned under the Rapid Transit project, anticipated to commence in 2015 on King Street at the Conestogo Road intersection (Conestoga Mall station).

It is the intention of the Project Team to accelerate the design process and complete the tender documents for the King Street / Weber Street project in late 2013, thereby providing an opportunity to advance the start of construction on this project to 2014 to mitigate overall construction disruption for the public. Following confirmation of the Rapid Transit project schedule and subject to approval of the advancement of funds from 2015 to 2014, the contract for the King Street / Weber Street project would be tendered to have work completed on King Street 2014 in advance of the Rapid Transit construction work on King Street. Weber Street would be scheduled to follow in 2015.

With the exception of the multi-use trail on the west side of King Street, the proposed work on King Street does not require property purchase; however since property acquisitions would be required for the west-side multi-use trail, this trail would have to be constructed as separate construction work in 2015.
It is anticipated that the staging of construction work on both King Street and Weber Street will permit one through lane of traffic to be maintained in each direction during construction. Local access to businesses, emergency services and pedestrian traffic will be maintained at all times throughout each stage of the work.

CORPORATE STRATEGIC PLAN:

The recommended design alternative proposed for King Street and Weber Street support the Region’s Corporate Strategic Plan in the following Focus Areas, Strategic Objectives and Actions:

Focus Area 2.0 - Growth Management and Prosperity: Manage growth to foster thriving and productive urban and rural communities.

Strategic Objective / Action

2.2 Develop, optimize and maintain infrastructure to meet current and projected needs.
2.2.1 Continue to prioritize and implement capital program projects required to meet community needs and ensure sustainability.

Focus Area 3.0 - Sustainable Transportation: Develop greater, more sustainable and safe transportation choices.

Strategic Objective / Action

3.2 Develop, promote and integrate active forms of transportation (cycling and walking).
3.2.1 Work with Local Municipalities and other stakeholders to expand an integrated and safe network of regional, local and off-road cycling and walking routes.

FINANCIAL IMPLICATIONS:

The Region’s 2013 Transportation Capital Program and Ten-Year Forecast includes $3,225,000 of funding in 2013-2015 to complete detailed design and construction of the proposed improvements on King Street and Weber Street. Due to an extension in the scope of work as well as an updated estimate of the project budget, the Region of Waterloo component of the project is now estimated to cost $4,500,000. Therefore, a budget increase of $1,275,000 will be submitted for consideration as part of the Region’s 2014 budget deliberations to cover the updated estimated cost of this project.

The City of Waterloo cost for sanitary sewer and watermain improvements on Weber Street and King Street and for their share of the multi-use trails on King Street is estimated to be $1,250,000.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE;

Subject to Council approval of Report E13-082, Council and Administrative Services Division / Corporate Resources Department will be consulted at the time these facilities are constructed regarding a by-law amendment to incorporate reserved bicycle lanes on both sides of Weber Street (Regional Road 8) from Forwell Creek Drive to Blythwood Road.
ATTACHMENTS:

Appendix A   -  Project Area and Key Plan
Appendix B.1  -  Typical Cross-sections presented at Public Consultation Centre
Appendix B.2  -  Modified Cross-section for King Street
Appendix C    -  Public Consultation Centre Comments
Appendix D   -  Letter Response to Waterloo Inn and Conference Centre (WICC)

PREPARED BY:  Eric Saunderson, Project Manager, Transportation Base Program

APPROVED BY:  Thomas Schmidt, Commissioner, Transportation and Environmental Services
Appendix A
Project Area and Key Plan

WEBER STREET (REGIONAL ROAD No. 8)
BLYTHWOOD ROAD TO FORWELL CREEK ROAD
KING STREET (REGIONAL ROAD No.15)
WEBER STREET. TO HWY 85
CITY OF WATERLOO
Appendix B.1
Typical Cross-sections

REGIONAL ROAD No. 15
(KING STREET NORTH)
PROPOSED TYPICAL CROSS SECTION
WITH MULTI-USE TRAIL
(2012 PCC VERSION)

REGIONAL ROAD No. 8
(WEBER STREET NORTH)
PROPOSED TYPICAL CROSS SECTION
WITH BIKE LANES

REGIONAL ROAD No. 15
(KING STREET NORTH)
REGIONAL ROAD No. 8
(WEBER STREET NORTH)
City of Waterloo
Appendix B.2
Modified Cross-section for King Street

EXISTING TYPICAL CROSS SECTION

PROPOSED TYPICAL CROSS SECTION WITH MULTI-USE TRAIL

REGIONAL ROAD NO. 15
(KING STREET NORTH)
KING STREET NORTH SERVICE ROAD TO HIGHWAY 85
CITY OF WATERLOO
## Appendix C
### Public Consultation Centre Comments

<table>
<thead>
<tr>
<th>NAME</th>
<th>ADDRESS</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawrence Bingeman</td>
<td>12 Halliwell Dr., Kitchener</td>
<td>Re: King St. N and King St. N service road – this intersection has gotten worse over the years. Pre Conestoga Mall, there was little to not problem (1978), now it is next door to a death trap. This area is probably on Waterloo’s worst areas for accidents.</td>
</tr>
<tr>
<td>Macie Szblag</td>
<td>108 Blythwood Rd Rd</td>
<td>As a Blythwood Road homeowner, I approve of the changes planned for the foot of my street, which includes the pedestrian island, bicycle lane and sidewalk extension on Weber Street.</td>
</tr>
<tr>
<td>Margaret</td>
<td></td>
<td>Include multi-use lanes on King Street (called as a future possible ASAP) Extend bike lane on Weber Street behind Blythwood Rd towards Northside (by the Sobeys store)</td>
</tr>
<tr>
<td>Keith Golem</td>
<td>302-30 Blue Springs Dr. Waterloo N2J 4T2</td>
<td>I like what you are proposing for Weber Street, especially the dedicated right turn ramp heading westbound on Weber and emptying onto King going northbound. Creating a left turn lane onto the King Street North Service Road is a slight improvement over what exists today but in the final analysis it just amounts to tinkering. Accidents will still occur, especially caused by people turning left onto King out of the Service Road. The Service Road needs to be extended in a U shape around the back of the IMS building so it can empty out at the Blue Springs Drive corner. It will be expensive to expropriate the required land to do this, but it’s the only viable long term solution to the existing design problem. I realize there are jurisdictional issues with the King Street entry onto the expressway and into Manulife, but the Region and the Province ought to get together to fix that intersection. Far more accidents occur there than at the entrance to the Service Road.</td>
</tr>
<tr>
<td>Peter Lejcar</td>
<td>MTE Consultants</td>
<td>Regarding the planned road improvements to King Street and further to our attendance at the open house held at St. David Catholic Secondary School on Tuesday, October 23rd, 2012 to review the same, the foregoing has been prepared on behalf of our client, Waterloo Inn, and is presented as follows for consideration in the design development. We understand the proposal at the King and North Service road intersection is to provide a ‘Northbound left turn lane’ into the site based on traffic volume warrants. Discussions with the Region have indicated there are currently eighteen (18) documented traffic accidents (six (6) forecasted) at this intersection, nine (9) of which were rear end collisions to northbound traffic waiting to turn left onto North Service Road. Presently, and as we understand, there is no warrant for traffic signals at this location and consideration of a roundabout is precluded based on this warrant. The Waterloo Inn has the capacity to accommodate over 3000 people between</td>
</tr>
<tr>
<td>Peter Lejcar</td>
<td>MTE Consultants</td>
<td>(continued)</td>
</tr>
</tbody>
</table>
their overnight rooms and the convention rentals. Furthermore, the surrounding developable properties at full build-out could also contribute significantly to future traffic volumes and turning movements at this intersection. These existing and future considerations, paired with the proposed ‘Northbound left turn lane’ may potentially compound the already unsafe condition for eastbound left turn movements onto King Street from the North Service Road.

We have discussed with you the opportunity to investigate traffic counts further for at least a 7-day period (day/night) to accurately define traffic demands and further review traffic signal warrants at this intersection to address the following concerns and considerations: 1 – Number of vehicles and turning movements; 2 – Number of accidents and the possibility they could increase and become more serious; 3 – Delays (excess time) caused in the inability to make left turns exiting North Service Road; 4 – Delays (excess time) caused to right turning movements as a result of queued left turning movements.

Please notify the undersigned and the Waterloo Inn of when you intend to complete the traffic counts at this intersection to ensure that we are capturing what would be considered average traffic demands. We ask that the Region review the following options with respect to the intersection at North Service Road and King Street in addressing the aforementioned considerations:

1 – Install traffic signals linking North Service Road signals to Blue Springs Road signals to address operation issues
2 – Install roundabout at North Service Road
3 – Install roundabout at Blue Springs Road to allow right turn movements from North Service Road to ultimately head northbound on King Street
4 – Improvements to the North Service road leg to incorporate left turn storage so as not to impede right turn movements
5 – Incorporate 5th lane extension along King Street as a ‘painted island refuge’ for vehicles making left turn movements from North Service Road.

On behalf of our client, we would be happy to meet with you to further discuss the opportunities at this intersection. We also request to be notified of any upcoming meetings on this matter so that our client can attend and voice their concerns.

Virina Elgawly
Planning Officer
WCDSB
480 Dutton Dr.
Waterloo, ON N2L 4C6

Staff at the Waterloo Catholic District School Board has reviewed the Notice of Public Consultation Centre for the above mentioned project. The notice states that the improvements include:

- The reconstruction of the St. David Catholic Secondary School driveway to Weber Street as a full movement entrance; and
- Replacement/lengthening of the Grand River Transit school special bus stop adjacent to the school.

Consequently, we kindly request that we are kept informed of the process by sending us any updated information as it becomes available, timing for the project, and the potential designs being contemplated.

In addition, the Notice states that the proposed construction is planned for spring/summer 2015. We also request that the construction is only conducted during the summer so as not to interfere with school operations. Also, as stated above, if you could advise us of actual construction times closer to the date that would be great as it may affect when we can move portables to and from the site.
Appendix D

Public Consultation Centre Response

Waterloo Inn and Conference Centre (WICC)

RE: Weber Street and King Street Improvements – North Service Road Entrance to Waterloo Inn

Dear Mr. Lejar and Ms. D’Alton,

I am writing in response to your letter to John Lee dated November 2, 2012, regarding the King and Weber Streets reconstruction project planned for 2013, and more specifically, the improvements proposed to the King Street North Service Road intersection. If you are not aware, John Lee retired on December 20, 2012, and I have assumed John’s responsibilities on the King and Weber Streets project.

Northbound Left-turn Lane at King Street North Service Road

As presented at the Public Consultation Centre (PCC) held at St. David’s secondary school on October 23, 2012, it is the Region’s intent to improve the northbound turning movements at the King Street North Service Road intersection by introducing a dedicated left-turn lane with 30m of vehicular storage. A review completed by the Region’s Traffic Engineering section concluded that a dedicated northbound left-turn lane is warranted based on traffic volume entering/existing the intersection. The five-year collision history (2007 to 2011) shows that there were 19 collisions at the King Street/North Service Road intersection. 21% of the collisions may be correctable with the installation of a northbound left-turn lane. These collisions include motorists attempting a northbound left turn from King Street onto North Service Road and being struck. It is anticipated that the addition of this left-turn lane will reduce the number of rear-end collisions and improve the operation of this unsignalized intersection.

Signalization at King Street North Service Road

Current Regional practice is to consider the installation of traffic control signals or a roundabout if Regional warrants have been met. The warrant evaluation is based on established provincial guidelines as documented in the Ontario Traffic Manual (OTM) Book 12 and developed through the Ministry of Transportation of Ontario. Traffic volumes used in the analysis are based on traffic counts during the busiest 9-hours of a weekday and are considered representative of a ‘typical’ day. Accordingly, traffic volumes generated by special events do not constitute ‘typical’ weekday volumes and are not commonly used in assessing signal warrants. The criteria used to establish the need for traffic control signals includes collision history, vehicular / pedestrian volumes and a detailed assessment of the roadway characteristics.

Additional traffic control was reviewed as part of this review and determined to be unwarranted given the current vehicular volumes entering and exiting the intersection. In addition to the volumetric and collision review, the proximity of the Blue Springs Road intersection poses a potential delay / timing / queuing concern with vehicular traffic on King Street. For this reason Regional staff generally does not recommend that traffic control signals be installed at an intersection which is located less than 200 metres from an existing traffic control signal. The spacing between Blue Springs Road and King Street North Service Road is approximately 140m.
Should future proposed development conditions result in the need for additional traffic control measures, traffic signals could be retrofitted in at this location at that time.

**Roundabout at Blue Springs Road**

As a follow up to your request for roundabout consideration at the King Street and Blue Springs Road intersection, the Region’s Traffic Engineering section was consulted further and a review of the latest collision history for the past five years (2007 to 2011) was conducted. The collisions during this timeframe are less than anticipated where, 16 collisions were documented when 53 were expected based on a probability assessment of annual traffic volumes. Of the 16 collisions recorded, only 1 collision resulted in an injury. Based on this historical collision data, a roundabout would not be warranted to address collisions at the King Street and Blue Springs Road intersection.

**Traffic Exiting King Street North Service Road**

As noted previously, traffic signals are not warranted at King Street and King Street North Service Road based on established provincial guidelines for the determination of signal warrants. It is acknowledged that the Waterloo Inn and Conference Centre hosts special events on occasion which may attract in excess of 3,000 guests, causing delays for patrons egressing the King Street North Service Road.

Between 2007 and 2011, there were 10 collisions involving vehicles exiting King Street North Service Road that may have been avoided with traffic signals. The OTM collision-based warrant requires 5 collisions per year for 3 consecutive years before traffic signals are considered. Accordingly, the existing condition and collision history do not warrant consideration of traffic signals at King Street and King Street North Service Road.

The suggestion to extend the proposed centre lane in the middle of King Street to be used as a refuge area by northbound vehicles exiting King Street North Service Road cannot be formalized as it contravenes the Transportation Association of Canada (TAC) guidelines for intersection design. It is anticipated that such a design would likely lead to an increase of sideswipe collisions.

**King Street North Service Road Improvements**

Improvements on King Street North Service Road, such as extending the limits of work to incorporate right and left-turn lanes onto King Street can be considered as part of this project. Extended turn lanes would improve the capacity for vehicles exiting the King Street North Service Road during peak periods. Further discussions will be required with the City of Waterloo as King Street North Service Road is under the City’s jurisdiction and would therefore require City endorsement / funding.

Please feel free to contact me should you wish to discuss these options further.

Regards,

Eric Saunderson
Project Manager

ES/mw

cc: Gary MacDonald, Design and Construction, Region of Waterloo
    Mike Jones, Traffic Engineering, Region of Waterloo
    Dan Green, MRC
    Randal Harder, MRC
    Jessica Keleman, City of Waterloo
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: June 18, 2013

FILE CODE: T13-60 (A)

SUBJECT: UPDATE ON BIKE SHARING PROJECTS IN THE REGION OF WATERLOO

RECOMMENDATION:

For information.

SUMMARY:

On October 16, 2012, Regional staff updated the Planning and Works Committee, describing bike sharing prospects being developed in Waterloo Region by two not-for-profit organizations; The Working Centre and Grand River Public Bike Share. The report noted that to reduce the potential limitations of two independently operating bike shares, staff’s preference would be to have a single integrated bike share system. The report also encouraged both organizations to collaborate on opportunities to increase the convenience of using bikes between each system. This report provides an update on the bike sharing projects and how the Region is continuing to facilitate discussions between the two organizations.

Regional staff is working with both organizations to help establish their systems, including providing potential opportunities to use Regional property for bicycle docking stations and comments that staff believe can help build effective bike share business models in the region. These opportunities would be forwarded to Regional Council for consideration. Regional staff are continuing to encourage both organizations to work together to provide easy travel between Waterloo and Kitchener. In an effort to achieve this, both groups are prepared to offer a membership discount to each other’s customers. The groups also intend to examine further opportunities to improve the interoperability between each system after both systems have been established.

Bike sharing in the region can help build transit ridership, support active transportation and improve mobility choice. As a means to support these Regional objectives, the Region continues to support the implementation of bike sharing systems that demonstrate the best practices of successful systems.

In addition to a $60,000 grant from the City of Kitchener, The Working Centre has received a $15,000 Community Environmental Grant from the Region. Grand River Public Bike Share has applied to the City of Waterloo for a potential agreement to operate a bike share in the City of Waterloo.

REPORT:

In 2012, two not-for-profit organizations approached the Region for an endorsement of their proposed bike sharing systems.

The two organizations currently developing these systems in the region are The Working Centre and Grand River Public Bike Share. The Working Centre is developing a bike share system in the City of
Kitchener and Grand River Public Bike Share is developing a system in the City of Waterloo. Bike sharing systems are relatively new components to transportation networks and the knowledge of effective bike share implementation is growing as more communities adopt these programs and measure their successes. Bike sharing systems help create opportunities for short and medium distance cycling trips by providing free or affordable access to bikes at convenient locations. Systems operate in a similar way to car sharing where individuals purchase bike share memberships that give them access to short-term bicycle rentals located at automated bicycle docking stations. Bike sharing systems are known to increase transit ridership by expanding the catchment area of transit and providing greater travel options to users.

Stakeholders

**Grand River Public Bike Share**

Grand River Public Bike Share (GRPBS) is a not-for-profit organization currently negotiating an agreement for a pilot bike sharing system in the City of Waterloo. Highlights of the GRPBS system include the intent to serve the university student market with 10 bicycle docking stations located at the Universities, residential neighbourhoods, shopping centres, and UpTown Waterloo. Funding to operate the bike share would come from memberships, usage fees, and corporate sponsorships. GRPBS is not seeking financial support from the Region.

**The Working Centre**

The Working Centre (the Centre) is a not-for-profit organization currently establishing a bike sharing system in the City of Kitchener as part of an incremental pilot project with the intent to serve the downtown market. The Centre intends to have 12 bicycle docking stations concentrated in downtown Kitchener. Funding to operate the bike share is expected to come from membership fees, grants, sponsorships and advertising.

In addition to a $60,000 grant from the City of Kitchener, the Centre has received a $15,000 Community Environmental Grant from the Region.

**The City of Waterloo**

The City of Waterloo is currently negotiating an agreement with Grand River Public Bike Share. GRPBS is not seeking financial support from the City of Waterloo.

**The City of Kitchener**

The City of Kitchener has awarded The Working Centre a $60,000 grant to implement its bike sharing project and is helping the Centre with locating docking stations in downtown Kitchener.

**The City of Cambridge**

The City of Cambridge has not been approached by bike share organizers with proposals to implement bike share projects in Cambridge. Both GRPBS and The Working Centre have indicated that they will consider expanding their bike share systems to the City of Cambridge pending their experiences in Kitchener and Waterloo.

**The Region of Waterloo**

The Region is interested in bike sharing as a means to support the Region’s strategic objective to improve mobility choice, support active transportation and increase transit ridership. The Region’s Transportation Master Plan recommends that a bicycle sharing program be implemented in the short term and bike sharing is also supported in the draft Active Transportation Master Plan.

In April of 2013, the Active Transportation Advisory Committee passed the following motion:

*THAT the Active Transportation Advisory Committee endorse the bike share proposals as presented by Grand River Public Bike Share and The Working Centre;*
AND THAT the Committee encourages Regional Council to support both projects and review the outcomes within one year’s time.

The Working Centre was a successful applicant to the Region’s Community Environmental Grant program and received a $15,000 grant to assist in the funding of a bike share coordinator position and online reservation software.

Facilitating Bike Shares

Regional staff is currently working with both bike share groups to help facilitate both groups in establishing their systems.

Regional staff have encouraged both bike share organizers to work together to provide travel options for users who would like to travel by bike share between Waterloo and Kitchener. Regional staff have also provided comments about the economic challenges of bike share business models in other communities (e.g. BIXI Montreal, BIXI Toronto, and Boston’s Hubway), and the effective location placements of docking stations to generate sustainable ridership (e.g. a distance of 300 metres or less between docking stations is optimal to provide multiple origins and destinations).

Regional staff is also working with both bike share groups on potential opportunities to use Regional property for bike share docking stations through encroachment agreements. Encroachment agreements would ensure that Regional property is safely used and maintained. The agreements would also indemnify the Region against claims and losses. Staff is reviewing advertising regulations for Regional properties as well, as both non-profit organizers are expected to seek advertising and/or sponsorship revenue on their docking stations as part of their business models.

Conclusion

Public bike sharing in the region supports Regional transportation objectives by promoting active forms of transportation, increased mobility choice, and increased transit ridership.

It is encouraging that community organizations continue to work toward establishing a bike share system in the region. As these organizations finalize bike share system plans in the City of Waterloo and City of Kitchener, Regional staff will continue to facilitate discussions between the two organizations. Staff will also continue to provide opinions regarding what system characteristics successful bike share operations in the region should ensure are in place (e.g. appropriate business models, dense docking station networks and effective operations plans). This should reduce the challenges of two independently operating systems. (e.g. limited mobility between the two cities when using bike shares).

As the Region is working towards providing potential opportunities to use Regional property for bike share docking stations, Regional staff will continue to collaborate with both bike sharing groups and monitor their implementation.

Area Municipal Consultation/Coordination

City of Waterloo staff and City of Kitchener staff were consulted in the development of this report and both cities have received a copy.

CORPORATE STRATEGIC PLAN:

The implementation of a bicycle sharing program in the short term is recommended in the Regional Transportation Master Plan and is supported in the draft Active Transportation Master Plan. Bike sharing supports the Region’s improved air quality objective (Focus Area 1) and promotion of active forms of transportation (Focus Area 3). By working with the organizations interested in bike
sharing, the Region is strengthening partnerships with area municipalities and community stakeholders (Focus Area 5).

**FINANCIAL IMPLICATIONS:**

NIL

**OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:**

Transportation and Environmental Services were consulted on this report.

**ATTACHMENTS:**

NIL

**PREPARED BY:** James LaPointe, Principal Planner, Transportation Demand Management

**APPROVED BY:** Rob Horne, Commissioner, Planning, Housing and Community Services
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: June 18, 2013

FILE CODE: M04-50

SUBJECT: GRT CUSTOMER SERVICE TRENDS & ISSUES

RECOMMENDATION:

For Information.

SUMMARY:

The attached report provides a comparative summary and analysis of the GRT Customer Issues for the period of 2010 to 2012.

REPORT:

Below is a comparative summary and analysis of the GRT customer issues for the period of 2010 to 2012 in four broad categories (Fares, Bus Stop Environment, Service Delivery and Operations). In the attached report each of these service categories is then graphically and numerically divided into various sub-categories along with a brief overview and analysis.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>2010</th>
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<tr>
<td>Fares</td>
<td>74</td>
<td>78</td>
<td>69</td>
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<tr>
<td>Bus Stop Environment</td>
<td>288</td>
<td>432</td>
<td>368</td>
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<tr>
<td>Service Delivery</td>
<td>1,346</td>
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<tr>
<td>Operations</td>
<td>1,327</td>
<td>1,571</td>
<td>1,716</td>
</tr>
<tr>
<td>Total</td>
<td>3,035</td>
<td>3,622</td>
<td>3,629</td>
</tr>
</tbody>
</table>

Total Ridership: 18,050,000 19,722,186 21,247,474

Number of Issues per 100,000 riders: 17 18 17

In 2012, the number of customer issues remained stable when compared to 2011. Ridership increased by 8% to 21,247,474 annual riders while the number of issues per 100,000 riders in 2012 decreased slightly when compared to 2011.

GRT attempts to respond to all operational issues within 24 business hours of receipt. Information obtained from these recorded issues has driven service improvements made in 2012 and some of those planned for 2013. Employee awareness of these customer concerns has also increased accountability among staff and is contributing to better understanding of customer service expectations.
CORPORATE STRATEGIC PLAN:

Strategic Objective – Service Excellence: Foster a culture of citizen centered customer service responsive to community needs and suggestions.

FINANCIAL IMPLICATIONS:

The cost of updating and maintaining the GRT customer service database and the analysis of this information is included in the annual operating budget.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Transportation Planning also utilizes this customer information to assist in transit development and service planning.

ATTACHMENTS:

GRT Customer Service Trends & Issues

PREPARED BY:  Eric Gillespie, Director, Transit Services

APPROVED BY:  Thomas Schmidt, Commissioner, Transportation and Environmental Services
GRT summarizes customer issues into four main service categories. These categories are Operations, Service Delivery, Bus Stop Environment and Fares which are then discussed in detail below.

**Operations**

47% or 1,716 of customer issues in 2012 were categorized as operational concerns. These issues include on-board incidents/accidents, customers missed at bus stops, driving performance and interpersonal concerns. The percentage of customer issues in the operations category has remained stable over the years.
Technologies such as cameras and real time GPS on board the buses, is enabling GRT to resolve operational issues more efficiently than in the past.

GRT also responds to customers via email, Twitter, Facebook and telephone, and this is enabling customers to get very quick responses that would have taken more time in the past to resolve.

Service Delivery
This category captures a wide variety of service related incidents and account for roughly 40% of all issues in 2012. Customer compliments and issues relating to schedule adherence, requests for new service and service quality provided by GRT staff are all encompassed in the Service Delivery Category.

In 2012, requests for customer information, requests for new service and schedule adherence issues were the top call drivers in the Service Delivery category. The information relayed to GRT by customers was reviewed and changes were made whenever possible. For example feedback from customers about the schedule adherence of the route 9 and 29 were gathered. GRT conducted a number of investigations and as a result, additional service was added to these routes based on this customer feedback.

Customers also called to request information. Information requests vary according to each customer’s needs, but customers are generally interested in technologies that GRT will implement in the future. For example many customers asked if GRT will be implementing a smart card fare payment system or whether GRT will be introducing real time schedule information to the public through text messaging.
Bus Stop Environment
Issues in the Bus Stop Environment category account for roughly 10% of all issues in 2012. Mild weather conditions did not contribute to an increase in issues in this category this year. Seasonal requests for shelters and other amenities at the bus stop, and the conditions of the bus stop locations are the top call drivers in this category.

Customers often inform GRT of the conditions at the bus stop locations, and this increases accountability for GRT to maintain the various properties throughout the region. This year, feedback from customers about their experience at the terminals prompted the introduction of smoke free facilities and many customers were pleased with this new Regional policy.

Security related incidents also fall under this category.
2012 vs 2011
CUSTOMER SERVICE TRENDS AND ISSUES

Fares
The majority of issues in this category relate to GRT’s fare structure, and other issues relating to the types of fares offered.

Calls in this category usually relate to requests for alternate fares and the availability of these fares.

GRT’s Customer Service Plans for the Future:

GRT will continue to seek the opinions of customers for future improvements to the transit system. GRT hosted a focus group to get customers opinions about the bus seat configurations and more focus groups are planned for the future to get customer’s feedback on various upcoming projects such as the electronic smart card fare payment system.

GRT is also collaborating with the Service First Call Centre to provide a seamless integration of GRT staff into the Regional call centre later in 2013.

Actual bus time information is being introduced in 2013 which will provide customers with actual arrival times of buses at their bus stops.

Security at all transit facilities is important to GRT. GRT has outlined a number of security objectives as it relates to the reduction of fraudulent fares, the safety of all transit facilities, and maintenance of ongoing policies as it relates to By-Law enforcement. GRT is also forging a stronger relationship with the Waterloo Regional Police to assist with security related concerns.
TO: Jim Wideman and Members of the Planning and Works Committee

DATE: June 18, 2013

FILE CODE: T01-20/4 Bleams, T01-20/12 Queen

SUBJECT: PROPOSED INSTALLATION OF AN ALL-WAY STOP AT THE INTERSECTION OF BLEAMS ROAD (REGIONAL ROAD 4) AND QUEEN STREET (REGIONAL ROAD 12), TOWNSHIP OF WILMOT

RECOMMENDATION:

THAT the Regional Municipality of Waterloo amend Traffic and Parking By-law 06-072, as amended, to:

   a) Remove from Schedule 11, Through Highways, Queen Street (Regional Road 12) from the South Side of Highway 7/8 to the South Side of Bridge Street (Regional Road 12);
   b) Add to Schedule 11, Through Highways, Queen Street (Regional Road 12) from the South Side of Highway 7/8 to the North Side of Bleams Road (Regional Road 4);
   c) Add to Schedule 11, Through Highways, Queen Street (Regional Road 12) from the South Side of Bleams Road (Regional Road 4) to the South Side of Bridge Street (Regional Road 12); and
   d) Add to Schedule 12, Intersection Stop Signs, Bleams Road (Regional Road 4) at Queen Street (Regional Road 12), in the Northbound, Southbound, Eastbound, and Westbound directions;

in the Township of Wilmot, as outlined in report E-13-060, dated June 18, 2013.

SUMMARY:

NIL

REPORT:

Transportation Division staff received concerns with regard to the existing traffic control at the Bleams Road (Regional Road 4) and Queen Street (Regional Road 12) intersection. Specifically the concerns raised were with regard to safety and a need for traffic control signals.

Based on the concerns received, Transportation Division staff undertook a detailed review of the intersection.

Existing Conditions

Queen Street intersects Bleams Road at a right angle forming an intersection. The east and west approaches (Bleams Road) are controlled by stop signs with the north and south approaches (Queen Street) consisting of a free flow condition. The posted speed limit approaching the intersection on both Queen Street and Bleams Road is 80km/h. The intersection attracts an Average Annual Daily Traffic volume of approximately 7500 vehicles per day. Figure 1 shows the intersection and existing traffic control.
Collision History

During the previous 5 years (2007 to 2011) the Bleams Road at Queen Street intersection experienced 22 collisions where 3 would be expected for the same period. The collision history includes 15 angle collisions where 1 would be expected. Of the 15 angle collisions, 15 motorists stopped before proceeding.

The following measures were installed at the intersection to mitigate collisions however angle collisions involving motorists who stop and then proceed through the intersection continue to occur.

- Oversized stop signs;
- Oversized stop-ahead signs; and
- Overhead flashing beacon.

This type of driver behavior is normally attributed to poor visibility of approaching vehicles, however, a review of the sight distance from all approaches to the intersection exceed minimum recommended distances. Staff believes that the angle collisions are occurring because stopped drivers have difficulty in assessing suitable gaps and the speed of approaching traffic on Queen Street. Measures to reduce this type of collision were considered which included all-way stop control and traffic control signals.

All-way Stop Warrant Analysis

The most recent eight-hour turning movement count (August 2012) was applied to the Region’s All-way Stop Warrant. The Region’s All-way Stop Warrant considers the collision experience at the
intersection and traffic volume entering the intersection.

For the Bleams Road/Queen Street intersection to warrant an all-way stop based on the traffic volume, the total volume entering the intersection must average at least 500 vehicles per hour, the total combined vehicle and pedestrian volume on the minor street (Bleams Road) must average at least 200 vehicles per hour and the volume split entering the intersection can not exceed 70/30.

To warrant an all-way stop under the collision warrant, 12 collisions susceptible to correction must have occurred during the previous three-years and the volume split must not exceed 70/30.

Based on the collision warrant, an all-way stop is warranted at the Bleams Road and Queen Street intersection.

The Region has implemented all-way stop control at 5 other intersections in the area of Bleams Road and Queen Street. The table below shows a summary of the collisions before and after the all-way stop control installations:

**Table 1 – Before/After Collisions Post All-way Stop Control**

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Posted Speed</th>
<th>Cross Section</th>
<th>AADT</th>
<th>4-way Conversion Date</th>
<th>3-Year Collisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erb’s Road at Nafziger Road</td>
<td>80km/h</td>
<td>60km/h</td>
<td>Rural</td>
<td>6 493</td>
<td>May 2004</td>
</tr>
<tr>
<td>Trussler Road at New Dundee Road</td>
<td>80km/h</td>
<td>60km/h</td>
<td>Rural</td>
<td>8 700</td>
<td>July 2007</td>
</tr>
<tr>
<td>Snyder's Road at Nafziger Road</td>
<td>80km/h</td>
<td>80km/h</td>
<td>Rural</td>
<td>10 101</td>
<td>Nov. 2007</td>
</tr>
<tr>
<td>Trussler Road at Huron Road</td>
<td>60km/h</td>
<td>80km/h</td>
<td>Rural</td>
<td>4 269</td>
<td>July 2008</td>
</tr>
<tr>
<td>Ottawa Street at Trussler Road</td>
<td>60km/h</td>
<td>80km/h</td>
<td>Rural</td>
<td>15 406</td>
<td>Nov. 2007</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>74</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20</td>
</tr>
</tbody>
</table>

In summary, there were 74 collisions 3 years before the installation of an all-way stop versus 20 collisions 3 years after the installation of an all-way stop at these locations. This represents a 73 percent reduction in collisions following the installation of an all-way stop at the 5 locations.

**Signal Warrant Analysis**

The most recent eight-hour turning movement count (August 2012) was applied to the Region’s Traffic Control Signal Warrant. Criteria used to establish the need for traffic control signals includes main-street volumes, side-street volumes, pedestrian volumes, roadway characteristics and the collision history. The results of the warrant assessment are shown below.

- Minimum Vehicle Warrant - 92%
- Delay to Cross Traffic Warrant - 71%
- Collision Warrant - 85%
In order for traffic signals to be warranted one of the above warrants must satisfy 100% or the Minimum Vehicle Warrant and Delay to Cross Traffic Warrant must both satisfy 80%. Our assessment indicates that traffic and pedestrian volume currently entering the Bleams Road/Queen Street intersection do not meet the need for traffic control signals at this time, however it is anticipated that traffic signals or a roundabout may be required by 2021 to manage expected increased traffic volumes.

As previously noted, the Region’s all-way stop warrant is met based on collisions.

**Public Input**

Information signs were installed at the intersection for 2 weeks starting April 15, 2013. The signs advised motorists of the proposal to install an all-way stop and invited public comment. Of the 23 respondents, 12 are in favour of the all-way stop and 11 are opposed. The majority of those that oppose the all-way stop control note that the intersection would be more hazardous, and there are already too many all-way stop locations in this area. As noted, based on the experience at other all-way stop controlled intersections, staff expects collisions to reduce by approximately 70 percent.

**Recommendations**

Based on the analysis contained herein, Transportation Division staff recommends that an all-way stop be installed at the Bleams Road and Queen Street intersection until such time that traffic control signals or a roundabout is required to manage increased traffic volumes. An interim all-way stop as recommended would include the following:

- Oversized stop signs and advance oversized stop ahead warning signs on all approaches;
- Temporary (30 days) “NEW” sunburst signs above the stop ahead warning signs;
- Overhead flashing red beacon;
- All-way tabs affixed to all stop signs; and
- Notification signage advising of the change posted 3 weeks in advance of the change being made.

This intersection is suitable for all-way stop control, similar to other rural intersections within the area. Motorists approaching the Queen Street/Bleams Road intersection should not be surprised of the all-way stop control, due to sufficient advance notice, advance warning signs and an overhead flashing red beacon.

Township of Wilmot staff supports this recommendation.

Those wishing to be advised of when this matter will be dealt with by the Regional Planning and Works Committee have been notified.

**CORPORATE STRATEGIC PLAN:**

This report addresses the Region’s goal to optimize the use of existing infrastructure (Strategic Objective 5.1).

**FINANCIAL IMPLICATIONS:**

The all-way stop will cost approximately $2,000 to implement, including modifications to the existing overhead flashing beacon. Funds to implement the all-way stop are available in the Region’s 2013 maintenance budget.
OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

The Council and Administrative Services Division will be required to prepare the amending by-law.

ATTACHMENTS:

NIL

PREPARED BY: Satinderjit Bahia, Engineering Technologist (Traffic)

APPROVED BY: Thomas Schmidt, Commissioner of Transportation and Environmental Services
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: June 18, 2013

FILE CODE: T08-50/GEN

SUBJECT: 2012 TRAFFIC SIGNAL CORRIDOR AND SIGNAL TIMING REVIEW

RECOMMENDATION:

For information

SUMMARY:

NIL

REPORT:

This report summarizes the traffic signal corridor and signal timing review completed in 2012.

Traffic signal progression or coordination of traffic signals within a network is one of the most effective methods of improving the traffic flow. Improvements to traffic flow can provide:

- Improved traffic capacity on roads with closely spaced traffic signals;
- Reduction in overall network travel time and delay;
- Reduction in the overall network number of stops;
- Reduction in collisions; and
- Reduction in noise levels, air pollution and fuel consumption.

The Region currently operates 480 traffic control signals, of which 445 are on a traffic control system and 35 operate independently. The signals that operate independently are generally in the rural areas.

Staff review the operation of approximately 90 traffic control signals each year. Priorities are set for areas that have not had a recent review, have operational problems and or have experienced changes in traffic patterns. Changes can occur due to new developments or the construction of new roads.

In 2012 Traffic Systems staff as part of its annual signals review, reviewed traffic signal coordination and traffic flows for 103 signals in 4 control areas. Figure 1 identifies the 4 signal control areas and Table 1 summarizes the arterials within each signal control area.
Figure 1: 2012 Signal Control Areas

Table 1 – 2012 Signal Control Areas and Arterials

<table>
<thead>
<tr>
<th>Control Area Name</th>
<th>Number of Intersections</th>
<th>Corridor Name</th>
<th>Section of Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 University/Columbia</td>
<td>32</td>
<td>University Avenue</td>
<td>Westmount Road to Lincoln Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Columbia Street</td>
<td>Westmount Road to Weber Street</td>
</tr>
<tr>
<td></td>
<td></td>
<td>King Street</td>
<td>Marshall Street to Blue Springs Drive</td>
</tr>
<tr>
<td>2 Highland/Victoria</td>
<td>32</td>
<td>Westmount Road</td>
<td>Queen Street to Stoke Drive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fischer-Hallman Road</td>
<td>Queen Street to Glasgow Street</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Highland Road</td>
<td>Westforest Trail to Stirling Avenue</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Victoria Street</td>
<td>Westforest Trail to Belmont Avenue</td>
</tr>
<tr>
<td>3 West Waterloo</td>
<td>28</td>
<td>Westmount Road</td>
<td>Glasgow Street to Bearinger Drive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fischer-Hallman Road</td>
<td>Glasgow Street to Laurelwood Drive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Erbsville Road</td>
<td>Keats Way Drive to Laurelwood Drive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>University Avenue</td>
<td>Westvale Gate to Westmount Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Erb Street</td>
<td>West Side Market to Westmount Rd</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Columbia Street</td>
<td>Erbsville Road to Westmount Road</td>
</tr>
<tr>
<td>4 Preston</td>
<td>11</td>
<td>King Street</td>
<td>Eagle Street to Concession Road</td>
</tr>
</tbody>
</table>
Field studies use a Global Positioning System Unit to track repeated staff vehicle movements along arterial roadways and to determine the location, types and extent of traffic delays. Collected data included:

- Progression between the intersections and along arterial roadways;
- Travel time;
- Delays;
- Number of stops; and
- Speed.

Staff analyzed the data and implemented actions to reduce delay and improve operational efficiency. Perfect synchronization for one direction of traffic on a street may result in frequent stops and delays to the other direction. Staff tries to establish balanced traffic flow in each direction for the corridors as well as balancing major crossing arterials. If balance cannot be achieved, then staff favours the arterial and the direction with heavier traffic flow by time of day. Table 2 summarizes the results of the review.

Table 2: Average Results of 2012 Signal Control Area Review for Traffic Flows

<table>
<thead>
<tr>
<th>Roadway Name</th>
<th>Installation date of New Timing</th>
<th>Number of Intersections</th>
<th>Direction</th>
<th>Average Travel Time (minutes : seconds)</th>
<th>Change</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Before</td>
<td>After</td>
<td>Change</td>
</tr>
<tr>
<td>1 Fischer-Hallman Road</td>
<td>March 2013</td>
<td>13</td>
<td>Northbound</td>
<td>7:47</td>
<td>6:56</td>
<td>-0:51</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Southbound</td>
<td>7:37</td>
<td>7:20</td>
<td>-0:17</td>
</tr>
<tr>
<td>2 Westmount Road</td>
<td>March 2013</td>
<td>11</td>
<td>Northbound</td>
<td>8:26</td>
<td>7:46</td>
<td>-0:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Southbound</td>
<td>8:10</td>
<td>7:34</td>
<td>-0:36</td>
</tr>
<tr>
<td>3 Highland Road</td>
<td>March 2013</td>
<td>13</td>
<td>Eastbound</td>
<td>3:43</td>
<td>3:09</td>
<td>-0:34</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Westbound</td>
<td>3:46</td>
<td>3:34</td>
<td>-0:12</td>
</tr>
<tr>
<td>4 University Avenue</td>
<td>Nov 2012</td>
<td>12</td>
<td>Eastbound</td>
<td>7:26</td>
<td>6:16</td>
<td>-1:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Westbound</td>
<td>6:06</td>
<td>5:34</td>
<td>-0:32</td>
</tr>
<tr>
<td>5 Columbia Street</td>
<td>Mar 2013</td>
<td>8</td>
<td>Eastbound</td>
<td>3:15</td>
<td>2:34</td>
<td>-0:41</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Westbound</td>
<td>2:56</td>
<td>2:46</td>
<td>-0:10</td>
</tr>
<tr>
<td>6 Erbsville Road</td>
<td>March 2013</td>
<td>4</td>
<td>Northbound</td>
<td>3:15</td>
<td>2:54</td>
<td>-0:21</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Southbound</td>
<td>4:04</td>
<td>3:18</td>
<td>-0:46</td>
</tr>
<tr>
<td>7 King Street (Preston)</td>
<td>May 2012</td>
<td>8</td>
<td>Northbound</td>
<td>4:19</td>
<td>3:33</td>
<td>-0:46</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Southbound</td>
<td>5:39</td>
<td>3:57</td>
<td>-1:42</td>
</tr>
<tr>
<td>8 King Street (Waterloo)</td>
<td>Nov 2012</td>
<td>7</td>
<td>Northbound</td>
<td>3:28</td>
<td>2:16</td>
<td>-1:12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Southbound</td>
<td>2:47</td>
<td>2:26</td>
<td>-0:21</td>
</tr>
<tr>
<td>9 Weber Street</td>
<td>Nov 2012</td>
<td>5</td>
<td>Northbound</td>
<td>3:45</td>
<td>3:51</td>
<td>+0:06</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Southbound</td>
<td>4:29</td>
<td>3:16</td>
<td>-1:13</td>
</tr>
</tbody>
</table>

Travel time and delay studies were only conducted for arterial roadways containing 3 or more coordinated signals in close proximity. On average, travel times were reduced by 13.2% as a result of staff reviews and actions.
Signal timings were also reviewed and optimized for the following intersections:

- Mill Street and Stirling Avenue
- Queen’s Boulevard and Patricia Avenue
- Queen’s Boulevard and Belmont Avenue
- Queen’s Boulevard and Elm Ridge Drive
- University Avenue and Resurrection Drive
- Erb Street and Erbville Court
- Erb Street and Gateview Drive/Beechwood Drive
- Erb Street and West Side Market
- Albert Street and Seagram Drive
- Westmount Road and Bearinger Road
- Albert Street and Bearinger Road
- Albert Street and Phillip Street
- Weber Street and Albert Street
- Lexington Road and Dearborn Place
- Concession Road and Lang’s Drive
- Concession Road and Bishop Street

Table 3 identifies the traffic signal control areas that are currently under review for 2013.

**Table 3: 2013 Signal Control Areas and Arterials.**

<table>
<thead>
<tr>
<th>Control Area Name</th>
<th>Number of Intersections</th>
<th>Corridor Name</th>
<th>Section of Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Weber/Lancaster</td>
<td>22</td>
<td>Weber Street</td>
<td>Cameron Street to Guelph Street</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lancaster Street</td>
<td>Frederick Street to Bridgeport Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Victoria Street</td>
<td>Lancaster Street to Duke Street</td>
</tr>
<tr>
<td>2 Bruce/Edna</td>
<td>12</td>
<td>Edna Street</td>
<td>Frederick Street to Victoria Street</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bruce Street</td>
<td>Frederick Street to Victoria Street</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Victoria Street</td>
<td>Frederick Street to Edna Street</td>
</tr>
<tr>
<td>3 East Kitchener</td>
<td>19</td>
<td>Lackner Boulevard</td>
<td>Fairway Road to Ottawa Street</td>
</tr>
<tr>
<td></td>
<td></td>
<td>River Road</td>
<td>Holbourn Drive to Lorraine Avenue</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ottawa Street</td>
<td>Lackner Boulevard to Franklin Street</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Victoria Street</td>
<td>Fountain Street to Natchez Road</td>
</tr>
<tr>
<td>4 King/Ottawa</td>
<td>23</td>
<td>King Street</td>
<td>Montgomery Road to Cedar Street</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Charles Street</td>
<td>Ottawa Street to Cedar Street</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Courtland Avenue</td>
<td>Ottawa Street to Madison Avenue</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ottawa Street</td>
<td>Hwy 7/8 EB Ramp to Mill Street</td>
</tr>
<tr>
<td>5 Kitchener CBD</td>
<td>23</td>
<td>Duke Street</td>
<td>Scott Street to Water Street</td>
</tr>
<tr>
<td></td>
<td></td>
<td>King Street</td>
<td>Frederick Street to Francis Street</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Charles Street</td>
<td>Benton Street to Francis Street</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Queen Street</td>
<td>Duke Street to Courtland Avenue</td>
</tr>
</tbody>
</table>
CORPORATE STRATEGIC PLAN:

This report addresses the Region’s objective to optimize existing road capacity to safely manage traffic throughout the region (Strategic Objective 3.3).

FINANCIAL IMPLICATIONS:

NIL

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

NIL

ATTACHMENTS:

Appendix A – Traffic Signal Control Area Map

PREPARED BY:  Jennifer Bertelsen, Analyst (Traffic Systems Management)

APPROVED BY:  Thomas Schmidt, Commissioner, Transportation and Environmental Services
TO: Chair Jim Wideman and Members of the Planning and Works Committee
DATE: June 18, 2013
FILE CODE: A02-40/SASC
SUBJECT: TEMPORARY PART-TIME SECONDEMENT TO SMART ABOUT SALT COUNCIL

RECOMMENDATION:
For Information

SUMMARY:
The Region has been implementing a voluntary program to certify contractors and facility owners that implement winter salt best management practices on their parking lots and sidewalks since 2007. The smart about salt program is a critical component of the Region’s approach to reducing salt levels in municipal water supply systems. In August 2009, Regional Council authorized the Commissioner of Transportation and Engineering to participate in the creation of a new non-profit corporation to develop, administer and promote the smart about salt program and to enter into an agreement to transfer all program materials to the new corporation. In June 2010, Regional Council authorized a grant for $30,000 to be provided to Smart About Salt Council (SASC) to assist in its financial position and ensure the program produced by SASC continues to benefit the Region.

Under the current Executive Director’s stewardship, the SASC is positioned to be financially stable by the end of 2014. Currently, the Executive Director position is fulfilled by a volunteer from the Board of Directors until sufficient income is generated to hire a full time person. As part of the strategy to achieve financial independence, a Water Services staff person has agreed to a part-time secondment to SASC for up to two years to transition the Executive Director position to a full time, paid position. As part of the agreement with the Region, SASC will reimburse the Region for Regional employee’s salary and benefits.

REPORT:
Introduction

In December 2007, Regional Council approved the launch of smart about salt, (E-07-113) a voluntary program to certify contractors and facility owners that implement winter salt best management practices on their parking lots and sidewalks. This program was designed and implemented to help reduce the impacts of winter salt on the quality of drinking water sources.

While the program continued to grow locally, interest outside the Region was also increasing in part due to the recognition that many contractors and facility owners operate businesses both within and outside the Region. Accordingly, in August 2009 Regional Council authorized the Commissioner of Transportation and Engineering to apply for the creation of a new non-profit corporation to develop, administer and promote the smart about salt program and to enter into an agreement to transfer all program materials to the new corporation (E09-079). The Region was a founding partner in the new
corporation in addition to Landscape Ontario (LO) and the Ottawa Chapter of the Building Owners and Managers Association (BOMA). In its deliberations on the new corporation, Regional Council chose to defer a recommendation to provide a start-up grant to the corporation.

In December 2009, the Region jointly filed an application for Letters Patent for a new federal non-profit corporation, Smart about Salt Council (SASC). The Letters Patent were received in late February 2010 and the first meeting of SASC was held at the Landscape Ontario office in Milton on March 8, 2010. As a result of delays in the issuance of the Letters Patent, the SASC was unable to fully capitalize on many seasonal opportunities for training and certification which would have generated income. Due to the seasonal nature of the work, it was anticipated that SASC would not be able to generate sufficient operating income during the summer and would have an operating shortfall for a further one to two years. In recognition of the importance of this program to reducing salt levels in municipal water supply systems and the existing commitment by Region staff in the development of this program, Regional Council provided a $30,000 grant to SASC in June 2010 (E10-050). Both BOMA and LO provided $5,000 grants to SASC as well.

This report presents a brief summary of the current financial status and structure of SASC and specifically that one Regional employee is to be seconded to SASC on a part time basis for an interim period to enable the corporation to become financially independent.

Smart about Salt Corporate Structure and Financial Status

The business of the SASC is underway and actively recruiting candidates for program certification. The website of the corporation can be found at smartaboutsalt.com. The SASC is managed by an Executive Director who reports to a Board of Directors. The Commissioner of Transportation and Environmental Services, or his designate, was elected as President of the Board of Directors in recognition of the Region of Waterloo’s role as creator of the smart about salt program and the importance of the program to improve municipal drinking water quality.

The Region, Landscape Ontario and BOMA - Ottawa have provided and will continue to provide in-kind support to the Corporation. The Region will continue to promote the program locally, monitor and assess the extent of local implementation, and occasionally provide financial contributions as per the Region’s financial/purchasing by-laws for projects and studies needed to improve the program. In addition the Region will continue, though the Board of Directors, to provide input into the direction of the non-profit to ensure training opportunities are provided locally and that the content of the program continues to address protection of drinking water within the Region of Waterloo. Landscape Ontario has provided an office and related telephone and internet links, has provided facilities for one training event, and has allowed SASC staff to share their booths at several trade shows. Both LO and BOMA-Ottawa have committed to marketing the program to their membership.

The 2010 four-year business plan for SASC conservatively projects that within 4 years the SASC will be financially stable. The major source of income is through training and certification fees for facilities and contractors. Because of the delays in the Letters Patent process, only one training session was held in the winter of 2009/2010 and only a few certification fees were received in part because SASC could not be promoted during this past season. Several training sessions were undertaken in the fall of 2010 and aggressive marketing launched to encourage companies
to enroll in the program and become certified. The founding partners’ grants were critical to the on-going operation of SASC. A summary of several key benchmarks showing program growth is provided in Appendix 1.

As can be seen in Appendix 1, participation in the smart about salt program has continued to grow and the corporation is well on its way to financial independence. Due to the lack of income in 2010 and to a lesser degree in subsequent years, a paid, full-time Executive Director was not possible. In late 2010, one of the board members volunteered to take on the Executive Director role for an interim period to help build momentum for the organization and financial independence. The current ED was paid as funds became available and more regularly since the middle to 2012. The current ED has provided notice that he will no longer undertake this “volunteer” position as of June 2013.

Under the current ED’s stewardship, the SASC is positioned to be financially stable by the end of 2014 with sufficient income to hire a full time person as Executive Director. To take the organization to this step, a transition strategy was developed consisting of splitting the responsibilities of the ED into 3 areas and seeking alternative ways to maintain development and expansion of the SAS program. These areas and the implementation strategy included contracting out day-to-day administrative functions to Landscape Ontario in May 2013 and changing the approach to training from classroom style to on-line delivery by December 2013. With these functions removed, the third key area, leadership and program expansion, could be undertaken on a part-time basis, preferably by someone familiar with the program and committed to its goals. The Region is well positioned to support this leadership function with its existing staff for the transition period. Leanne Lobe, Supervisor Source Protection Programs, has agreed to a part-time secondment to SASC. The secondment is for one day per week for the period July 2, 2013 through June 30, 2015. This end date was selected to align with the end of the winter maintenance program following two years of further program development.

Implications to the Region

The Region’s on-going participation in this program is important for protection of municipal water supplies. The Region will benefit in the long term by playing a direct role in running the program on a provincial scale as it will help achieving financial independence in this organization.

In accordance with the Region’s Secondment Policy (Section V, Policy 15), SASC will reimburse the Region for the time that Leanne Lobe is seconded to SASC. An agreement will be signed between the organizations in accordance with the Region’s signing policies.

CORPORATE STRATEGIC PLAN:

The development of the SASC supports the Corporate Strategic Plan Focus Area One – Environmental Sustainability’s objective to protect the quality of our water sources.

FINANCIAL IMPLICATIONS:

The Region will be reimbursed by SASC for salary and benefits during the secondment period.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Labour Relations and Legal Services staff were consulted in the development of the contract.
ATTACHMENTS

Appendix 1: Benchmarks for SASC Development

PREPARED BY:  
Eric Hodgins, Manager Hydrogeology and Source Water

APPROVED BY:  
Thomas Schmidt, Commissioner Transportation and Environmental Services
## APPENDIX 1

### Benchmarks for SASC Development

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>December 2010</th>
<th>December 2011</th>
<th>December 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Certified Contractors</td>
<td>23</td>
<td>26</td>
<td>55</td>
</tr>
<tr>
<td>Number of Registered Contractors</td>
<td>-</td>
<td>59</td>
<td>110</td>
</tr>
<tr>
<td>Number of Certified Facilities</td>
<td>0</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Number of Persons Completing Training</td>
<td>179</td>
<td>155</td>
<td>310</td>
</tr>
<tr>
<td>Approximate Income</td>
<td>$5,300*</td>
<td>$44,000*</td>
<td>$123,000*</td>
</tr>
</tbody>
</table>

* Excludes grants from the founding partners
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: June 18, 2013

FILE CODE: D18-01

SUBJECT: MONTHLY REPORT OF DEVELOPMENT ACTIVITY FOR MAY 2013

RECOMMENDATION:


SUMMARY:

In accordance with the Regional By-law 01-028, as amended, the Commissioner of Planning, Housing and Community Services has:

- Accepted the following plan of condominium;
- Draft approved the following plan of subdivision;
- Modified the following plan of subdivision;
- Released for registration the following plan of subdivision; and
- Approved the following official plan amendment.

REPORT:

City of Cambridge

Plan of Condominium Application 30CDM-13101
Date Accepted: May 27, 2013
Applicant: Aberdeen Homes
Location: 10 Cheese Factory Road
Proposal: To permit the development of 24 apartment units, 8 townhouse units, 18 parking units and a common element area associated with outdoor amenities, landscaping and access.

Regional Processing Fee: Paid May 6, 2013

City of Kitchener

Registration of Draft Plan of Subdivision 30T-07203
Draft Approval Date: March 9, 2010
Phase: Stage 1
Applicant: Hallman Construction Limited
Location: South of Stauffer Drive and east of Groh Drive
Proposal: To permit the development of 82 single detached, 12 semi-detached and 41 multiple units.

Regional Processing Fee: Paid February 28, 2013
Commissioner’s Release: May 21, 2013
City of Waterloo

Draft Approval of Plan of Subdivision 30T-11402
Applicant: Activa Holdings Inc.
Location: 480 Wilmot Line
Proposal: To permit the development of 10 to 18 single detached units.
Regional Processing Fee: Paid April 19, 2013
Commissioner’s Approval: May 1, 2013
Comes Into Effect: May 22, 2013

Modification of Draft Plan of Subdivision 30T-10401
Draft Approval Date: September 15, 2010
Applicant: University of Waterloo
Location: Fischer-Hallman Road, Bearinger Road and Westmount Road
Proposal: To modify Condition 30 to secure future road works at Fischer-Hallman Road and Street A.
Regional Processing Fee: Paid May 29, 2013
Commissioner’s Approval: May 29, 2013
Came Into Effect: Immediately

Township of Wellesley

Official Plan Amendment No. 5
Applicant: B.G. Frey Collectables Inc.
Location: Herrgott Road
Proposal: To change the designation of the subject lands from Agriculture Resource Area to Rural Settlement Area by expanding the Hawkesville Settlement Area. Official Plan Amendment No. 5 will result in the conversion of this site to an Employment Area, in fulfillment of the Township’s identified need for such lands.
Regional Processing Fee: Paid January 21, 2013
Commissioner’s Approval: May 7, 2013
Comes Into Effect: May 28, 2013

Residential Subdivision Activity January 1, 2013 to May 31, 2013

<table>
<thead>
<tr>
<th>Area Municipality</th>
<th>Units in Residential Registered Plans</th>
<th>Residential Units Draft Approved</th>
<th>Pending Plans (Units Submitted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Kitchener</td>
<td>162</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Waterloo</td>
<td>0</td>
<td>43</td>
<td>0</td>
</tr>
<tr>
<td>Cambridge</td>
<td>122</td>
<td>26</td>
<td>203</td>
</tr>
<tr>
<td>Woolwich</td>
<td>0</td>
<td>0</td>
<td>531</td>
</tr>
<tr>
<td>Wilmot</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>North Dumfries</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Wellesley</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Region of Waterloo</td>
<td>284</td>
<td>69</td>
<td>734</td>
</tr>
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</table>

*The acceptance and/or draft approval of plans of subdivision and condominium processed by the City of Kitchener under delegated approval authority are not included in this table.
For comparison the following table has also been included:

### Residential Subdivision Activity January 2012 to May 31, 2012

<table>
<thead>
<tr>
<th>Area Municipality</th>
<th>Units in Residential Registered Plans</th>
<th>Residential Units Draft Approved</th>
<th>Pending Plans (Units Submitted)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Kitchener</em></td>
<td>194</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Waterloo</td>
<td>389</td>
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<td>0</td>
</tr>
<tr>
<td>Cambridge</td>
<td>55</td>
<td>0</td>
<td>26</td>
</tr>
<tr>
<td>Woolwich</td>
<td>0</td>
<td>0</td>
<td>154</td>
</tr>
<tr>
<td>Wilmot</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>North Dumfries</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Wellesley</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Region of Waterloo</td>
<td>638</td>
<td>0</td>
<td>180</td>
</tr>
</tbody>
</table>

*The acceptance and/or draft approval of plans of subdivision and condominium processed by the City of Kitchener under delegated approval authority are not included in this table.*

### Area Municipal Consultations/Coordination:

These planning approvals, including consultation with Area Municipalities, have been completed in accordance with the Planning Act. All approvals contained in this report were supported by the Area Municipal councils and/or staff.

### CORPORATE STRATEGIC PLAN:

This report reflects actions taken by the Commissioner in accordance with the Delegation By-law adopted by Council. The activities described in this report are operational activities consistent with objectives of Focus Area A: Growth Management and Prosperity.

### FINANCIAL IMPLICATIONS:

NIL

### OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

NIL

### PREPARED BY:

*Andrea Banks, Program Assistant*

### APPROVED BY:

*Rob Horne, Commissioner, Planning Housing and Community Services*
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: June 18, 2013

FILE CODE: D01-40

SUBJECT: FULL REMOVAL OF BRIDGEPORT DEVELOPMENT CAP

RECOMMENDATION:

THAT the Regional Municipality of Waterloo remove the remaining development cap in the Bridgeport area of the Cities of Kitchener and Waterloo, as described in Report No. P-13-062, dated June 18, 2013.

SUMMARY:

The Region of Waterloo established a development cap in the Bridgeport area in 1996 to prevent further traffic congestion and delay across the Grand River and at other Bridge Street intersections in the area. The intersection of Bridge Street and Lancaster Street was converted to a roundabout in 2009 which improved traffic flow. As a result, the first phase of the development cap was removed to allow some development in the area to proceed. Traffic Operations in the area have been monitored, the roundabout is operating acceptably with spare capacity in the peak hours. Today, there are only about 200 potential new units in the area that could be developed beyond what is currently allowed. Also, the new Highway 7 (Kitchener to Guelph) is projected to reduce traffic in this area by providing an alternative route, and the Ministry of Transportation has scheduled construction of the highway starting in 2015, as confirmed in the Southern Highways Program. Staff is now recommending the remaining phase of the development cap be removed in the Bridgeport area. Staff of the Cities of Kitchener and Waterloo also support this action.

REPORT:

A development cap was established by the Region of Waterloo in the Bridgeport area (Attachment 1) in 1996, implemented through Report PC-96-012 (February 13, 1996) and continued, as described in Report E-08-001 (January 8, 2008). This cap was established because of significant traffic congestion and delays crossing the Bridgeport Bridge and congestion at several Bridge Street intersections in the area. The improvements studied in the 1996 Bridge Street Area Transportation Study could not significantly mitigate this congestion and delay because they also attracted more external traffic to the area.

In January 2008, the Region completed the Bridgeport Bridge and Bridge Street Improvements Class Environmental Assessment (EA), which recommended lifting the development cap in two phases. The first phase would permit 65% of potential development within the area to proceed after the Bridge Street and Lancaster Street roundabout was operational. The remaining development cap was planned to be lifted after a monitoring program demonstrated that the roundabout was able to accommodate additional traffic from development, or the new Highway 7 (Kitchener to Guelph) was operational.

The first phase of development under the cap (representing about 800 units) was subsequently allowed to proceed under the basis outlined above. Those developments were:
Woolwich Estates Subdivision (Waterloo): 191 new units
Galantai (Cook Homes) Subdivision (Waterloo): 61-72 new units
Activa-Bridgeport North Subdivision (Kitchener): 395 new units
Auburn Apartment (Waterloo): 127 new units

Construction and occupancy of the units are proceeding. Area municipal and Regional staff has also confirmed that there is minimal development potential within the area beyond what is already permitted (about 200 units, comprised of 30 units over the next few years and 170 units longer term).

Staff has been monitoring traffic operations at the roundabout every year since it was constructed. Traffic at the intersection of Bridge and Lancaster Streets and across the Bridgeport Bridge showed little growth between 1996 and 2006, despite significant growth in the surrounding East Waterloo areas. This means that traffic had shifted to other times during the peak periods, or was using alternative routes, prior to the roundabout increasing the capacity of the intersection. Since construction of the roundabout in 2009, PM peak hour traffic across the bridge has grown by about 3% per year, which cannot be solely attributed to the current pace of development in the immediate area.

The roundabout currently has extra capacity during the peak hours of traffic and can accommodate additional traffic that would be generated by allowing development to proceed in the area. While queues are experienced during peak conditions, they are much shorter than they were when the intersection had traffic signals. A review of the intersection monitoring video has demonstrated that such queues continue progressing towards the roundabout (i.e. rolling queues) and dissipate quickly. Furthermore, while the intersection was a major source of citizen complaints prior to the roundabout, complaints about delays are now infrequent. Should traffic exceed the capacity during the AM/PM peak hours, some traffic could shift to other times during the peak periods by starting the trip earlier or later. Additionally, since past studies have shown that 60% of traffic does not stop in the area, but instead travels through it, traffic would be predisposed to take alternative routes if Bridge Street became too congested.

The new Highway 7 (Kitchener to Guelph) is projected to reduce traffic at the roundabout because it will provide an alternative route over the river. The Ministry of Transportation has recently confirmed that the new Highway 7 will be constructed and it is currently listed in the Southern Highways Program with a proposed construction start in 2015.

Consequently, staff is recommending that the remaining phase of the development cap for the Bridgeport area be removed. The roundabout is operating well and has spare capacity in the peak hours, most of the development potential in the cap area is already permitted, and the new Highway 7 is scheduled for construction.

Area Municipal Consultation/Coordination

Planning, Housing and Community Services staff have corresponded regularly with their counterparts at the Cities of Kitchener and Waterloo regarding development applications and the status of the development cap. Planning staff at both cities support the recommendation to remove the development cap and have been sent a copy of this report.

CORPORATE STRATEGIC PLAN:

Removal of the development cap would be consistent with Strategic Objective 2.1 (Encourage compact, livable urban and rural settlement form) because future developments will occur within the
existing built boundary and use existing infrastructure. The Bridge Street and Lancaster Street roundabout itself is consistent with Strategic Objectives 2.2 (Develop, optimize and maintain infrastructure to meet current and projected needs) and 3.3 (Optimize existing road capacity to safely manage traffic throughout Waterloo Region).

FINANCIAL IMPLICATIONS:

NIL

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Transportation and Environmental Services has been consulted in the review of traffic operations at the roundabout.

ATTACHMENT:

Attachment 1 – Bridgeport Development Cap Area

PREPARED BY:  Craig Hockaday, Principal Planner
                Geoffrey Keyworth, Senior Transportation Planning Engineer

APPROVED BY:  Rob Horne, Commissioner, Planning, Housing and Community Services
TO: Chair Jim Wideman and Members of the Planning and Works Committee
DATE: June 18, 2013
FILE CODE: T15-40/58 KIT/C 13-20/CA
SUBJECT: AMENDMENT TO REGIONAL MUNICIPALITY OF WATERLOO CONTROLLED ACCESS BY-LAW #58-87 FOR ACCESS TO REGIONAL ROAD #58 (FISCHER-HALLMAN ROAD), CITY OF KITCHENER

RECOMMENDATION:

THAT the Regional Municipality of Waterloo Controlled Access By-law #58-87 be amended to include a temporary emergency access on the west side of Regional Road #58 (Fischer-Hallman Road) approximately 120 metres north of the Seabrook Drive/Fischer-Hallman Road roundabout, in the City of Kitchener as explained in Report No. P-13-064, dated June 18, 2013.

SUMMARY:

Tru-Villa Incorporated and 2040796 Ontario Limited are developing a mixed use residential / commercial development known as the Trillium Community Subdivision on the northwest corner of the intersection of Regional Road #58 (Fischer-Hallman Road) and Huron Road (please see Appendix A). Construction is to commence in 2013.

The subdivision would be accessed through the extension of Seabrook Drive on the west side of Fischer-Hallman Road in Phases One, Two and Three. In order to comply with the City of Kitchener emergency service policy requirements, a temporary emergency access to Fischer-Hallman Road approximately 120 metres north of Seabrook Drive is required to accommodate development of these phases (please see Appendix B). The temporary access would be used by emergency vehicles only and would be maintained and secured with a gate on the developers’ lands. The temporary emergency access would be required until the opening of Ludolph Street or Shoreacres Drive to Huron Road in future phases of the subdivision. The temporary emergency access would then be closed at the developers’ cost.

City of Kitchener Planning staff support the location of the proposed temporary emergency access from Fischer-Hallman Road.

Fischer-Hallman Road is designated as a Controlled Access-Prohibited Road from Regional Road #4 (Ottawa Street) to Regional Road #12 (New Dundee Road) under the Region’s Controlled Access By-Law #58-87. An amendment to this By-Law is required prior to the issuance of an Access Permit by Regional staff for the temporary emergency access.

REPORT:

By-law #58-87, “A By-law to Designate and Regulate Controlled Access Roads”, was enacted to control the construction or alteration to the geometric design of any private means of access to a Regional road. All Regional roads are included in either Schedule “A” or Schedule “B” of the By-law. Regional roads included in Schedule “A” (Controlled Access – Prohibited), include arterial roads and freeways where access to these roads must be restricted due to high traffic volume and speed. All
requests for changes to existing accesses or for new accesses require an amendment to the By-law. Regional roads included in Schedule “B” (Controlled Access – Regulated) include all remaining arterial roads within the Regional road system. Typically, these roads are front-lotted with access available only to the Regional road or are comparatively lower volume roads.

Tru-Villa Incorporated and 2040796 Ontario Limited have acquired and consolidated properties at 1683 Huron Road and 1571 Fischer-Hallman Road on the northwest corner of Regional Road #58 (Fischer-Hallman Road) and Huron Road in the City of Kitchener. The intent is to develop a mixed use residential / commercial development known as the Trillium Community Subdivision, with construction to commence in 2013.

The subdivision is proposed to be developed through the extension of Seabrook Drive on the west side of Fischer-Hallman Road in Phases One, Two and Three. In order to comply with City of Kitchener emergency service policy requirements, a temporary emergency access to Fischer-Hallman Road approximately 120 metres north of Seabrook Drive is also required to accommodate development of these phases (please see Appendix B). The temporary access would be used by emergency vehicles only and would be maintained and secured with a gate on the developers’ lands. The temporary emergency access would be required until the opening of Ludolph Street or Shoreacres Drive to Huron Road in future phases of the subdivision. The temporary emergency access would then be closed at the developers’ cost.

City of Kitchener Planning staff support the location of the proposed temporary emergency access from Fischer-Hallman Road.

Fischer-Hallman Road is designated as a Controlled Access – Prohibited Road from Regional Road #4 (Ottawa Street) to Regional Road #12 (New Dundee Road) under the Region’s Controlled Access By-law #58-87. Approval of the By-law amendment to permit the temporary emergency access from Fischer-Hallman Road would be required by Regional Council prior to the issuance of an Access Permit by staff.

Staff has confirmed that the emergency access meets minimum standards and recommend the approval of the proposed By-law amendment.

**Area Municipal Consultation/Coordination**

City of Kitchener Planning staff support the location of the proposed temporary emergency access from Fischer-Hallman Road.

**CORPORATE STRATEGIC PLAN:**

Managing access to the Regional Road system is integral to the development approval process and is represented in Focus Area 2: Growth Management and Prosperity: Manage growth to foster thriving and productive urban and rural communities.

**FINANCIAL IMPLICATIONS:**

The developers would be responsible for the cost to construct the temporary emergency access including the installation and maintenance of a gate on the developers’ lands or any other associated works. Once proposed Ludolph Street is constructed to Huron Road through future phases of the proposed subdivision, the temporary emergency access would be closed at the developers’ cost.
OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Corporate Resources would be required to amend Controlled Access By-law #58-87. Upon issuance of a Regional Access Permit, Transportation Engineering would issue a Regional Work Permit to perform works within the Regional right of way on Fischer-Hallman Road.

ATTACHMENTS:

Appendix A  -  Key Map showing the location of the Proposed Trillium Community Subdivision.
Appendix B  -  Location of the proposed temporary emergency access and proposed amendment to Controlled Access By-law #58-87.

PREPARED BY: Joginder Bhatia, Transportation Planner

APPROVED BY: Rob Horne, Commissioner, Planning, Housing and Community Services
APPENDIX B

PROPOSED AMENDMENT TO CONTROLLED ACCESS BY-LAW #58-87

BLOCK 8
MIXED USE

BLOCK 7
MIXED USE

SEABROOK DRIVE

© Regional Municipality of Waterloo 2013
Map Source: MTE
Report: P-13-065

TO: Chair Jim Wideman and Members of the Planning and Works Committee
DATE: June 18, 2013
FILE CODE: D28-60(A)

SUBJECT: ELECTRONIC FARE MANAGEMENT SYSTEM (EFMS) UPDATE

RECOMMENDATION:

For information.

SUMMARY:

The Regional Transportation Master Plan and the 2011–2014 Grand River Transit Business Plan, recommended an electronic fare payment system for Grand River Transit vehicles and the rapid transit system. The Electronic Fare Management System (EFMS) would be an electronic smart card transit fare solution for the Region of Waterloo that would be used for fare payment on GRT buses, Mobility Plus, LRT and aBRT service. Rather than paying with tickets, flashing a pass, or using a paper transfer, transit customers would use a smart card to pay their fare or to transfer. Cash payment would also continue to be accepted.

Smart card based electronic payment for transit service is in operation throughout North America. In Ontario, the cities of Brantford and Kingston have implemented systems, and the City of London has a project underway with a pilot phase expected in 2014. As well, the Presto fare system, offered by Metrolinx, is in operation on GO Transit service as well as on local transit in the Cities of Brampton, Hamilton and Mississauga, the Town of Oakville and the Regional Municipalities of Durham and York. An upgraded version of Presto is in a pilot phase in the City of Ottawa and is in the early stages of implementation in the City of Toronto.

The EFMS would help ensure seamless integration of GRT bus, MobilityPLUS and ION rapid transit service. Fares and transfers would be accepted across GRT bus, ION LRT and MobilityPLUS services. As the ION LRT and aBRT are proposed to use a Proof-of-Payment (POP) fare system where fares are paid prior to boarding, the EFMS should include Ticket Vending Machines (TVMs) to be installed on ION platforms. Platform TVMs would allow customers without a smart card to purchase a single-ride ticket using cash. Smart card readers would also be installed on platforms, to allow customers to pay with their smart card prior to boarding. A POP fare system reduces LRT boarding times as well, since passengers can use any of the multiple doors available on the Light Rail Vehicle.

The existing GRT fare structure would be comprehensively reviewed during the development of system specifications to ensure important fare products can continue to be offered by the new EFMS. The enhanced functionality of the EFMS provides the opportunity to explore innovative fare solutions such as fare by distance or by time, and would support an initiative to streamline the subsidized transit fare programs offered through Social Services. In addition, GRT’s current fareboxes are obsolete, and would have to be replaced or upgraded to support the new EFMS system. The enhanced functionality provided by the new EFMS would create a potential for cost savings by eliminating duplication of functions between fareboxes and the EFMS.

Currently, the project team is working to refine draft Technical Specifications for the system, which would be included in a Request for Proposals (RFP) later this year. Staff has reviewed the Region’s
business objectives for transit fare collection and developed a draft list of mandatory, desirable and optional system functionalities. The technical specifications would be included in a Request for Information (RFI) to be distributed to potential vendors. During this Market Sounding phase, staff would consult with system vendors with a view to understanding the current state of the market.

The Presto fare system, offered by Metrolinx, would be included in the RFI process. This would provide staff with the opportunity to compare Presto’s functionality with other vendors’ products. Staff was informed by Metrolinx that Presto was procured by the Province of Ontario through a public process, and Metrolinx does not respond to RFPs. After the RFI process, if Presto’s functionality is deemed to meet the Region’s needs, staff may recommend entering negotiations with Presto. If the Region feels Presto’s functionality will not meet its needs then it could enter the RFP process.

The results of the Market Sounding would be reviewed by the project Steering Committee in August. Final specifications would then be prepared and a summary report submitted to the Planning and Works Committee in the fall of 2013 for consideration before an RFP would be issued.

REPORT:

The Regional Transportation Master Plan, as detailed in Report P-10-059, dated June 22, 2010 recommends that the Region develop and implement smart card technology for transit to improve fare collection systems and provide a more flexible fare collection system across the region. In addition, the 2011 – 2014 Grand River Transit Business Plan, as described in Report P-12-013, dated January 31, 2012, includes a recommendation that the Region initiate a project to implement an electronic fare collection system, including conducting research on potential for “open payment” process, which uses contactless credit cards issued by financial institutions.

The Electronic Fare Management System (EFMS) would be an electronic transit fare solution for the Region of Waterloo to be used for fare payment on GRT buses, Mobility Plus, and ION LRT and aBRT service. The system would support seamless transferring between all transit modes. The EFMS would use a contactless electronic Smart Card that a customer would tap to a reader to register a fare payment on a GRT bus or on a Rapid Transit platform. Cash payment would also continue to be accepted.

The EFMS would help ensure seamless integration of GRT bus, MobilityPLUS and ION rapid transit service by integrating multiple fare payment types across multiple transit modes. The ION service is planned to use a Proof of Payment (POP) system where fares are paid before boarding. A smart card would retain the necessary record of payment for this system, while simplifying transfers between RT, GRT bus and/or MobilityPLUS service. Bus transit would continue to accept payment on boarding, with electronic smart card readers. MobilityPLUS vehicles would also be equipped with electronic readers.

In addition to supporting seamless integration of transit modes, the EFMS would:

- Provide improved customer convenience
- Contribute to improved productivity and financial performance of Grand River Transit
- Increase flexibility in the creation of fare products targeted at key customer demographics
- Support the use of diverse and evolving fare media throughout its operating life, and
- Speed customer boarding and reduce Transit Operators’ workload related to passenger fares

Card Based and Account Based Systems

Most Smart Card payment systems in operation today are closed, card based systems. An emerging trend in the transit industry is the adoption of open, account based systems. The project team is reviewing the benefits and challenges offered by both approaches. Bids from vendors of both types of system would be considered.

In a card based system, the card acts as an electronic wallet or "e-purse" that carries a cash balance
that can be used to purchase transit trips by ‘tapping’ the card to a reader on the transit vehicle. Typically the cards are recharged by online purchase, by using cash at a retail agent, or by preauthorized payment. When a customer taps the card, it is validated by the card reader and the value of a trip is deducted. Some transit agencies encourage frequent use by allowing free trips after a minimum number have been taken within a month. In this system, the vehicle reader is updated in the evening with lists of valid/invalid card numbers, and balance changes.

An account based system relies on the card to act as a pointer to an account held by the transit service provider or a third party, typically a bank or credit card company, or other trusted source. When the customer taps the card, the smart card reader communicates wirelessly with a financial clearing house to validate the account status and carry a balance for later reconciliation. This type of system offers a large amount of customer flexibility but requires that smart card readers be permanently connected to the internet and creates challenges in reconciliation of ridership and revenue when dealing with a potentially very large number of payment sources. Service fees are typically charged on a per transaction basis by account holders in this type of system. Account based systems that include the ability to use credit or debit cards are often called ‘Open Payment’ systems because of the lack of restriction in card type. Implementation of this type of system is an emerging trend in the transit industry.

Emerging Payment Technology

The mobile payment industry is evolving rapidly. Most currently available smartphones include the ability to use Near Field Communications (NFC) which allows the phone to replicate the function of a smart card. This function has been in use for some time in other parts of the world and is becoming available in Canada. Other emerging trends are embedding smart card circuitry into commonly carried items such as key fobs or jewellery, and the use of high resolution displays on mobile phones for electronic ticketing. The EFMS project will consider the ability of vendors to effectively incorporate these features and to be able to be adapted to other payment methods as they become available through the life of the system.

Smart Card Transit Fare Systems in Ontario

Electronic fare systems are in operation or under development in many Ontario municipalities, as shown in Table 1, below:

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Fare System</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brantford</td>
<td>B-Card</td>
<td>In operation since December 2007</td>
</tr>
<tr>
<td>Brampton, Burlington, Hamilton, Mississauga, Oakville, Durham Region, York Region</td>
<td>Presto</td>
<td>Presto Version 1, pilot program 2007, rollout 2009 – present</td>
</tr>
<tr>
<td>Ottawa</td>
<td>Presto</td>
<td>Presto Version 2, pilot phase</td>
</tr>
<tr>
<td>Toronto</td>
<td>Presto</td>
<td>Presto Version 2, early stages of implementation</td>
</tr>
<tr>
<td>Kingston</td>
<td>MyCard</td>
<td>In operation since August 2008</td>
</tr>
<tr>
<td>London</td>
<td>System provided by Scheidt &amp; Bachmann GmbH</td>
<td>Early stage of implementation, roll-out expected in 2014</td>
</tr>
</tbody>
</table>

The systems in operation in Brantford and Kingston, as well as the system under development in London are card-based, closed systems. Version 1 of the Presto system as implemented in the Greater Toronto Area is also a card-based system though account-based functionalities are being added with Version 2, also called Presto Next Generation.
Rapid Transit Integration

The planned fare system for the ION LRT is a Proof-of-Payment system where transit fares are paid on the platform prior to boarding. The aBRT would also use this system once LRT enters service. This type of system allows boarding times to be kept to a minimum, which also minimizes the time ION trains and buses must spend at stations. In this system, passengers must carry a valid receipt during their journey and be prepared to present it to a fare inspector if asked. As a result the EFMS should include Ticket Vending Machines (TVMs) to be installed on ION platforms. These machines would allow customers to purchase a ticket using cash, or to tap the smart card for fare payment or to transfer. A paper ticket would function as a receipt and a transfer for cash paying customers. The receipt and transfer would be electronic for customers using the Smart Card. Smart card readers would also be installed on platforms, to allow customers to pay with their smart card prior to boarding.

GRT Fares

The EFMS would replace all tickets and passes for transit travel in the Region. The capacity of the selected system to accommodate reduced fares and special purpose passes would therefore affect the number and type of GRT fares available. The GRT fare structure should be reviewed before finalizing a system specification to ensure important fare products can continue to be offered in the new format. In addition, the enhanced functionality of the EFMS provides the opportunity to explore innovative fare solutions such as fare by distance or by time. This review of the GRT fare structure also supports an initiative to streamline the subsidized transit fare programs offered by Social Services.

Typically, electronic fare systems allow a single ride fee as well as a predetermined number of discount fare types. These can include multi-ride discounts spanning a range of times as well as special purpose discount programs including reduced fares for elementary and high school students, senior citizens, U-Passes for post-secondary students and special purpose discount programs offered in partnership with Social Services. The selected system must be able to meet all current and future fare needs for the Region.

GRT Fareboxes

The existing GRT fareboxes are obsolete and need to be replaced or upgraded to be compatible with the new EFMS. The implementation of the EFMS creates the opportunity to review the necessary farebox functionality, creating a potential cost savings by eliminating duplication of functions between fareboxes and the EFMS. Fareboxes may still be procured separately, depending on the capability of the selected EFMS vendor, but the specification is dependent on the outcome of the GRT fare system review and the final specification for the EFMS.

With electronic payment available for all fares except the cash fare, it may be advisable to stop accepting bills for transit fare payment. Removing the requirement to maintain bill transport mechanisms, and to separate and count bills in the coin room would offer a substantial capital and operating cost savings. Bills currently represent approximately 1% of GRT annual revenue.

Process

The EFMS project is broken into six phases, as summarized below.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Goal</th>
<th>Key Tasks</th>
<th>Expected end date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needs Assessment</td>
<td>Attain a clear understanding of the Region’s needs</td>
<td>• Review current system</td>
<td>June 2013</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Internal &amp; external stakeholder meetings</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Review system architecture</td>
<td></td>
</tr>
</tbody>
</table>
In the Needs Assessment phase of the project, staff reviewed the Region’s business objectives for transit fare collection and developed a draft list of mandatory, desirable and optional system functionalities. This information, together with a compliance matrix, would be supplied to system vendors in the Market Sounding phase.

The goal of the Market Sounding process is to allow staff to consult with some EFMS and farebox systems integrators in the market with a view to understanding the current ‘state-of-the-market’. This would be accomplished using a Request for Information (RFI). This process should confirm whether the required functionalities can be provided in systems to be supplied by a reasonable enough cross section of system integrators to ensure that an RFP would attract several competitive proposals from quality bidders.

The Presto fare system, offered by Metrolinx, would be included in the Market Sounding process. This would provide staff with the opportunity to compare Presto’s functionality with other vendors’ products. Staff was informed by Metrolinx that Presto was procured by the Province of Ontario through a public process, and Metrolinx does not respond to RFPs. If the Market Sounding process indicates that the Presto system would be able to meet the Region’s needs, staff may recommend entering into negotiations with Presto. If those negotiations do not prove successful, or if the Region feels Presto would not meet its needs, then it may enter the RFP process to acquire an alternative solution.

The Steering Committee is expected to review the results of the upcoming Market Sounding phase in August, and based on the Committee’s feedback, work would begin on developing final specifications for a Request for Proposals (RFP). A summary report would be submitted to the Planning and Works Committee in the fall of 2013 before an RFP would be issued.
Area Municipal Consultation/Coordination

Information on this project has been presented to the Region’s Parking Co-ordination Committee which includes staff from the Cities of Cambridge, Kitchener and Waterloo. Area municipal staff will be kept informed of the status of the EFMS project and will receive a copy of this report.

CORPORATE STRATEGIC PLAN:

The EFMS project supports Regional Council’s Strategic Objective 3.1 “Implement a Light Rail Transit System in the Central Transit Corridor fully integrated with an expanded conventional transit system”.

FINANCIAL IMPLICATIONS:

The approved 2013 GRT Capital Budget and 10 Year Forecast includes $8,096,000 from 2013 – 2015, to be funded from development charges and the RT/RTMP Reserve Fund, to complete the EFMS project. This funding is intended to support the implementation of the EFMS through to the Commissioning phase. Funds for any ongoing operating or support costs will be quantified and included in the 2015 GRT operating budget subject to Council approval. The approved Rapid Transit (RT) project budget includes funding for the purchase and installation of TVM’s at all RT platforms.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

The EFMS project is managed by a Steering Committee and a Project Team with representation from Planning, Housing and Community Services, Transportation and Environmental Services, Corporate Resources and Finance.

ATTACHMENTS:

NIL

PREPARED BY:  Gethyn Beniston, Project Manager, Transportation Planning

APPROVED BY:  Rob Horne, Commissioner, Planning, Housing and Community Services
REGION OF WATERLOO
PLANNING, HOUSING AND COMMUNITY SERVICES
Transportation Planning

TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: June 18, 2013  FILE CODE: D09-40(A)

SUBJECT: TRAFFIC CALMING MEASURES ON LOCAL STREETS IN KITCHENER AND IN OTHER AREA MUNICIPALITIES WITH GRAND RIVER TRANSIT ROUTES

RECOMMENDATION:

THAT the Regional Municipality of Waterloo endorse Report No. P-13-066, dated June 18, 2013, regarding traffic calming measures on streets with Grand River Transit Routes;

AND THAT this report be forwarded to the City of Kitchener for consideration in its current review of traffic calming measures and to all other Area Municipalities.

SUMMARY:

Traffic calming measures, generally defined as “the combination of mainly physical measures on streets”, are increasingly being used to address concerns about vehicle speeds through local neighbourhoods. In many cases, vertical measures, such as speed humps, speed tables or raised crosswalks, are being used. Relative to horizontal measures, such as curb extensions or narrowed travel lanes, vertical measures tend to have a larger impact on transit operations and customer comfort. As a result, Regional staff is recommending that less reliance be placed on vertical traffic calming measures for streets where GRT bus routes operate.

Monitoring of transit operations and analysis of bus running times has determined that routes with a significant number of vertical measures on them tend to have increased running times. Transit customers also experience a more uncomfortable ride each time a bus traverses a vertical traffic calming measure. Transit staff conducted a cross-Canada survey and found similar concerns with the use of vertical traffic calming measures at other transit systems. A number of transit agencies indicated that policies exist in their municipalities to restrict the type of traffic calming used on streets with transit service, often prohibiting vertical measures. Transit agencies operating on streets with vertical traffic calming measures noted the negative impact they had on transit operations and rider comfort. The stated preference was for non-vertical traffic calming measures.

Regional staff has discussed the negative impact of vertical traffic calming measures on transit operations and rider comfort with the City of Kitchener. The City of Kitchener is currently evaluating potential traffic calming measures on streets with existing bus routes: Morrison Road, Highview Drive, Yellow Birch Drive and Golden Meadow Drive. The City is also in the process of updating their traffic calming policy. City of Kitchener staff has indicated that they will consider the recommendations of this report when developing this year’s traffic calming plans and during the traffic calming measures policy update. The recommendations contained in this report should also be applicable to other Area Municipalities with local roads that are used by Grand River Transit.

The Region is proposing to place raised crosswalks at some roundabouts to reduce speeds where there is heavier pedestrian traffic. The design is modified to have a longer top and more gradual exit slope which is expected to have less of an impact on bus operations than other vertical measures.
REPORT:

Traffic calming measures are increasingly being used to deal with concerns about the speed and volume of automobile traffic through local neighbourhoods. The three cities in Waterloo Region have introduced policies that provide some guidance on when and how traffic calming measures should be implemented. This report addresses concerns regarding the proliferation of vertical traffic calming measures being introduced on streets that are used by Grand River Transit (GRT) buses. Vertical traffic calming measures have a negative impact on transit operations and rider comfort. Traffic calming measures can be complementary to efficient transit operations and a positive rider experience. Typically, bus stops on local collector roads are spaced an average of 250 m apart. Buses stopping to pick up and drop off riders slow down the speed of following traffic.

Staff generally support the concept of traffic calming, as it can improve neighbourhood streets for non-vehicular users. Instead of vertical traffic calming measures which have a negative impact on transit operations and rider comfort, staff prefer horizontal traffic calming measures such as curb extensions, on-road parking bays or raised median islands or passive traffic calming such as radar speed signs.

What is Traffic Calming?

The technical definition of traffic calming is: “the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behaviour and improve conditions for non-motorized street users,” as outlined in the 1998 Canadian Guide to Neighbourhood Traffic Calming produced by the Transportation Association of Canada.

While a number of different approaches can be used to calm traffic, a toolbox of different measures in the City of Waterloo’s Transportation Master Plan gives a list of the types of tools that could be used, grouped into active measures and passive measures (Table 1). Active measures can be further divided into measures of vertical deflection or of horizontal deflection, in which the former induce vehicles to reduce their speed through vertical impediment, and the latter induce vehicles to reduce their speed through lateral movement.

Table 1 – Traffic Calming Measures Toolbox

<table>
<thead>
<tr>
<th>Active Traffic Calming</th>
<th>Horizontal Deflections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vertical Deflections</strong></td>
<td><strong>Horizontal Deflections</strong></td>
</tr>
<tr>
<td>• Speed Humps, speed Cushions and speed Tables</td>
<td>• Narrowed Travel Lanes</td>
</tr>
<tr>
<td>• Raised Crosswalks</td>
<td>• Curb Extensions</td>
</tr>
<tr>
<td>• Raised Intersections</td>
<td>• Raised Median Islands</td>
</tr>
<tr>
<td>• Textured Pavement</td>
<td>• On-Road Parking Bays</td>
</tr>
<tr>
<td></td>
<td>• On-Road Exclusive Bike Lanes</td>
</tr>
<tr>
<td></td>
<td>• Modern or Mini-Roundabouts and Neighbourhood Traffic Circles</td>
</tr>
<tr>
<td></td>
<td>• Intersection Channelization</td>
</tr>
<tr>
<td></td>
<td>• Directional Road Diverters and Closures</td>
</tr>
<tr>
<td><strong>Passive Traffic Calming</strong></td>
<td></td>
</tr>
<tr>
<td>• Neighbourhood and Location-Specific Signage (NOTE: does not include Stop Signs)</td>
<td></td>
</tr>
<tr>
<td>• Vehicle-Activated Traffic Calming Signs (VATCS), i.e., Radar Speed Signs</td>
<td></td>
</tr>
<tr>
<td>• Pavement Colourization</td>
<td></td>
</tr>
<tr>
<td>• Pavement Warning Markings and Reflective Pavement Markers</td>
<td></td>
</tr>
</tbody>
</table>

Source: City of Waterloo Transportation Master Plan.
City of Kitchener Traffic Calming Measures

In recent years, traffic calming measures have been introduced on a number of streets in the Region, especially in the City of Kitchener. Kitchener has placed them on streets including Traynor Avenue/Vanier Drive, Mill Park Drive, and Pioneer Drive, typically using vertical deflections such as speed humps or tables. The City of Kitchener has installed just over 100 vertical traffic calming measures (mostly speed humps, plus some raised crosswalks). Some temporary chicanes (horizontal ‘zig-zag’ deflections) were tried on Greenbrook Drive, but were removed after problems arose, including issues for GRT vehicles. The images below highlight some of the traffic calming measures currently in place on City of Kitchener streets:

Figure 1 – Traffic Calming Measures in Kitchener

Vanier Drive between Massey Avenue and Erie Avenue – speed humps

Pioneer Drive between Nathaniel Crescent and Doon Village Road – speed humps

For 2013, the City of Kitchener identified three areas with existing bus routes for the implementation of traffic calming measures. These are:

- **Highview Drive/Yellow Birch Drive/Golden Meadow Drive** – The Preferred Design Alternative includes: four (4) speed humps, two (2) raised crosswalks, one (1) intersection narrowing, all-way stop control at Highview Drive & Driftwood Drive, “No Parking Anytime” areas, and painted centerlines.
- **Morrison Road** – The Preferred Design Alternative includes: two (2) speed humps, one (1) raised crosswalk, and one (1) roadway improvement (curb extension).
- **Country Hill Drive** – The Preferred Design Alternative includes: one (1) speed hump between Cherry Hill Drive and Cedarhill Crescent, one (1) speed hump between the trail crossing and Four Seasons Court, one (1) speed hump between Four Seasons Court and Martinglen Crescent, one (1) raised crosswalk in front of Country Hills Public School, and one (1) raised crosswalk at the trail crossing between Coach Hill Drive and Four Seasons Court.

The Country Hill Drive review has already been approved by the City of Kitchener Council but has not yet been implemented. The Morrison Road and the Highview Drive/Yellow Birch Drive/Golden Meadow Drive review is currently in progress.
Meadow Drive review have reports that are to go to the City of Kitchener Council in August. City staff has agreed to incorporate the Region’s comments into the reports.

Regional staff provided comments on the three proposals in late February, noting the level of service and potential transit impacts on each of the streets. Staff requested further discussion with City staff regarding the best way to move forward and ensure that the residents’ use of transit in those neighbourhoods is not negatively affected. Subsequently, a meeting was held in March 2013 between Regional and City staff to discuss the use of traffic calming, transit concerns and the appropriate types of measures that should be used.

The City has traditionally relied on vertical deflection measures, as they have found these to be the most effective in reducing speeds at the lowest cost. Unfortunately, at the same time, these have some of the most significant impacts on transit service. One of the initial premises in the City’s traffic calming policy states that “vertical traffic calming measures will not be considered on emergency routes, transit routes or major roads”. The City found this to be a limiting condition and so, in 2008, set up a test pilot of a variety of different speed hump designs. The pilot was observed by various agencies including Transit, Fire, Police, and EMS. While the City selected a final acceptable design with a less severe hump than earlier designs, Regional staff continued to expressed concerns and did not endorse any particular design.

Transit Operations Impact

Monitoring of transit operations has found that the use of vertical deflections such as speed humps are affecting bus schedules. In addition to the normal slowing down to pick up and drop off passengers at bus stops, buses have to repeatedly slow down when approaching traffic calming measures.

Before and after studies of running time were done for Route 2 FOREST HILL and Route 8 FAIRVIEW, as both routes operate on streets where speed humps were installed in 2008 (Greenbrook Drive for Route 2 and Vanier Drive/Traynor Avenue for Route 8). This work has shown that the construction of traffic calming measures increases transit run times.

The Route 2 FOREST HILL showed a 34% increase in average running time on the 2.6 km stretch of Greenbrook drive. This is a 12 second increase in running time per speed hump. Meanwhile the Route 8 had a 20% increase in the average running time towards downtown and a 15% increase towards Fairview Park Mall. Over the 2.8 km stretch, this is an increase of 9 seconds per speed hump on the route.

Even after accounting for any other factors, the above results are consistent with Transport Canada findings. In a 2005 report entitled Traffic Calming in Canadian Urban Areas, Transport Canada has stated that each traffic calming measure can delay a bus by up to 10 seconds.

While one or two traffic calming measures may have a very minimal impact on transit schedules, the cumulative effect of multiple traffic calming measures along a corridor can have a more significant impact, causing buses to run late on existing schedules and requiring more running time to be added to these routes or an additional vehicle added to the route (at cost) to maintain the current schedule. This also makes travelling by transit a less attractive option to current or potential riders, as travel times increase and routes experience schedule adherence problems.

Appendix A shows the current number of traffic calming measures by GRT route, indicating several routes have multiple traffic calming features along their length that could cumulatively cause problems involving schedule adherence, operations, and passenger comfort. Of note are Routes 2, 8, 10, 16, and 27, all of which have at least seven (7) traffic calming features over their length, and might experience delays totalling over a minute along the route (see Table 2) from these features, using the results of the running time studies above which are supported by Transport Canada’s findings.
Table 2 – Traffic Calming Features by GRT Route and Approximate Cumulative Delay

<table>
<thead>
<tr>
<th>ROUTE</th>
<th># FEATURES</th>
<th>DELAY* (secs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route 2</td>
<td>9</td>
<td>81</td>
</tr>
<tr>
<td>Route 3</td>
<td>4</td>
<td>36</td>
</tr>
<tr>
<td>Route 4</td>
<td>4</td>
<td>36</td>
</tr>
<tr>
<td>Route 7B</td>
<td>4</td>
<td>36</td>
</tr>
<tr>
<td>Route 8</td>
<td>11</td>
<td>99</td>
</tr>
<tr>
<td>Route 10</td>
<td>7</td>
<td>63</td>
</tr>
<tr>
<td>Route 10 extension</td>
<td>3</td>
<td>27</td>
</tr>
<tr>
<td>Route 11</td>
<td>6</td>
<td>54</td>
</tr>
<tr>
<td>Route 11 extension</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>Route 15</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Route 16</td>
<td>10</td>
<td>90</td>
</tr>
<tr>
<td>Route 19</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Route 20</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Route 27</td>
<td>7</td>
<td>63</td>
</tr>
<tr>
<td>ALL</td>
<td>70</td>
<td></td>
</tr>
</tbody>
</table>

*A delay of 9 seconds per feature was used, this being the more conservative estimate from the two running time studies that were completed and just below the Transport Canada estimate of 10 seconds.

Other potential impacts of vertical deflections on transit operations identified by Regional staff and sent to the City of Kitchener in July 2004, include:

- Mechanical breakdowns involving the suspension
- Passenger comfort from going over the bump; this has also been identified by GRT customers, as discussed in the following section.

**Customer Impact**

Problems have been identified with uncomfortable rides and extreme jostling of customers when buses go over vertical deflections such as speed humps. This is particularly true for those customers standing or seated near the rear of the bus as the motion is greater behind the rear wheels.

Since 2006, sixteen (16) comments have been received related to traffic calming measures. Nine (9) customers expressed having an uncomfortable or unpleasant ride due to speed humps, and two (2) customers experienced an injury due to the movement of the bus over a speed hump. One (1) customer had an issue with on-street parking used as a traffic calming measure, since it resulted in her bus having to enter part of the oncoming lane to avoid parked cars. Four (4) of the comments mention speed humps or traffic calming as secondary concerns.

**CUTA Survey on Traffic Calming Measures**

As part of the traffic calming review, Region staff asked the Canadian Urban Transit Association (CUTA) to carry out a review of practices across the country determine how other transit systems handle traffic calming measures in their communities. Appendix B summarizes the results of the survey. The respondents generally found that, depending on the type of measure uses, transit operations and customer comfort was affected. A number of transit agencies use their policies to restrict the types of traffic calming allowed on streets with transit service. Typically, policies stated that vertical deflections are not allowed or are limited.
Speed Tables

Vertical deflection measures have a number of different designs with varying impacts on transit operations. While speed bumps or humps are the most common term, in many cases, speed tables are used instead as they have less negative impact. These are described in more detail in Appendix C. While still calling them “speed humps”, the City of Kitchener uses this design in their more recent installations. At the same time, while the impact may be less, they still can cause more negative impact than other types of calming measures.

The Region is currently planning a slightly different speed table design at roundabouts, such as those planned for Franklin Boulevard in Cambridge. These are proposed at pedestrian crossings, and could be termed a “raised crosswalk”, as noted. Since these would be located at a crossing where transit vehicles would be expected to yield or stop for pedestrians anyway, and they have a longer table with a more gradual slope leaving the table, this measure is anticipated to have less impact on schedule adherence. These are shown in Appendix C.

Alternative Measures

Rather than using speed humps or tables, other traffic calming measures are available that can have the desired impact without the negative impact to transit. Appendix D describes other approaches in more detail, including a newer kidney-shaped vertical deflection that may warrant further investigation.

Recommendations

Staff recommend that the Region advise that, for the reviews currently underway, the City of Kitchener use horizontal or passive traffic calming measures on streets with bus routes. Vertical measures such as speed humps should be discouraged, due to negative impacts on transit operations and passenger comfort and safety concerns. This is informed from operational experience here in Waterloo Region, as well as in other municipalities in Canada, as determined from the CUTA survey.

It is further proposed that policies in all local municipalities and the Region of Waterloo incorporate a prohibition on vertical traffic calming measures on streets with bus routes, with limited exceptions. One exception discussed in this report that could be acceptable for transit is measures at intersections and crossings such as raised crosswalks or raised intersections (speed tables), which have a similar, but lesser impact on transit operations and customer comfort than traditional speed humps.

Finally, the Region will participate in the City of Kitchener’s review of their traffic calming policy, which is planned to begin later this year. While the policy does state that vertical deflection will not be considered on transit routes, this has not always been reflected in practice. A new policy should look at existing traffic calming installations for review and possible retrofitting measures, to allow for better integration with transit service where applicable. A new policy could also promote innovative alternatives as described in this report, and traffic calming measures that are most beneficial to sustainable transportation modes, including transit and cycling.

Area Municipal Consultation/Coordination

Regional and City of Kitchener staff have met as part of the review of 2013 traffic calming projects in Kitchener. Comments from the Region will be used as part of their reports on specific traffic calming projects this year. The Region will also be invited to participate in their forthcoming policy review.

This report will be circulated to all municipalities.
CORPORATE STRATEGIC PLAN:

The review of traffic calming measures supports the implementation of Council’s Strategic Focus, identified under Focus Area 3: Sustainable Transportation: *Develop greater, more sustainable and safe transportation choices.*

FINANCIAL IMPLICATIONS:

While difficult to quantify, there are potential costs due to additional fleet maintenance on suspension and potential revenue impacts from less ridership due to uncomfortable rides, personal injury, unreliable schedule adherence and missed connections due to buses taking longer than anticipated on their schedule. If the delays become large enough additional running time and buses may be required.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Transportation and Environmental Services provided input into this report.

ATTACHMENTS:

Appendix A - Number of Vertical Traffic Calming Measures by Transit Route  
Appendix B - CUTA Survey on Traffic Calming Policies and Measures  
Appendix C - Speed Table Concept  
Appendix D - Alternative Traffic Calming Measures

PREPARED BY: *Blair Allen*, Supervisor Transit Development

APPROVED BY: *Rob Horne*, Commissioner, Planning, Housing and Community Services
Appendix A - Number of Vertical Traffic Calming Measures by Transit Route
Appendix B - CUTA Survey on Traffic Calming Policies and Measures

A review of practices across the country was conducted to determine how other transit systems handle traffic calming measures in their communities. A survey was carried out on our behalf by the Canadian Urban Transit Association (CUTA) of all transit systems serving populations greater than 100,000 people. Responses were received from 21 of the 36 systems (a 58% response rate). The results are summarized in Table B1.

<table>
<thead>
<tr>
<th>Number of Respondents</th>
<th>21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number with Policies Regarding Traffic Calming</td>
<td>10 (48%)</td>
</tr>
<tr>
<td>Number with Speed Humps on Bus Routes</td>
<td>8 (38%)</td>
</tr>
<tr>
<td>Positive/Negative Experience with Speed Humps</td>
<td>No Response: 1 Neutral: 3 Negative: 4</td>
</tr>
<tr>
<td>Number with Speed Tables on Bus Routes</td>
<td>3 (14%)</td>
</tr>
<tr>
<td>Positive/Negative Experience with Speed Tables</td>
<td>No Response: 1 Neutral: 2</td>
</tr>
<tr>
<td>Number who Restrict Speed Humps or Tables on Bus Routes</td>
<td>9 (43%)</td>
</tr>
<tr>
<td>Identification of other Calming Measures</td>
<td>12 (57%)</td>
</tr>
<tr>
<td>Traffic Circle/Roundabout</td>
<td>8</td>
</tr>
<tr>
<td>Median/Traffic Islands</td>
<td>4</td>
</tr>
<tr>
<td>Curb-outs/Extensions</td>
<td>6</td>
</tr>
<tr>
<td>Speed Cushion</td>
<td>4</td>
</tr>
<tr>
<td>Raised Crosswalk</td>
<td>3</td>
</tr>
<tr>
<td>Real-time Driver Feedback Signs (speed displays)</td>
<td>1</td>
</tr>
<tr>
<td>Alternate Side Parking</td>
<td>2</td>
</tr>
<tr>
<td>All-way Stops</td>
<td>1</td>
</tr>
</tbody>
</table>

A number of transit agencies use their policies to restrict the types of traffic calming allowed on streets with transit service. Typically, vertical deflections are not allowed or are limited. Toronto, Barrie, York Region, Winnipeg, Vancouver and Ottawa are among cities that prohibit speed humps or other vertical deflections on transit routes. As an example, Barrie’s policy sates that one of their warrants to proceed with traffic calming is that “roadway is not a transit route.” TransLink (Metro Vancouver’s regional transportation authority) indicates that it “does not support, in principle, the installation of speed humps on bus routes for reasons of passenger safety and comfort, operational efficiency, and vehicle maintenance implications.”

The Toronto Transit Commission (TTC)’s comments note the following concern about vertical deflection: “vertical deflection causes discomfort and the potential for injury to bus passengers, especially since many are standing and those who are sitting are not using seat belts. There is also increased wear and tear on buses, and the potential for malfunctioning suspension, which could cause damage to the vehicle undercarriage when going over a speed hump. The horizontal measures such as traffic islands, medians, and painted lines on the road do not have these same concerns, as long as they are designed to allow buses to manoeuvre around them.” The City of Toronto Traffic Calming Policy stipulates that speed humps are not allowed on any street with
regularly-scheduled transit service. The TTC was directly involved in the City’s development of its traffic calming policy.

OC Transpo’s comments with regard to vertical measures are “vertical measures such as speed humps do have noticeable impacts on transit customers...Horizontal measures...have very little impact ...[and] often narrow the gap between motorist speeds and transit speed, which may increase the attractiveness of transit.” They add that “speed humps provide a negative experience for transit customers in terms of comfort as well as travel speed (perceived or actual). These effects are even more pronounced for paratransit customers.”

In some cases, policies note that existing speed humps are permitted to remain.

Transport Canada draws similar conclusions to those apparent from the CUTA survey, noting in *Traffic Calming In Canadian Urban Areas* that: “most communities do not permit vertical traffic calming measures like speed humps or raised crosswalks on streets that serve transit routes or are used frequently by emergency vehicles. Each such measure can delay fire trucks, ambulances and buses by up to 10 seconds, with a group of measures threatening an unacceptable cumulative delay.”
Appendix C - Speed Table Concept

When vertical deflection is allowed, the Institute of Transportation Engineers (ITE) *Updated Guidelines for the Design and Application of Speed Humps* is generally followed. These guidelines indicate that “speed humps are generally not recommended for use on bus routes...speed tables may be more appropriate, and could be applied after consultation. Speed tables are generally used on residential collectors, emergency routes or transit routes. The use of alternative traffic calming measures may also be considered for use on bus or emergency vehicle routes.”

Below is a diagram showing a speed table, and, if no horizontal deflection alternative can be employed, would be preferable for a use on a street with transit, as opposed to a standard speed hump or speed bump. The longer length and flat-topped design provides for a gentler ride, and the tables don’t require vehicle operating speeds to be reduced below 40 km/h, according to the ITE Guidelines. When installed at a pedestrian crossing or intersection, the tables can be referred to as raised crosswalks/intersections, and provide greater visibility for pedestrian crossings, thanks to the raised surface and textured material that is usually applied on the flat top. Speed tables therefore have the potential to address the considerations of pedestrians as well as improved transit operations over speed humps. However, speed tables could still create issues for transit operations if used mid-block, as they would delay the route by causing it to slow down at points in between scheduled stop locations.

Figure C1 – Speed Table – Cross Section


The City of Kitchener defines a speed hump in their traffic calming policy as “a raised area of a roadway, which deflects both the wheels and frame from a transversing vehicle” – this definition does not mention design details specific to a speed table, as shown in Figure C1. The term “speed table” is not mentioned anywhere in the City policy; however, they do make reference to raised crosswalks/intersections, which as discussed are speed tables implemented at crossing points. The policy mentions the use of these in midblock locations, however, which could have the negative effect of creating additional delay for transit vehicles, as mentioned.
Laurentian Drive between Shea Crescent and Dunsmuir Drive

The Region is currently planning a slightly different design of speed table at roundabouts, such as those planned for Franklin Boulevard in Cambridge. These are proposed at pedestrian crossings, and could be termed a “raised crosswalk”, as noted. Since these will be located at a crossing where transit vehicles would be expected to yield or stop for pedestrians anyway, regardless of traffic calming measures being in place, this measure is anticipated to have less impact on schedule adherence. The flat-topped design also provides for a smoother ride compared to speed humps. As Figure C3 shows, these are similar in cross-section detail to the sinusoidal speed table in Figure C1, with slightly longer vertical height (100m compared to 76 mm) and a more gradual slope ay the end of the feature.

Source: Stantec Inc.
Appendix D - Alternative Traffic Calming Measures

Some active traffic calming measures that would have minimal impact on transit operations and transit users are outlined in Table D1, and could be considered preferable to vertical deflections including speed humps:

<table>
<thead>
<tr>
<th>Measure</th>
<th>Impact on Transit Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Extensions</td>
<td>Acceptable under some conditions; however, it can create delays and prevent turning movements</td>
</tr>
<tr>
<td>Intersection Channelization</td>
<td>Impact depends on desired route at this point; would prevent buses turning at the intersection</td>
</tr>
<tr>
<td>On-street Parking</td>
<td>When road widths allow, this is acceptable, although it has an impact due to more potential conflicts between parking and bus movements</td>
</tr>
<tr>
<td>On-street Bike Lanes</td>
<td>When road widths allow, this is acceptable and can encourage more cycling</td>
</tr>
<tr>
<td>Raised Crosswalk/Raised Intersection (speed tables)</td>
<td>Has a similar, but lesser, impact as speed humps</td>
</tr>
<tr>
<td>Sidewalk Extension</td>
<td>Same as raised crosswalk/intersection</td>
</tr>
<tr>
<td>Textured Crosswalk</td>
<td>No significant impact</td>
</tr>
</tbody>
</table>

A recent innovation in traffic calming is a device called the ‘speed kidney’, which has been developed by a highway research group in Spain. This device is meant to minimize some of the disadvantages of traditional traffic calming measures such as speed humps. It consists of a main speed hump and a complementary speed hump on the same cross section (see Figure 5). The design allows vehicles to modify their path laterally, along the curvature of the main speed hump, to avoid the discomfort and possible mechanical damage of vertical deflection. The ITE explains that this design would minimize delays on buses and emergency vehicles, “as wider vehicles can circulate with a straight path without going over the speed kidney”. This would also reduce physical discomfort experienced by bus passengers. Cyclists could also avoid the discomfort of a speed hump, as the device can be navigated without vertical deflection. The Transportation Research Board describes this device as “a functional, feasible, sustainable, and safe solution for traffic calming”. It is almost as inexpensive as a speed humps, has been proven in tests to lower speeds, and has no negative effect on transit vehicles. Innovative solutions like the kidneys could be explored as alternatives.
Traffic calming measures that are supportive of a Complete Streets approach (accommodating the needs of all road users, including transit, pedestrians and cyclists) such as raised or textured crosswalks, curb extensions at bus stops, parking changes to narrow (or create a perception of narrowing) the street and on-street bike lanes are also alternatives that would better align with RTMP goals and have minimal impact on transit operations. These measures increase the visibility of other modes of transportation besides the automobile, and reduce the roadway width, which can slow down traffic in a way that does not necessitate the introduction of vertical deflections such as speed humps.

Because of the importance of controlling excessive vehicle speeds in our community, staff support the appropriate use of traffic calming measures in the appropriate locations. At the same time, there is concern about the adverse impact on transit operations and thus on the transit customer of certain measures, especially vertical measures such as speed humps. As noted in the York Region policy, staff wish “to ensure that buses can negotiate traffic calming schemes in a satisfactory manner without damage to the buses, and to maintain a safe and comfortable environment for both our customers and bus operators”. If this environment is not maintained, ridership, revenue and cost levels can all be impacted.

Figure 1. Speed hump: (a) plan view; (b) cross-section at the midpoint.

Conclusion

Traffic calming measures that are supportive of a Complete Streets approach (accommodating the needs of all road users, including transit, pedestrians and cyclists) such as raised or textured crosswalks, curb extensions at bus stops, parking changes to narrow (or create a perception of narrowing) the street and on-street bike lanes are also alternatives that would better align with RTMP goals and have minimal impact on transit operations. These measures increase the visibility of other modes of transportation besides the automobile, and reduce the roadway width, which can slow down traffic in a way that does not necessitate the introduction of vertical deflections such as speed humps.

Because of the importance of controlling excessive vehicle speeds in our community, staff support the appropriate use of traffic calming measures in the appropriate locations. At the same time, there is concern about the adverse impact on transit operations and thus on the transit customer of certain measures, especially vertical measures such as speed humps. As noted in the York Region policy, staff wish “to ensure that buses can negotiate traffic calming schemes in a satisfactory manner without damage to the buses, and to maintain a safe and comfortable environment for both our customers and bus operators”. If this environment is not maintained, ridership, revenue and cost levels can all be impacted.
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: June 18, 2013

FILE CODE: L07-20

SUBJECT: PERIODIC SUMMARY REPORT OF PROPERTY ACQUISITIONS (EXCLUDING RAPID TRANSIT RELATED ACQUISITIONS) COMPLETED PURSUANT TO PROPERTY ACQUISITION BY-LAW 11-055 – JANUARY 1, 2012 TO JUNE 7, 2013

RECOMMENDATION: For information.

SUMMARY:

By-law 11-055 (the “Property Acquisition By-law”) provides for certain delegated authority through a prescribed process and subject to certain prescribed criteria for the acquisition of real estate property in instances in which the total value of the transaction does not exceed $100,000. Section 5.2 of the Property Acquisition By-law requires that the Manager of Real Estate Services provide a periodic summary for information purposes to Council concerning all property acquisitions completed under that By-law. Appendix “A” to this Report provides a summary of such property acquisitions, excluding Rapid Transit related acquisitions, for the period January 1, 2012 to June 7, 2013.

REPORT

The Property Acquisition By-law delegates certain authority for the acquisition of real estate property in instances in which the total value of the transaction does not exceed $100,000 to the respective Commissioner responsible for the project or programme in respect of which the real property interest is proposed to be acquired. The Property Acquisition By-law imposes the following conditions in respect of this delegated authority:

(a) Sufficient funds have been allocated and are available in departmental capital budgets approved by Council for the total value of the transaction and the transactional costs (the Project Manager/Engineer and Finance staff provide certification in this regard);
(b) A current market value appraisal or valuation for the interest in the real property has been obtained and approved by the Manager of Real Estate Services;
(c) The acquisition agreement and all ancillary documentation is in a form that is satisfactory to the Regional Solicitor;
(d) All applicable Regional policies have been complied with; and
(e) The Regional Solicitor approves the acquisition.

As of the writing of this report, 14 non- Rapid Transit related transactions have been approved and completed under the Property Acquisition By-law. The compensation amounts ranged from $2,900 to $58,000 and all of the interests acquired were fee simple partial takings. These acquisitions were undertaken for roads capital projects, primarily University Avenue, Weber Street and Bloomingdale Road. The transactions are detailed on the chart attached as
Appendix “A” to this Report.

It is noted that those transactions undertaken for the Rapid Transit Project are summarized under a separate report (CR-RS-13-059).

CORPORATE STRATEGIC PLAN:

This Report is in furtherance of the Strategic Plan’s priority to ensure that Regional programs and services are efficient and effective and demonstrate accountability to the public.

FINANCIAL IMPLICATIONS:

In accordance with the requirements of the By-law, sufficient funds were allocated and available in the respective departmental capital budgets approved by Council for the total value of the transaction and the transactional costs described in this Report.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

In accordance with the requirements of the By-law, Transportation and Environmental Services staff and Finance staff were involved in approving the property acquisitions described in this Report.

ATTACHMENTS

Appendix “A” - Summary of Real Estate Acquisitions

PREPARED BY:  Tom Penwarden, Manager, Real Estate Services

APPROVED BY:  Gary Sosnoski. Commissioner, Corporate Resources
# Appendix “A” to Report CR-RS-13-058

<table>
<thead>
<tr>
<th>Property</th>
<th>Interest Acquired</th>
<th>Purchase Price</th>
<th>Project</th>
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<tr>
<td>115 University Avenue East, Waterloo:</td>
<td>Partial Taking</td>
<td>$8,000.00</td>
<td>University Avenue Improvements, Waterloo</td>
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<tr>
<td>Part of Lots 10 &amp; 11 Plan 501 being Part 3 on 58R-17180</td>
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<td>1044 Knechtel Court, Petersburg:</td>
<td>Partial Taking</td>
<td>$58,000.00</td>
<td>Ottawa/ Trussler Intersection Improvements, Kitchener</td>
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<tr>
<td>Part Lot 1 Concession North Bleams Road being Parts 3 and 4 on 58R-17142</td>
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<tr>
<td>68 Church Street West, Elmira:</td>
<td>Partial Taking</td>
<td>$12,000.00</td>
<td>Church Street Road Improvements, Woolwich</td>
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<tr>
<td>Lot 79 PL 99 being Part 1 on 58R-17457</td>
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<td></td>
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<tr>
<td>58 Church Street Elmira:</td>
<td>Partial Taking</td>
<td>$36,800.00</td>
<td>Church Street Road Improvements, Woolwich</td>
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<tr>
<td>Part 2 and 3 on 58R-17457</td>
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<tr>
<td>113 Breithaupt Street, Kitchener:</td>
<td>Partial Taking</td>
<td>$29,387.10 (for rental period July 20, 2012 to Dec 31, 2014)</td>
<td>Weber Street Grade Separation, Kitchener</td>
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<td>Part Lot 2 Sub of Lot 16 GCT; Part Lot 19 SUB of Lot 3 GCT, Part 7 58R-11146 being Part 1 on 58R-17281</td>
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<td>40 Wilhelm Street, Kitchener:</td>
<td>Partial Taking</td>
<td>$13,300.00</td>
<td>Weber Street Grade Separation, Kitchener</td>
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<td>Part Lot 3 PL 131 being Part 1 on 58R-17363</td>
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<tr>
<td>43 Wilhelm Street, Kitchener:</td>
<td>Partial Taking</td>
<td>$500 + $2,400 for loss of buffer strip</td>
<td>Weber Street Grade Separation, Kitchener</td>
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<td>Part 5 on 58R-741881</td>
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<td>272-274 Highland Road West, Kitchener:</td>
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<td>Highland Road Improvements, Kitchener</td>
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<td>Part 1 on 58R-17496</td>
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<tr>
<td>130 Bloomingdale Road, Kitchener:</td>
<td>Partial Taking</td>
<td>$8,000.00</td>
<td>Bloomingdale Road Improvements, Kitchener</td>
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<td>Part 3 on 58R-17402</td>
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<td>66 Bloomingdale Road, Kitchener:</td>
<td>Partial Taking</td>
<td>3000.00</td>
<td>Bloomingdale Road Improvements, Kitchener</td>
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<td>Part 8 on 58R-17403</td>
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<td>134 Bloomingdale Road, Kitchener:</td>
<td>Partial Taking</td>
<td>$8000.00</td>
<td>Bloomingdale Road Improvements, Kitchener</td>
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<td>Part 4 on 58R-17402</td>
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<td>122 Bloomingdale Road, Kitchener:</td>
<td>Partial Taking</td>
<td>$26,300.00</td>
<td>Bloomingdale Road Improvements, Kitchener</td>
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<td>Part 1 on 58R-17402</td>
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<td>60 Bloomingdale Road, Kitchener:</td>
<td>Partial Taking</td>
<td>$4500</td>
<td>Bloomingdale Road Improvements, Kitchener</td>
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<td>Part 7 on 58R-17403</td>
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<tr>
<td>92 Bloomingdale Road, Kitchener:</td>
<td>Partial Taking</td>
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<td>Bloomingdale Road Improvements, Kitchener</td>
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<tr>
<td>Part 11 on 58R-17403</td>
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</table>
May 15, 2013

To the Council of the Region of Waterloo,

At the October 16, 2012 meeting of the Region of Waterloo Administration and Finance Committee, the Co-chairs of the Grand River Accessibility Advisory Committee (GRAAC) affirmed that the GRAAC would be able to directly provide Regional Council with their suggestions on the subject of pedestrian safety at roundabouts. The present letter outlines the GRAAC’s recommendations, position, and history of input on the issue of pedestrian safety at roundabouts.

Sincerely,

Anthony Cashin - Co-Chair – Grand River Accessibility Advisory Committee

Andrew Tutty - Co-Chair – Grand River Accessibility Advisory Committee
Grand River Accessibility Advisory Committee
and pedestrian safety at roundabouts

A letter to the Council of the Region of Waterloo
May 2013

GRAAC

The Grand River Accessibility Advisory Committee is an advisory committee to the Region of Waterloo Council (and to 5 other local councils).

It was established as a requirement of the Ontarians With Disabilities Act (2001).

Its mandate:

The Grand River Accessibility Advisory Committee shall assist the participating municipalities in fulfilling the purpose of the Ontarians with Disabilities Act and the Accessibility for Ontarians with Disabilities Act by providing vision and advice with regard to the removal of barriers.

The issue

The Region of Waterloo, and, to a lesser extent the cities of Cambridge, Kitchener and Waterloo, have adopted road intersection roundabouts as a traffic movement solution on high traffic roadways.

There appears to be good evidence that roundabouts do allow for more efficient traffic flow once drivers become accustomed to them. They also reduce the number of serious automobile accidents by eliminating most “T-bone” collisions.

However, pedestrians also wish to cross roadways at these intersections. The safety of all pedestrians and, in particular those pedestrians with special mobility issues, is of great concern to GRAAC.

History of GRAAC input

With the appearance of roundabouts in our region, GRAAC has taken an ongoing interest and concern regarding their impact on pedestrians.

As early as January 2007 GRAAC was discussing the potential impact of roundabouts on pedestrian safety with Region transportation staff. In May of 2008, members of GRAAC visited two local roundabouts with Region staff. At that time our concern was with pathfinding (how to know you are in the right place), visibility and the design and location of the pedestrian crossings.

On July 29, 2008, GRAAC wrote to Region, Waterloo and Kitchener staff outlining a number of issues with the design of pedestrian crossings at these roundabouts. In the same letter, we also described pedestrian safety concerns...
with refuge islands. We included suggestions for design improvements at both roundabouts and refuge islands. (See Attachment A)

Region staff responded on October 20, 2008 acknowledging our letter and responding to our suggested design improvements. (Attachment B)

It should be noted that the response included the suggestion that the CNIB could be involved in training of sight-impaired individuals to safely use pedestrian crossings at roundabouts. However, local CNIB staff are reluctant to do so as they do not feel that a vision-impaired individual can cross safely. In 2011 the CNIB national office formally took the position that roundabouts are not safe for sight impaired individuals (see Attachment C).

As well, in April 2012, the Canadian National Consumer Advocacy Committee issued a Position Paper on Accessible Roundabouts, which included a number of design recommendations to improve the safety for vision-impaired individuals. (Attachment D)

CNIB has endorsed this paper.

Over the next 2 - 3 years GRAAC noted the increasing number of roundabouts being constructed in the Region. The continuing experience of GRAAC members reinforced an increasing concern about pedestrian safety at these intersections. When opportunities arose, such as when reviewing the Kitchener and Waterloo Transportation Master Plans, our committee continued to express our strong reservations.

On November 21, 2011 we wrote a letter to Region, Kitchener and Waterloo transportation staff with copies to all councilors drawing attention to our ongoing concerns about pedestrian safety at roundabouts. (Attachment E)

On January 31, 2012 GRAAC co-chair Gordon Cummer made a presentation to the Transportation And Environmental Services Committee regarding the staff report “Homer Watson Boulevard (Regional Road 28) And Block Line Road Review” (staff report T04-10/28)

In our presentation we pointed out the pedestrian safety issues with current roundabout designs and the need for better solutions.

Subsequently, at a regular GRAAC meeting on April 26, 2012, Regional and city transportation staff made a detailed presentation on current design practices for accessibility on sidewalks, roadways, trails, etc. No specific solutions for improved accessibility of crosswalks at roundabouts were presented. Region staff stated their desire to work with GRAAC and others to see what solutions might be available.
Since then Region transportation staff have held two workshops (September 26 and November 28, 2012) with GRAAC members and CNIB staff to review various design approaches and to identify possible solutions to the issue of improving pedestrian safety. Based on input received from GRAAC members and the CNIB at the transportation workshops, Region staff developed a report (Report E-13-014, dated January 29, 2013) with recommendations to enhance accessibility at intersections and roundabouts on Regional roads for members of the community with visual impairments. The recommendations in the report were endorsed by Regional Council on February 6, 2013.

On May 3, 2013 Regional transportation staff met with the Grand River Accessibility Transportation Subcommittee (G-TSC) to obtain input on the proposed accessibility measures proposed as a part of the detailed design for the roundabout at Franklin Boulevard and Saginaw Parkway in the City of Cambridge. The members of the G-TSC present approved the proposed accessibility measures. Region staff informed the Transportation Subcommittee that they would consult GRAAC on an ongoing basis regarding the accessibility of roundabouts.

**Recommendations**

1. That Region staff continue to consult with GRAAC and other organizations concerned with accessibility on ways to improve pedestrian safety at roundabouts and other intersections.

2. That Region staff continue to review the literature on best practices in roundabout design for pedestrian safety.

3. That Regional Council develop a new public education campaign specifically designed to alert drivers to the presence of pedestrians at roundabouts and to educate pedestrians on the safe use of crossings at roundabouts and elsewhere.

4. That Regional staff continue their support of a campaign to establish the primacy of pedestrians in provincial legislation.

GRAAC
May 2013
July 29, 2008

To: Bob Henderson,
    Steve Van de Keere,
    Greg Proctor,
    Region of Waterloo
    150 Frederick St.
    Kitchener ON N2G 4J3

    Chris Hodgson,
    City of Waterloo
    100 Regina St. S.,
    Waterloo ON N2J 4A8

Gentlemen:

Thank you once again for taking time and interest in our concerns regarding roundabouts and pedestrian refuge islands.

The mandate of the Grand River Accessibility Advisory Committee is to advise municipalities in identifying, preventing, and removing barriers for people with disabilities. The members of the GRAAC Transportation subcommittee have serious reservations about the safety of the designs of these features.

We perceive that some roundabouts and refuge islands currently pose a safety hazard, and therefore a barrier to safe travel for all people with disabilities.

The major concerns are manoeuvrability for people with mobility challenges, often using wheelchairs or other assistive devices, and visibility for people with sight impairment, often using white canes or guide dogs. Both of these issues could well affect the orientation of people with cognitive disabilities when attempting to cross safely. Also, people with hearing loss must depend entirely on sight to avoid danger.

We summarize our location visits and conclusions, as follows:

**Roundabouts:**
Examples experienced:

1. Laurelwood at Beaver Creek, City of Waterloo
2. Ira Needles Blvd. at Erb St., Region of Waterloo

- The width of crossing "island" (1.) seemed inadequate. We suggest these spaces be larger to accommodate wheelchair users.
- The sloping of the roundabout islands, while a good idea for drainage, could pose difficulties for wheelchair users in winter with ice and snow accumulation, especially since the roads are cleared first.
- Landscaping is a significant concern and could be modified to improve visibility. The shrubbery type and placement on the centre island of the roundabouts should be low-growing plants or shrubs, including ground covers, to avoid obstructing the view of both pedestrians and automobile drivers. Only trucks, vans and the like can see clearly across this centre island.
- Shrubbery should not be allowed on lots adjacent to the intersection if they interfere with sight lines.
- Signs on the centre island should also be placed to avoid obstructing sight lines.
- Clear bold signage should be placed at the nearest intersections to advise pedestrians with sight impairment on the location of the roundabouts if they are situated mid-block.
- In-service sessions could be held to advise both the general public and non-profit agencies that assist people with disabilities, for example, with CNIB orientation and mobility specialists. This would familiarize pedestrians with new designs and enhance their ability to use them safely.
- Visual and tactile markings at the crosswalk (2.) are very useful, especially for white cane users.
- It is suggested that the City of Waterloo use similar markings in location (1).

Pedestrian Refuge Islands:

Example experienced: Westmount Rd. near Ottawa St.

- Although this design has the safety feature of directing pedestrian sightlines to oncoming traffic, manoeuvrability is sacrificed. It requires pedestrians in wheelchairs to face traffic then readjust to cross in a straight path.
- * Please see attached diagram for a suggested alternative. This is only an approximate representation, not a "best practices" solution.
- The addition of highly visible and/or tactile markings and safety features could make this island safer and easier to locate, both for people with low vision or sight impairment, and drivers.
• Bold yellow curb paint and bright lighted bollards would enhance visibility on the island, especially at night.
• Clear large pedestrian signage on the sidewalks approaching the crossing could help identify the existence and location of the island. Sidewalk tactile striations and ladder markings on the street itself would also improve safety.

We do understand and appreciate the explanations, statistics and traffic safety rationales that we have received from planning staff. However, there seems ambiguity regarding who has the right of way. We agree that all people should always be cautious, but vehicles are certainly faster and more potentially dangerous than pedestrians.

We get the distinct feeling that automobiles are far more highly regarded and considered than pedestrians. We are aware that all area councils have approved the Pedestrian Charter, and recommend that traffic designs should be reflective of this. We believe that our recommendations would also assist drivers to manoeuvre around both roundabouts and refuge islands more safely.

We are always available and willing to assist in any further details required. Please let us know of any planned modifications to future roundabouts and pedestrian refuge islands.

Yours sincerely,

Sharon Ward-Zeller
Taposhi Batabyal

Co-Chairs,
Grand River Accessibility Advisory Committee

cc: John McBride
200 King Street West, 9th floor
Kitchener, ON N2G 4G7
City of Kitchener
**Attachment B**

**Response from Region transportation staff**  
**October 20, 2008**

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<tr>
<th>Refer To:</th>
<th>File No:</th>
<th>Date:</th>
</tr>
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<tbody>
<tr>
<td>Steve van De Keere, 519-575-4792</td>
<td>5267</td>
<td>October 20, 2008</td>
</tr>
</tbody>
</table>

Grand River Accessibility Advisory Committee  
c/o Kelly Steiss  
200 King Street West  
P.O. Box 1118, 7th Floor  
Kitchener ON  N2G 4G7

**Attention:** Sharon Ward-Zeller and Taposhi Batabyal  
Co-chairs, Grand River Accessibility Advisory Committee

Dear Sharon and Taposhi:

Thank you for organizing the site tour on Tuesday, May 13, 2008 to the Erb/Ira Needles Roundabout, the Beaver Creek/Laurelwood Roundabout and the pedestrian refuge island on Westmount Road south of Ottawa Street. We found the site tour to be valuable and I believe Region and City of Waterloo staff in attendance were able to learn from the insights provided by the volunteers who attended. We have received your letter from the Grand River Accessibility Advisory Committee (GRAAC) dated July 29, 2008 regarding your conclusions about the volunteers' observations during the site tour and have reviewed them with staff to provide a response to the concerns/comments in your letter. The following paragraphs are intended to address GRAAC’s comments.

### Roundabouts at Erb/Ira Needles and Beaver Creek/Laurelwood

1. Region and City staff are striving to provide a desirable width of at least 2.5 metres for the refuge areas on all splitter islands. This width is considered adequate to accommodate a bicycle with a trailer and should be adequate for wheelchairs. At constrained sites, however, where available right-of-way is limited, such as at Beaver Creek/Laurelwood, it is necessary to reduce the refuge area to a minimum of 1.8 metres which should be adequate to accommodate most users including those in wheelchairs.

2. Slopes on splitter islands where pedestrians take refuge will be kept to a minimum while providing adequate drainage (1% crossfall).
3. Landscaping in the central island is a significant issue for many users of the roundabouts. While some users (drivers and pedestrians) may take some comfort in being able to see clear across the roundabout at all times, providing this extended sight distance can cause other problems. It is important that motorists do not get the impression that they can drive through the roundabout like they can at a signalized intersection. Drivers should see there is an obstruction in the road as this tends to make them slow down on the approach. This is particularly important at night where drivers who see the headlights of an oncoming vehicle may mistakenly think the road goes straight through the intersection and then drive into the central island. Tall objects in the centre of the roundabout tend to “catch the headlights” of an approaching vehicle and alert the driver of an obstruction in the road. In addition, a central island that allows motorists to see straight through may encourage aggressive drivers to enter at higher speeds and thus the benefit of more visibility of the pedestrian is lost due to higher speeds. At all roundabouts the central island grading and landscaping is designed to provide adequate visibility so that motorists traveling around the
central island have adequate time to stop if they see a pedestrian in the crosswalk. In most cases there is ample time for the pedestrian to make the crossing before the car reaches the crosswalk if the driver simply eases off the accelerator. There is an area around the outside of the central island where plant material is avoided (by use of a concrete pad) or kept to a low height (less than 1.0 m) to allow the drivers and pedestrians to see over the outside edge of the island.

4. Staff will review the height and placement of signs within the central island to ensure adequate visibility is not compromised.

5. Staff are always looking for additional ways to educate the general public, including those who have disabilities, on how to use roundabouts. Staff are currently embarking on a new Roundabout Education Campaign which will be focusing on providing information to both drivers and pedestrians on how pedestrians and drivers are to interact at roundabouts. Where there is a known visually-impaired person at an existing or planned roundabout, staff will contact the CNIB regarding an in-service session with a mobility specialist to enhance the ability of the person to use the roundabout. This practice is similar to the Region’s practice for the implementation of audible traffic signals.

6. Ladder-style pedestrian markings are incorporated into all pedestrian crossings at roundabouts wherever pedestrian volumes warrant such an installation. The Region is investigating various types of tactile markings on approach sidewalks to see if a new standard can be developed which enhances their detection and facilitates the use of the markings for the pedestrians.

Pedestrian Refuge Island

Research proves that marked crosswalks at uncontrolled locations are associated with higher pedestrian collision rates. For this reason the Region of Waterloo will not install marked crosswalks at pedestrian refuge islands. There is no legislation in place at this time that provides pedestrians right-of-way over the motoring public at uncontrolled locations on Ontario roadways. Therefore we are unable to provide signage or pavement markings that would indicate otherwise at any such location.

Traffic Engineering staff are working closely with Operations staff to mark the curb-face of pedestrian refuge islands with new reflective yellow material as a
pilot test. This should help increase the overall visibility of the island from all approaches and should help highlight the pathway through the island, however there may be some issues regarding longevity.

Once again, we thank you for your time to meet on site and to assemble your comments and we look forward to working with you in the future.

Yours truly,

Steve van De Keere, P.Eng.
Head, Transportation Expansion Program

SvDK/dp

cc: Members of Roundabout Coordinating Committee
CNIB Position statement on roundabouts

Roundabouts

Roundabouts present significant safety challenges for blind and partially sighted pedestrians and are not recommended by CNIB.

CNIB recommends that blind and sighted pedestrians cross streets at controlled intersections; traffic lights or stop signs because they are able to use the sound of traffic at these types of intersections to determine when it is safe to cross the street. When the traffic is moving in front of them on the perpendicular street they know it is not safe to cross. When the parallel traffic begins to move in the same direction they are walking, it is safe for them to begin to cross the street.

When an intersection is changed to a roundabout, the ability for blind and partially sighted pedestrians to travel safely and independently is taken away.

Blind and partially sighted pedestrians are not able to use the sound of traffic at roundabouts to determine when it is safe to cross. It is challenging if not impossible for a blind person to audibly detect a gap in traffic flowing through a roundabout. The sounds are confusing as traffic is constantly entering and exiting the roundabout, making it difficult to determine the appropriate time to cross, (plus there are often multiple lanes of traffic). (Sighted pedestrian rely on their vision to detect a gap in traffic to determine when it is safe to cross a roundabout. Plus they are able to make eye contact with the drivers.)

Research studies on how to make roundabouts safe and accessible to blind and partially sighted pedestrians are testing treatments ranging from low-cost flashing beacons and audible sound strips, to raised crosswalks and Pedestrian Hybrid Beacons (HAWK signal). This research is ongoing and inconclusive.

Until there is conclusive research that is proven to make roundabouts accessible for blind and partially sighted pedestrians, (the) CNIB does not recommend roundabouts due to the fact that they are unsafe for pedestrians who are blind and partially sighted.

Links:
Pedestrian Access to Modern Roundabouts: Design and Operational Issues for Pedestrians who are Blind
http://www.access-board.gov/research/roundabouts/bulletin.htm
Attachment D

National Consumer Advocacy Committee
Position Paper on Accessible Roundabouts
April 2012

Kelly Baldock, Alberta Society for the Visually Impaired (ASVI), Edmonton District
Jane D. Blaine, BC Blind Sports Association
Bob Fenton, AB
Louise Gillis, Canadian Council of The Blind, NS
Ron Kruzeniski, SK
Richard Marion, BC
Rob Sleath, BC
Dawn Clelland, VIEWS for the Visually Impaired, ON
Doris Koop, Vision Impaired Resource Network (VIRN) Inc., MB

Roundabouts Position Paper – Universal Design and Accessibility for All
(including those who are blind, vision impaired or deaf/blind).

Background
Many cities are considering roundabouts to improve vehicle safety, increase
roadway capacity and efficiency, reduce vehicular delay and concomitant
emissions, provide traffic-calming effects, and mark community gateways. As a
result, roundabouts are replacing many traditional intersections, in cities across
Canada.
This rapid installation of roundabouts, has led to major concerns about the
accessibility of these free-flowing intersections, to all pedestrians, with a higher
level of concern, for the safety and independent travel of people who are blind,
vision impaired or deaf/blind.
Pedestrians who are blind, vision impaired or deaf/blind rely primarily on
auditory, visual markings, and/or tactile information to make judgments about
when it is appropriate to begin crossing a street. The continuous flow of traffic, at
roundabouts, removes many of the audible cues, pedestrians who are blind and
visually impaired use, to navigate street crossings. Visual barriers in the centre
island, which may be desirable for vehicular traffic, creates an auditory barrier for
pedestrians, with visual impairments.
An increased number of lanes of traffic poses a greater risk of accidents for
pedestrians.
It is imperative that before the installation of any roundabout in a residential
and/or urban area equipped with sidewalks, the following design elements must
include:

General Requirements
1. Public education must be done on how to safely and effectively use
roundabouts for both vehicular traffic and pedestrians. Drivers must be well
informed that pedestrians will be accessing roundabouts and to be alert and
proceed with caution.
2. Transportation engineers and/or civic planners must make it their goal to create an accessible and safe environment for all pedestrians, (including people who are blind, vision impaired or deaf/blind).

3. Water fountains and other features, which produce background noise, must not be placed in close proximity to the roundabout so as to impede on the ambient sound of vehicular traffic.

4. Visual barriers, higher than 30 cm should not be permitted in the middle island, as it creates a visual barrier for drivers and pedestrians; this also creates an auditory barrier for pedestrians.

5. Clear consistent way finding that gives the pedestrian both visual and tactile cues where to enter and safely cross the roundabout.

6. For one and two lane roadways, a marked crosswalk equipped with an accessible pedestrian signal (APS) with acoustic locater tone and a Vibro-tactile component must be installed on each leg of the roundabout approach where a pedestrian will be able to cross the roundabout. APS output volumes must conform to the Transportation Association of Canada Guidelines for volume settings so as to avoid volume spillover and thus confusion by other pedestrians wanting to cross other legs of the roundabout. There must be one set of signals per entry and exit. We recommend the standard red/yellow/green signals be used. They would rest on flashing green. In response to a pedestrian activation, they would cycle to amber, and then red for the time allocated to allow for pedestrian crossing.

7. Roundabouts with three lanes or more, travelling in the same direction, require a pedestrian overpass.

8. Bus stops must not be located any closer than 50 metres to a roundabout, as the bus visually and aurally, obscures the pedestrian crossing.

9. All marked crosswalks on the approaches to roundabouts must be within 50 metres to the vehicular entrance of the roundabout.

Please go to www.itre.ncsu.edu/NCHRP378/ for visualizations of the above mentioned treatments.

**Way Finding Elements**

Definition: Way finding is the consistent usage of signs, clearly marked path ways, tactile walking surface indications (TWSIs), universally understood graphics, and audible sounds used to convey location and a natural flow of direction for travelers towards reaching a destination.

The following way finding elements and techniques must be considered when designing a roundabout.

1. Curb cuts or let-downs on both the departure and destination curbs of the crosswalk must include high color contrasting, 600mm wide tactile walking surface indicators (measuring back from the curb’s edge) which span the horizontal plain of the curb cut.
2. Sidewalks, with landscaping at street edge, to preclude prohibited crossings to center island.
3. Areas where pedestrians need to cross must have standardized, well-defined and color contrasting crosswalks, with high color contrasted, cane detectable guidance tiles (parallel lines) to demark a straight line of travel for pedestrians who are blind, visually impaired and deafblind.
4. Crosswalks must be perpendicular to all curbs.
5. Splitter islands must not extend into the crosswalk (in that a pedestrian who is blind, visually impaired or deafblind may interpret the splitter island as the destination curb.) Pedestrian WALK phases must allow sufficient time for a pedestrian to execute a complete crossing from the departure curb to the destination curb, particularly where the roadway is wider due to a splitter island.
6. All pedestrian signage must be consistent in format, provide both tactile and braille lettering and have high contrast between foreground and background colors.
7. All graphics or symbols used for signage must be universally recognizable and understood by most people.
8. All roundabouts, with pedestrian crossings, require lighting in all crosswalk locations, to assist in visibility of pedestrians.

**References and Resources**


Schroeder, Bastian. “Blind Pedestrians Access to Roundabouts and Other Complex Intersections.” **Institute for Transportation Research and Education at North Carolina State University**

Schroeder, Bastian; Hughes, Ronald; Rouphail, Nagui; Cunningham, Christopher; Salamati, Katy; Long, Richard; Guth, David; Wall Emerson, Robert; Kim, Dae; Barlow, Janet; Bentzen, Billie Louise (Beezy); Rodegerdts, Lee; Myers, Ed. “Crossing Solutions at Roundabouts and Channelized Turn Lanes for Pedestrians with Vision Disabilities.” **National Cooperative Highway Research Program Report 674**, Washington, D.C., 2011.


[www.access-board.gov/research/roundabouts/bulletin.htm](http://www.access-board.gov/research/roundabouts/bulletin.htm)
November 21, 2011

To: Bob Henderson, 
Steve Van de Keere, 
Mike Jones 
Region of Waterloo 
150 Frederick St. 
Kitchener ON N2G 4J3

Chris Hodgson, 
City of Waterloo 
100 Regina St. S., 
Waterloo ON N2J 4A8

John McBride 
City of Kitchener 
200 King Street West, 9th floor 
Kitchener, ON N2G 4G7

We are writing to you at this time to add our voice to the many public concerns regarding roundabouts in the Region of Waterloo, City of Waterloo, and City of Kitchener.

The Grand River Accessibility Advisory Committee (GRAAC) has always considered pedestrian safety to be a top priority. In July of 2008 we wrote to you, outlining very specific points regarding roundabouts, citing specific locations and concerns. As an advisory committee our role is to bring our observations to your attention. A copy of that letter is attached for your reference.

Since then, more roundabouts have been constructed in the region for traffic control. We still feel that pedestrian safety is not really being addressed, and the
recent occurrence at Homer Watson Boulevard and Block Line Road validates our concern.

It is sad that it takes such a dramatic event for the roundabout pedestrian policy to be revisited. It is obvious to this committee that the design of these pedestrian crossings at roundabouts is not meeting the needs of the average pedestrian, let alone the needs of persons with disabilities. We would venture to speculate that this accident could have been fatal had it involved a person in a wheelchair, or someone trying to cross with a visual impairment.

These pedestrian crossings at roundabouts MUST take into consideration the safety of pedestrians. We were gratified to see the speed limit reduced at this location, but that is just a beginning. Speed needs to be controlled at all roundabouts, and further education of drivers is paramount to ensuring a safe crossing for pedestrians. Signage must be clear and legible to all, and a safe place to cross needs to be determined and well-marked at every location.

The use of roundabouts is global, and a research study concerning "best practices" would be helpful in determining the safest way possible for pedestrians to cross the streets near roundabouts.

We consider this a "wake up call". Let’s work together to solve this problem and avoid another one of our citizens getting injured - or worse.

Sincerely,

Gord Cummer - Co-Chair – Grand River Accessibility Advisory Committee
Sharon Giles - Co-Chair – Grand River Accessibility Advisory Committee

cc- All Councilors:
   City of Waterloo
   City of Kitchener
   Region of Waterloo

- file
TO: Chair Jim Wideman and Members of the Planning and Works Committee  
DATE: June 18, 2013  
FILE CODE: T04-20, 5549  
SUBJECT: FRANKLIN BOULEVARD IMPROVEMENTS – ROUNDABOUT DESIGN AT FRANKLIN BOULEVARD AND SAGINAW PARKWAY, CITY OF CAMBRIDGE

RECOMMENDATION:

THAT the Regional Municipality of Waterloo approve the design of the Franklin Boulevard and Saginaw Parkway roundabout as outlined in Report E-13-032, dated June 18, 2013.

SUMMARY:

Planned improvements on Franklin Boulevard from Myers Road to Pinebush Road in the City of Cambridge include eleven modern roundabouts of which five, on the northerly section, will have 3 lane entries/exits (i.e. at Pinebush Road, Sheldon Drive, Bishop Street, Can-Amera Parkway and Saginaw Parkway). During 2011 and 2012, Regional Council and staff received questions and concerns regarding the safety of pedestrians crossing at the proposed Saginaw Parkway roundabout from St. Benedict’s Catholic High School staff, parents, Cambridge Library staff and Cambridge Council. Please refer to Appendix A for a key plan of the proposed Franklin Boulevard/Saginaw Parkway roundabout. Committee members requested staff to review options for enhancements to assist pedestrian/student crossing at the Saginaw roundabout and report back with further detailed design of the roundabout.

Staff conducted a traffic analysis to determine whether the 3-lane entries and exits to the northerly five roundabouts could be reduced to two lanes in the interim to simplify operations within the first few years. Staff’s conclusion from this analysis is that the 3-lane entries/exits are necessary to accommodate existing heavy traffic and therefore staff do not recommend an initial reduction to two lanes at any location.

Staff also conducted a review of the current design of the Saginaw Parkway roundabout to address concerns regarding student crossing safety. This included a review of measures implemented at the Homer Watson Boulevard/Block Line Road roundabout and a comprehensive exploration of additional design enhancements that could assist students crossing at the Saginaw Parkway roundabout. As part of developing and assessing the design enhancements, staff also consulted with staff from the Waterloo Catholic District School Board, St. Benedict’s Catholic High School and Parent Teacher Council, Cambridge Fire Services, Region Emergency Services, Canadian National Institute for the Blind (CNIB), Grand River Accessibility Advisory Committee (GRAAC) and Cambridge Councilor Nicholas Ermeta.

Based on the comprehensive technical review of the design and consultation with all concerned parties, staff are recommending the following design enhancements for assisting students and visually impaired pedestrians crossing at the Franklin Boulevard and Saginaw Parkway roundabout:
• Raised Crosswalks on all entries and exits of the roundabout;
• Large splitter islands on the approaches and exits of the roundabout;
• A yield condition channelized right turn lane from Saginaw Parkway to Franklin Boulevard, relocated north of the pedestrian crossing on Franklin Boulevard on the north side of Saginaw Parkway; and
• Roundabout Accessible Traffic Control Signals (traffic control signals for visually impaired pedestrians crossing at the roundabout) on Franklin Boulevard approximately 135 metres north of Saginaw Parkway.

In addition to the recommended design enhancements, Region staff are also recommending to:
• Continue to work with the City of Cambridge in providing crossing guards during peak student crossing times before and after school, and during lunch hours, until the Ontario Traffic Manual Book 15 Type 2 PXO sign is legislated by the province;
• Continue to work with the City of Cambridge in reviewing the possibility for constructing a pedestrian refuge island or pedestrian crossing control on Saginaw Parkway to accommodate crossings by students and visually impaired pedestrians easterly of Franklin Boulevard;
• Explore the possibility for constructing a walkway across school lands in connecting the St. Benedict’s school entrance to the Franklin Boulevard and Saginaw Parkway roundabout; and
• Continue to work with the Waterloo Catholic District School Board, St. Benedict’s Catholic High School staff, Parents Council, students and the local area community in providing education on pedestrian crossing at roundabouts.

The Region’s 2013 10 Year Transportation Capital Program currently identifies Year 1 construction phasing of the Franklin Boulevard Improvements to start in 2014, pending necessary property acquisitions, approvals and utility relocations. Despite Region staff making best efforts on an aggressive schedule to complete work for the 2014 start of construction, the start of the Year 1 construction phase will now be in the 2015 construction season. The main reasons for this delayed construction start are the extra consultation with the School Board, CNIB and GRAAC for the proposed roundabout at the Saginaw Parkway intersection together with the complexity and scope of utility relocation and the numerous partial takings needed for this project. Construction of the Franklin Boulevard and Saginaw Parkway roundabout is included in Year 2 phasing of the Franklin Boulevard Improvements for which construction will consequently start in 2016.

REPORT:

1.0 Background

The Franklin Boulevard Improvements Class Environmental Assessment (EA) was approved by Regional Council on March 24, 2010. The approved roadway improvements include approximately 8.0 km of road along Franklin Boulevard from Myers Road to Pinebush Road and an additional 3.5 km of related side street improvements in the City of Cambridge, with the construction of eleven modern roundabouts. Five of the roundabouts on Franklin Boulevard will have 3 lane entries/ exits, at Pinebush Road, Sheldon Drive, Bishop Street, Can-Amera Parkway and Saginaw Parkway.

Regional Planning and Works Committee at its meeting of May 8, 2012 approved the recommendation for a phasing schedule for constructing the Franklin Boulevard Improvements (Report E-12-027). At this same meeting Committee members raised questions and concerns regarding pedestrians crossing at roundabouts and requested staff to review options for traffic
signals and signalized pedestrian crosswalks, as well as the placement of crosswalks. Committee members also requested staff to review options for enhancements to assist pedestrian/student crossing at the Franklin/Saginaw roundabout and report back with further detailed design of the roundabout. Please refer to Appendix A for a key plan of the Franklin Boulevard and Saginaw Parkway intersection. Further to the May 8, 2012 Committee meeting, correspondence was received from the City of Cambridge by City Council motion of May 28, 2012 requesting that Region Council reconsider the proposed roundabout at the Franklin Boulevard and Saginaw Parkway/Elgin Street intersection.

At its meeting of June 19, 2012 Regional Planning and Works Committee received a delegation from representatives of the St. Benedict's Catholic High School, Parents Council and parents of students from schools in the area of Franklin Boulevard and Saginaw Parkway. The delegation expressed concerns for pedestrian safety at the proposed Franklin Boulevard/Saginaw Parkway roundabout due to the volume of vehicular and pedestrian traffic, and traffic speeds at roundabouts versus traffic signals. The delegation expressed their view that a traffic signal would be safer than a roundabout at this location.

In addition to the St. Benedict’s Catholic High School’s concerns, the Cambridge Public Library Board by letter of July 17, 2012 advised that it should be recognized that a branch of the Cambridge Public Library is located at the St. Benedict’s School at Franklin Boulevard and Saginaw Parkway. They also advised that many of the people who participate in the library programs are children under the age of 15 and regularly access the Franklin Boulevard and Saginaw Parkway intersection for their pedestrian trips to and from the library.

In response to all the concerns raised Region staff committed to undertake the following:
- Conduct a Roundabout Information Session with Regional Council members;
- Address concerns regarding pedestrian safety at roundabouts, including a review of crossing options and locations;
- Consider design elements to assist pedestrian crossings at the Franklin Boulevard and Saginaw Parkway roundabout; and
- Present a report to the Planning and Works Committee summarizing the findings of these actions.

2.0 Regional Council Information Session on Roundabouts

On October 30, 2012, Region staff held a Regional Council Information Session on roundabouts. The information session was well attended by Council members. Members of the public and the media were also welcome to this event. At the information session, Region staff made presentations and answered questions about various key roundabout topics including history, design characteristics, safety performance and crossing control options for pedestrians (including traffic signals). The information session included a group “brainstorming” exercise in which groups considered a typical roundabout application in discussing and identifying a best practice for pedestrian crossing control where large numbers of pedestrians are present. At the information session Region staff presented historical pedestrian safety performance information for the existing signalized intersection at Franklin Boulevard and Saginaw Parkway in comparison to the expected safety performance of a roundabout at this location. Information on the performance of the existing signalized intersection included the results of a speed survey and collision review in comparison to the roundabout at Homer Watson Boulevard and Block Line Road, as well as a review of research on the location of crosswalks at roundabouts and options for pedestrian crossing controls.
2.1 Traffic Speed Review

In review of the Franklin Boulevard and Saginaw Parkway intersection, Region staff undertook a traffic speed survey at the existing Franklin Boulevard/Saginaw Parkway signalized intersection and compared it to traffic speeds at a roundabout in a similar location, being Homer Watson Boulevard and Block Line Road. Staff found average entry speeds at the signals and roundabout to be similar at approximately 30 km/hr, whereas average exit speeds at the signals were approximately 60 km/hr in comparison to 40 km/hr at the roundabout. Staff also found peak traffic speeds at the roundabout to be slower than at the traffic signals.

Studies on vehicle speeds and pedestrian collisions have shown that the probability of pedestrian fatality increases significantly with increased vehicle speeds. With a roundabout at Franklin Boulevard and Saginaw Parkway, the expected lower peak vehicle speeds at the crosswalks on Franklin Boulevard exiting the roundabout are expected to provide lower overall risks for a pedestrian fatality compared to overall risks at a traffic signal. Please refer to Figure 1 below, Pedestrian Fatality Risk and Impact Speed.

![Pedestrian Fatality Risk and Impact Speed](image)

**Figure 1: Pedestrian Fatality Risk and Impact Speed**
2.2 Pedestrian Safety Performance (Roundabouts vs Traffic Signals)

Experience at roundabouts around the world and in the Waterloo Region has shown that roundabouts generally perform better for pedestrian safety over signalized intersections by creating an environment where: there are slower vehicle speeds; pedestrians need only watch for one direction of traffic at a time; the crossing distances are shorter; driver attention is not distracted by traffic signals; there are fewer conflict points; and drivers and pedestrians are more likely to be aware of each other. Over the period of 2007 to 2011 across the Region there have been 177 pedestrian collisions at the 246 signalized intersections in comparison to 4 at the 15 roundabouts. This represents a lower expectation of pedestrian collisions at roundabouts on average by 63% compared to traffic signals.

Region staff conducted a review of the pedestrian collision history at the existing signalized Franklin Boulevard and Saginaw Parkway intersection and found that between August 2011 and October 2012 there have been three pedestrian collisions at this location. In comparison, there has been one pedestrian collision at the Homer Watson Boulevard and Block Line Road roundabout over the same period of time. The Region’s 5 year history ranking for pedestrian collisions at signalized intersections currently ranks the Franklin Boulevard at Saginaw Parkway intersection as the fourth worst in the Region for most unexpected pedestrian collisions (7 collisions where 2 would have been expected).

Data sources on traffic signals and pedestrian collisions also indicate that as pedestrian volumes increase and traffic volumes remain steady, pedestrian collision rates decrease (“safety in numbers” effect). Conversely, when traffic volumes increase and pedestrian volumes remain steady, pedestrian collision rates increase (“exposure and complexity” effect). Traffic projections for Franklin Boulevard indicate that implementing improvements to the existing signalized intersection of Franklin Boulevard and Saginaw Parkway (to allow it to remain signalized), would require the widening of Franklin Boulevard from 4 to 6 lanes (plus turning lanes), making it much more complex for pedestrians. In fact, this intersection would look and operate like Hespeler Road at Pinebush Road in the City of Cambridge. Region staff would expect pedestrian collisions to increase if the intersection of Franklin Boulevard and Saginaw Parkway were to be reconstructed as a signalized intersection.

2.3 Pedestrian Crosswalks and Crossing Controls at Roundabouts

In consideration of concerns received regarding pedestrian crossing at roundabouts, Region staff has also reviewed the location of the crosswalks at roundabouts. Staff conducted a review of current design guidance and research in North America as well as other parts of the world. Based on this literature review, which included a recent study by the New Zealand Transport Agency (May 2012), staff concluded pedestrian collisions are more likely to occur when the crosswalks are located more than two car-lengths away from the roundabout. The reason cited for this higher collision frequency is the higher vehicle speeds as drivers are further away from the roundabout. As a result, most design guidance for roundabouts recommend not locating crosswalks more than 20 metres from the roundabout. In keeping the crosswalks close to the roundabout, vehicle speeds are controlled by the geometry of the roundabout. The speed control is created by the curvature of the road as it approaches the entry of the roundabout. This “deflection” forces drivers to slow down from their mid-block speeds. A good example of this is at the Homer Watson Boulevard and Block Line Road roundabout where on average drivers are entering the roundabout at speeds of approximately 30 km/hr despite the initial posted speeds of 70 km/hr and now 50 km/hr on Homer Watson Boulevard. With these lower speeds, the risk of a serious injury or fatality is significantly lower than at a traffic signal. (Please see Figure 1 above.)
In addition to the location of pedestrian crosswalks at roundabouts, Region staff has also reviewed various types of pedestrian crossing controls at roundabouts including: No Control; Yield to Pedestrian Signing; Flashing Beacon; Pedestrian Signal; and High-Intensity Activated Crosswalk (HAWK) Signal. In reviewing these pedestrian crossing controls, Region staff considered minimizing pedestrian crossing delays, providing clarity for pedestrian right-of-way and minimizing delays to motorists. Region staff believe that: a No Control pedestrian crossing does not give priority to pedestrians for right-of-way and will add delay in their crossing; pedestrian activated Flashing Beacons and HAWK Signals may create driver confusion for recognizing the priority of pedestrians at the roundabout crossing if the signals are not used/activated for all pedestrian crossings, creating further driver confusion on the priority of pedestrians crossing at other intersections in the Region where Pedestrian Signals are not present, and although Pedestrian Signals provide clarity in right-of-way, they create a delay for pedestrians and motorists, take the right-of-way away from the pedestrians and condition drivers to look at the signals rather than the pedestrian. In conclusion, Region staff believe that Yield to Pedestrian Signing best provides for clarity in pedestrian right-of-way for crossing at roundabouts and minimizes pedestrian crossing and motorist delay.

3.0 Design Review and Enhancements for Assisting Students Crossing the Roundabout

In further advancing the detailed design of the Franklin Boulevard and Saginaw Parkway roundabout, Region staff has identified a number of enhancements for assisting students crossing at this proposed roundabout. Please refer to Appendix B for a plan of the Draft Design - Franklin Boulevard at Saginaw Parkway Roundabout. The enhancements for assisting students crossing at this roundabout include: measures identified from the Homer Watson Boulevard and Block Line Road roundabout including provision of crossing guards; and design enhancements such as raised crosswalks, large splitter islands, and a yield condition channelized right turn lane from Saginaw Parkway to Franklin Boulevard, relocated north of the pedestrian crossing on the north side of Franklin Boulevard.

3.1 Measures Identified from Homer Watson Boulevard and Block Line Road Roundabout

As a result of crossing concerns received from the Waterloo Catholic District School Board and St. Mary's High School staff, students and parents immediately after opening of the Homer Watson Boulevard and Block Line Road roundabout, Regional Council directed a number of measures to help address the concerns (Report E-12-006). These measures included: consideration for reducing the number of entry lanes from 3 lanes to 2 lanes on an interim basis, until projected traffic requires the third lane; and the provision of crossing guards during peak times of student crossing before and after school until the Ontario Traffic Manual Book 15 Type 2 PXO sign is legislated by the province. Legislation by the Province for the Ontario Traffic Manual Book 15 Type 2 PXO sign (as shown in Figure 2 below) will provide enforcement and is expected to be approved by the Province by the end of 2014. Once approved by the Province, staff will implement the Ontario Traffic Manual Book 15 Type 2 PXO sign at all Regional roundabouts in lieu of the current Yield to Pedestrian signs.

The improvements on Franklin Boulevard include roundabouts with 3 lane entries/exits at Pinebush Road, Sheldon Drive, Bishop Street, Can-Amera Parkway and Saginaw Parkway. Staff has reviewed the traffic analysis for the Franklin Boulevard Improvements and concluded that the 3 lane entries/exits at the Franklin Boulevard roundabouts are necessary to accommodate existing traffic. Therefore, Region staff do not recommend reducing the number of entry/exit lanes on an interim basis as the reduced entry/exit widths would result in excessive traffic queuing and delays to motorists soon after construction.
Figure 2: Draft Type 2 PXO Sign Concept
Region staff believe the crossing guards at the Homer Watson Boulevard and Block Line Road roundabout are working well; however, there are also many student crossings without problems before and after school when crossing guards are not present. Pedestrian traffic counts at Homer Watson Boulevard and Block Line Road indicate that over the peak 8 hour period there are approximately 1,000 crossings at Homer Watson Boulevard with the majority of the crossings on the north side. In comparison, at Franklin Boulevard and Saginaw Parkway over the peak 8 hour period there are approximately 600 crossings which are split between the north side and south side of Franklin Boulevard. Please refer to Figure 3 below, Main Street Crossing Activity at Franklin Boulevard/Saginaw Parkway and Homer Watson/Block Line Road Intersections. The pedestrian crossing data indicates that the pedestrian crossing activity at Franklin Boulevard/Saginaw Parkway is not as busy as that at Homer Watson Boulevard/Block Line Road and that the peak crossing time at Franklin Boulevard/Saginaw Parkway occurs over the lunch time and does not coincide with vehicle traffic peaks in the morning and late afternoon. Because the proposed roundabout at Franklin Boulevard and Saginaw Parkway is a 3 lane roundabout at a location with high volumes of student crossings, Region staff are recommending to work with the City of Cambridge to provide crossing guards at the Franklin Boulevard and Saginaw Parkway roundabout should legislation by the Province for the Ontario Traffic Manual Book 15 Type 2 PXO sign be delayed beyond opening of the roundabout. It is proposed that crossing guards be provided upon opening of the roundabout during peak times of student crossing until the Ontario Traffic Manual Book 15 Type 2 PXO sign is legislated by the province.

![Figure 3: Main Street Crossing Activity at Franklin Boulevard/Saginaw Parkway and Homer Watson/Block Line Road Intersections](image-url)
3.2 Design Review

Region staff has reviewed the design for the Franklin Boulevard and Saginaw Parkway roundabout and found opportunities for a number of design enhancements in assisting pedestrians and students crossing the roundabout. Please refer to Appendix B – Draft Design – Franklin Boulevard at Saginaw Parkway Roundabout. The proposed design enhancements include: raised crosswalks; large splitter islands at the entry and exits of the roundabout to provide additional refuge space for groups of students in crossing traffic lanes; a yield design of the channelized right turn lane from westbound Saginaw Parkway to northbound Franklin Boulevard that would reduce vehicle speeds where the students would cross the turn lane; and the relocation of the channelized right turn lane to a location north of the north side pedestrian crossing of Franklin Boulevard that would eliminate the need for students to watch for right turning traffic at the same time as through traffic from the roundabout.

3.3 Raised Crosswalks

Region staff reviewed studies on pedestrian crossing initiatives at roundabouts and has identified raised crosswalks as an additional pedestrian crossing treatment for the Franklin Boulevard and Saginaw Parkway roundabout. Raised crosswalks are a raised platform (similar to a speed hump) at a pedestrian crossing to reduce vehicle speeds as vehicles approach the pedestrian crosswalk. Although similar to a “speed hump” in that it is a vertical bump on the road (up to 100 mm high), raised crosswalks are generally much longer (3 m or more) than a “speed hump” and are more like a raised platform rather than a “bump”. Raised crosswalks include a steeper ramp on the approach and a much smoother ramp on the leaving end. Please see Appendix C for a typical cross-section detail of a raised crosswalk.

Raised crosswalks have been used in other countries successfully and have proven to improve driver yield rates and reduce traffic speeds at roundabouts. Generally, arterial roads are not good locations for traffic calming devices such as raised crosswalks or “speed humps”, primarily because of the risk of a motorist or motorcyclist striking the “bump” at a high speed and losing control. For this reason, staff would generally not recommend this type of speed control device at a mid-block location or signalized intersection on a busy arterial road where vehicles can be travelling at high speeds. At the Franklin Boulevard and Saginaw Parkway roundabout however, the risk of a loss-of-control collision is significantly lower because drivers are already slowing down considerably because of the geometry of the roundabout. An example of this is at Homer Watson Boulevard and Block Line Road roundabout where 85% of the drivers are entering at speeds lower than 40 km/hr, and with average speeds of 28 to 30 km/hr.

Other reasons why vertical traffic calming devices are typically not recommended on arterial roads include:

- They can increase emergency response times if implemented at many locations along a route;
- They can cause premature “wear and tear” on large vehicles including buses and fire trucks;
- They can increase noise from acceleration/deceleration;
- They can cause some discomfort to transit patrons; and
- They can be an annoyance to motorists.

Raised crosswalks have been successfully implemented at roundabouts in Colorado and Utah in the United States as well as several locations in New Zealand and in Europe. To address concerns regarding “wear and tear” on buses and fire trucks and discomfort to bus patrons, staff are considering a design for the crosswalk that has been successfully implemented in Malmo,
Sweden in recent years. The raised crosswalk design used in Malmo incorporates a large platform (9 m long) that minimizes the discomfort to bus patrons and reduces the “wear and tear” on large vehicles such as buses and fire trucks.

Region staff has met with City of Cambridge Fire Services and Region Emergency Services staff in considering raised crosswalks at the Franklin Boulevard and Saginaw Parkway roundabout. Staff from the City of Cambridge Fire Services and Region Emergency Services are supportive of the design improvements; however they remain concerned regarding potential delay in response times associated with raised crosswalks, especially with the cumulative delay when applied in multiple locations along response routes. Region staff will continue to work with City of Cambridge Fire Services and Region Emergency Services staff in minimizing impacts for response time delays through establishment of policies and practices on their application and development of design details. During development of design details for raised crosswalks Region staff will review similar applications throughout the Region and local municipalities and will undertake “mock trials/testing” with Region and City Operations, Emergency Services and Fire Department staff as necessary in establishing a standard for best practices.

Studies on raised crosswalks indicate that they will result in average speed reductions of at least 6 km/hr at the crosswalks. It is expected that with raised crosswalks at the Franklin Boulevard/Saginaw Parkway roundabout, average entry speeds on Franklin Boulevard would be 24 km/hr (reduced from previously expected average speeds of 30 km/hr) and exit speeds on Franklin Boulevard would be 34 km/hr (reduced from previously expected average speeds of 40 km/hr). Although good driver yield rates and speed reductions are already occurring at Regional roundabouts, staff are recommending installation of raised crosswalks on all entries and exits at the Franklin Boulevard and Saginaw Parkway roundabout because raised crosswalks are expected to assist students crossing at this roundabout where the traffic volumes and pedestrian volumes are high. Region staff is also reviewing the Homer Watson Boulevard and Block Line Road roundabout and will present a report to Planning and Works Committee on a possible retrofit for raised crosswalks in advance of the construction of the Roundabout at Franklin Boulevard and Saginaw Parkway.

4.0 Accessibility at Intersections

Over the past year members of a multi-agency working group consisting of Regional and local municipal staff met with members of the Grand River Accessibility Advisory Committee (GRAAC) and Canadian National Institute for the Blind (CNIB) in developing recommendations to enhance accessibility at all intersections, including roundabouts, for members of the community with visual impairments. As a result of this working group, Regional Planning and Works Committee at its meeting on January 29, 2013, and subsequently Regional Council, approved a practice of enhancing accessibility at intersections and roundabouts in the Region of Waterloo (Report E-13-014). The approved practice includes for the consideration of accessibility measures at intersections such as: audible pedestrian signals, tactile advisory surface indicators, tactile guide strips, yellow curbs at pedestrian refuge islands, smart channels, Roundabout Accessible Traffic Control Signals and ladder crosswalks. These accessibility measures will be considered in the detailed design of the Franklin Boulevard and Saginaw Parkway roundabout as well as at all other intersections and roundabouts as part of the Franklin Boulevard Improvements project.

Region staff met with a representative of the Canadian National Institute for the Blind (CNIB) on February 27, 2013 in reviewing the need for Roundabout Accessible Traffic Control Signals at the Franklin Boulevard and Saginaw Parkway roundabout. At this meeting CNIB staff advised that currently there are four known visually impaired users of the Franklin Boulevard/Saginaw
Parkway intersection. Audible signals do not exist nor have they been requested at this intersection as the current visually impaired pedestrians have successfully been able to learn to cross the intersection without audible signals due to their ability to discern regular surges in traffic (stopping and starting). CNIB staff did however advise that the ability of a visually impaired pedestrian is independently assessed and some users may be incapable of using a signalized intersection without audible signals.

In accordance with the recently approved practice for enhancing accessibility at roundabouts in the Region of Waterloo, Region staff have reviewed the Franklin Boulevard and Saginaw Parkway roundabout with respect to existing visually impaired users, travel patterns and the operational impacts associated with the possibility and location for Roundabout Accessible Traffic Control Signals. Staff’s review identified a need to consider Roundabout Accessible Traffic Signals for crossing Franklin Boulevard north of Saginaw Parkway as well as crossing Saginaw Parkway on the east side of Franklin Boulevard. Visually impaired students and other visually impaired members of the local neighbourhood frequently cross at the Franklin Boulevard and Saginaw Parkway intersection to access the commercial plazas on the west side of Franklin Boulevard and south side of Saginaw Parkway for shopping and restaurants. Please see Appendix A, Key Plan of the Franklin Boulevard at Saginaw Parkway roundabout for the locations of shopping and restaurant plazas.

Region staff undertook a review of the potential traffic operation impacts of a Roundabout Accessible Traffic Control Signal on Franklin Boulevard. Staff’s review determined that a Roundabout Accessible Traffic Control Signal with a staggered crossing could be located approximately 135 metres north of Saginaw Parkway; however, it is expected that some traffic would queue at the crosswalk and back up into the Saginaw Parkway and Can-Amera Parkway roundabouts during peak traffic times. Although there would be some adverse operational impacts resulting from the implementation of a Roundabout Accessible Traffic Control Signal on Franklin Boulevard between Saginaw Parkway and Can-Amera Parkway, Region staff believe the risks of impacts to traffic operation on Franklin Boulevard from traffic queuing and delays are minor in that there are few visually impaired users of the accessible traffic signal and the potential use by students crossing in the area is highest during the lunch hours which is outside the peak traffic times on Franklin Boulevard. Installation of traffic control signals north of the Saginaw intersection for assisting visually impaired pedestrians in crossing Franklin Boulevard near the Saginaw roundabout is expected to be less of an impact on traffic operations and pedestrian crossing safety than locating the traffic signal crossing directly at the roundabout. A traffic signal crossing located at the roundabout would create greater levels of traffic queuing and delays to motorists and pedestrians. A traffic signal located too close to the roundabout could also potentially confuse motorists about the need to yield on entry to the roundabout. In addition, Region staff strongly believes that a roundabout at Franklin Boulevard and Saginaw Parkway is still a better solution than traffic signals in accommodating traffic needs and providing an improved environment for pedestrian crossing safety. Region staff is therefore recommending that a Roundabout Accessible Traffic Control Signal be implemented on Franklin Boulevard north of Saginaw Parkway as shown on the key plan in Appendix A.

Although the Roundabout Accessible Traffic Control crossing is being recommended to assist the visually impaired in crossing at the Franklin/Saginaw roundabout it is available for use by all pedestrians. Region staff are recommending to maintain the pedestrian crossings at the roundabout in addition to the Roundabout Accessible Traffic Control Signal crossing as this will ensure consistency at all roundabouts throughout the Region in reinforcing motorist’s expectations for a pedestrian crossing when approaching a roundabout. It is expected by staff that a majority of the public will cross at the roundabout as a more direct route of travel and that implementing raised crosswalks will attract even more pedestrian crossing at the roundabout,
however there may always be some students crossing Franklin Boulevard away from the intersection.

Region staff has also reviewed the potential for a Roundabout Accessible Traffic Control Signal across Saginaw Parkway on the east side of Franklin Boulevard. Region staff do not recommend a signalized crossing at this location due to the number of driveway accesses in the area and the inability to find a suitable location for a signalized crossing in proximity to the Franklin Boulevard roundabout.

Region staff met with the Transportation Sub-Committee of the Grand River Accessible Advisory Committee (GRAAC) on May 3, 2013 to review the proposed roundabout design at Franklin Boulevard and Saginaw Parkway and staff’s recommendations for enhancing accessibility. GRAAC members indicated their support of the recommended design enhancements for accessibility including the Roundabout Accessible Traffic Control Signals on Franklin Boulevard north of Saginaw Parkway. GRAAC members also commented on the need to consider similar initiatives for all modes of accessibility (visually impaired, mobility challenged, hearing impaired and the aging population) at existing and future roundabouts across the Region; specifically as traffic volumes increases at the intersections. Region staff will continue to work with GRAAC in reviewing the need and opportunity for enhancing accessibility on other Regional roadways as part of proposed improvements in the Transportation Capital Program.

5.0 Education and Awareness

Similar to efforts for the Homer Watson and Block Line Road roundabout, Region staff will continue working closely with the Waterloo Catholic District School Board and St. Benedict’s Catholic High School staff and students in developing a roundabout education and awareness plan to assist students and other pedestrians in understanding how to cross the roundabout at Franklin Boulevard and Saginaw Parkway. Region staff is also prepared to be on site to provide information and guidance to students on crossing the roundabout upon opening of the Franklin Boulevard and Saginaw Parkway roundabout at the start of the 2016 school year.

In addition, Region staff is planning to continue with its roundabout public education efforts in 2013 and in the next several years. Every year, a working group consisting of staff from the Region, the three Cities and Regional Police Services work to develop the upcoming roundabout education campaign for the next year and takes into account roundabout collision history, observed roundabout operations and public concerns raised about roundabouts when developing the goals of each year’s campaign. The Region’s roundabout education campaign for 2013 will be focusing on further distributing the Region’s “How The Heck Do You Drive In A Roundabout” DVD in educating the public on how to properly drive through roundabouts and in looking for pedestrians crossing at roundabouts.

As a result of the Homer Watson Boulevard/Block Line Road roundabout safety review, Region staff are also looking into further initiatives when constructing roundabouts for advising and educating motorists on roundabouts including:

- Explore alternative methods during construction of the roundabouts to condition drivers not to expect free-flow conditions and to expect a yield condition upon the opening of the roundabout;
- When roundabouts are under construction, explore new ways to better direct motorists’ attention to roundabout education and awareness;
- Anticipate those legs of the roundabouts that might involve drivers unfamiliar with roundabouts and adjust public education initiatives accordingly;
• Develop a comprehensive roundabout education and awareness campaign timed for implementation just in advance of opening the roundabouts within the project limits; and
• Enhance immature landscaping within the central island to increase the visible presence of new roundabouts.

As part of the education efforts for the proposed Franklin Boulevard roundabouts Region staff are planning “lunch and learn” sessions in late 2013 and throughout 2014 with local businesses along Franklin Boulevard in advance of construction of the roundabouts as part of an “outreach” campaign in meeting and presenting roundabout education material to their employees.

6.0 Consultation with Waterloo Catholic District School Board (WCDSB) and St. Benedict’s Catholic High School

Region staff met with representatives of the Waterloo District Catholic School Board (WCDSB), St. Benedict’s Catholic High School and Parent Council representatives on February 4, 2013, February 13, 2013 and April 19, 2013 to review the proposed design of the roundabout at Franklin Boulevard and Saginaw Parkway as included in this report. St. Benedict’s school staff indicated their assessment that student crossings are heaviest during the lunch hours where a significant volume of students cross Franklin Boulevard north of the Saginaw Parkway intersection as well as on Saginaw Parkway at the existing school driveway entrance east of the Franklin Boulevard intersection. St. Benedict’s school staff believe these student crossing patterns are a more direct route for students during lunch hours from the front entrance of the school in accessing the Tim Horton’s and other restaurants in the commercial plaza on the south side of Saginaw Parkway and west side of Franklin Boulevard. Please refer to Appendix A – Key Plan – Franklin Boulevard at Saginaw Parkway Roundabout for the location of the lunch hour student crossings.

Staff from the WCDSB and St. Benedict’s Catholic High School are supportive of the design improvements including the raised crosswalks and Roundabout Accessible Traffic Control Signals; however they requested consideration for additional traffic calming measures on Franklin Boulevard as well as provision of a student crossing facility on Saginaw Parkway at the school driveway entrance. School staff suggested traffic calming measures in advance of the roundabout, north and south of Saginaw Parkway, such as: additional mid-block speed bumps in slowing down drivers as they approach the roundabout crosswalks; and flashing warning lights, student crossing signs and pavement rumble strips in advising drivers of upcoming crosswalks at the roundabouts. St. Benedict’s Catholic High School staff also requested consideration for constructing a walkway across school lands in providing a more direct connection for students from the front entrance of the school to the Franklin Boulevard and Saginaw Parkway roundabout.

Region staff have reviewed the requests of the St. Benedicts Catholic High School and Parent Council representatives and do not recommend the additional traffic calming measures. Mid-block speed bumps, flashing lights or pavement rumble strips on Franklin Boulevard could lead to a potential increase in collisions at this location. Mid-block speed bumps are abrupt vertical deflections on the surface of the road across the traveled traffic lanes and are typically used to slow down through-traffic on local roads in residential neighborhoods experiencing high driver speeds with low traffic volumes. Mid-block speed bumps on arterial roads with high traffic volumes such as Franklin Boulevard would likely result in additional collisions at mid-block locations from drivers not expecting the speed bump and losing control in hitting the speed bump at higher speeds, or by being hit from behind in slowing down for the speed bump. Along with the number of road signs already required for the roundabout and raised crosswalks, additional flashing warning lights and student crossing signs for advising drivers of upcoming
crosswalks at the roundabout would result in an overabundance of lights and signs, likely creating “sign pollution” where drivers are “hard pressed” to read and understand all the signs prior to passing them, and thus eliminating the effectiveness of the required signs. Rumble strips are a series of grooves in the road surface across the traveled traffic lanes and are typically used on rural roadways in advising drivers approaching stop controlled intersections. Implementing rumble strips on Franklin Boulevard could lead to confusion for drivers with respect to expectations for slowing down versus stopping, not only on Franklin Boulevard but on other roads where rumble strips have been appropriately used.

As per the request of St. Benedict’s Catholic High School staff, Region staff will review opportunities for constructing a walkway across school lands through completion of the detailed design for the Franklin Boulevard and Saginaw Parkway roundabout and will meet with City of Cambridge staff in reviewing the possibility for constructing a pedestrian refuge island on Saginaw Parkway at the St. Benedict’s school entrance. In addition, Region staff will also include the peak student crossing during the lunch hours when working with the City of Cambridge to provide crossing guards at the Franklin/Saginaw roundabout as needed should legislation by the Province for the Ontario Traffic Manual Book 15 Type 2 PXO sign be delayed.

The Waterloo Catholic District School Board and St. Benedict’s Catholic High School staff has indicated their appreciation of the efforts of Region staff in understanding and addressing their concerns. The Waterloo Catholic District School Board and St. Benedict’s Catholic High School staff have been notified of Region staff’s recommendations for design enhancements at Franklin Boulevard and Saginaw Parkway roundabout as included in this report and that this report has been placed on the Region’s June 18, 2013 Planning and Works Committee meeting agenda for consideration.

7.0 Summary of Recommended Design Enhancements, Education and Other Efforts for Assisting Pedestrian and Student Crossing at the Franklin Boulevard and Saginaw Parkway Roundabout

Region staff believe that a roundabout at Franklin Boulevard and Saginaw Parkway will provide a safer pedestrian crossing environment as compared to traffic signals and that the roundabout design enhancements proposed will further assist pedestrian and student crossing at the roundabout. In consideration of the technical review and the consultation with staff from the Waterloo Catholic District School Board, St. Benedict’s Catholic High School, CNIB and GRAAC, Region staff are recommending the following design enhancements for assisting pedestrian/students crossing at the Franklin Boulevard and Saginaw Parkway roundabout:

- Raised Crosswalks on all entries and exits of the roundabout;
- Large splitter islands on the approaches and exits of the roundabout;
- A yield condition channelized right turn lane from Saginaw Parkway to Franklin Boulevard, relocated north of the pedestrian crossing on Franklin Boulevard on the north side of Saginaw Parkway; and
- Roundabout Accessible Traffic Control Signals on Franklin Boulevard approximately 135 metres north of Saginaw Parkway to assist visually impaired pedestrians crossing at the roundabout.

In addition to the design enhancements, Region staff are also recommending to:

- Continue to work with the City of Cambridge in providing crossing guards during peak student crossing times before and after school, and during lunch hours, until the Ontario Traffic Manual Book 15 Type 2 PXO sign is legislated by the province;
- Continue to work with the City of Cambridge in reviewing the possibility for constructing a pedestrian refuge island or pedestrian crossing control on Saginaw Parkway to
accommodate student and visually impaired pedestrians crossing easterly of Franklin Boulevard;
• Explore the possibility for constructing a walkway across school lands in connecting the St. Benedict’s school entrance to the Franklin Boulevard and Saginaw Parkway roundabout; and
• Continue to work with the Waterloo Catholic District School Board, St. Benedict’s Catholic High School staff, Parents Council, students and the local area community in providing education on pedestrians crossing at roundabouts.

8.0 Project Schedule
The 2013 Transportation Capital Forecast includes the improvements on Franklin Boulevard in 2014 and 2015 pending necessary property acquisitions, approvals and utility relocations. Construction of the Franklin Boulevard and Saginaw Parkway roundabout is included as part of Year 2 phasing of the Franklin Boulevard Improvements. Property requirements for the Franklin Boulevard project are extremely high requiring more than 300 parcels for road widening and easements in the Year 1 phase alone. Many of these property requirements are dependent on utility relocations within the corridor. The Region’s Legal Services Division has been working diligently with many of the property owners affected by the Year 1 works; however, the property acquisition work started later than planned due to delays in finalizing the road and hydro relocation designs. In addition, the numerous meetings and enhanced consultation with the School Board, CNIB and GRAAC have caused delays to the project schedule. As a result, the construction of Year 1 works will now start in 2015 rather than in 2014 as currently scheduled in the 2013 Ten Year Transportation Capital Program. Region staff are still planning to construct the entire project in two years with completion now expected in 2016.

CORPORATE STRATEGIC PLAN:
This project is consistent with the development of Focus Area 2 – Growth Management and Prosperity by optimizing infrastructure to meet current and projected needs.

The improvements on Franklin Boulevard when complete will support Focus Area 3 – Sustainable Transportation by optimizing existing road capacity to safely manage traffic.

FINANCIAL IMPLICATIONS:
The 2013 10 Year Transportation Capital Program includes $51,680,000.00 over the years 2013 to 2017 for the design, property acquisition, utility relocations and construction of this project to be funded from the Region Development Charges Reserve Fund.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:
NIL

ATTACHMENTS
Appendix A – Key Plan – Franklin Boulevard at Saginaw Parkway, City of Cambridge
Appendix B – Draft Design – Franklin Boulevard at Saginaw Parkway Roundabout (February 2013)
Appendix C – Raised Crosswalk - Typical Cross-Section

PREPARED BY: William Gilbert, Senior Project Manager, Transportation Expansion
APPROVED BY: Thomas Schmidt, Commissioner, Transportation and Environmental Services
APPENDIX “A”

Key Plan - Franklin Boulevard at Saginaw Parkway, City of Cambridge
APPENDIX “B”

Draft Design – Franklin Boulevard at Saginaw Parkway Roundabout (February 2013)
APPENDIX “C”

Raised Crosswalk - Typical Cross Section
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: June 18, 2013

FILE CODE: A02-30/PW

SUBJECT: PUBLIC CONSULTATION CENTRES FOR ION STOP DESIGN CONCEPTS

RECOMMENDATION:

For information.

REPORT:

Background

The design of ION stops is key to the success of the Region of Waterloo’s Rapid Transit (RT) service. Stops are the first point of contact for users of the system. Therefore, it is important that they reflect the identity of the community, while also ensuring durability, comfort, and ease of use.

Parsons Brinkerhoff, partnered with Genivar, was retained in April 2012 as the Region of Waterloo’s RT General Engineering Consultant (GEC). One of the tasks of the GEC is to develop ION Light Rail Transit (LRT) stop design concepts for inclusion in the Region’s Stage 1 LRT Request for Proposals (RFP) and to advance ION adapted Bus Rapid Transit (aBRT) stops to final design.

To date, RT staff have consulted with, and gathered feedback from, area municipal staff, regional staff, and key stakeholders. The next step in the development of the stop design concepts is to engage the public and gather their feedback.

ION Light Rail Transit (LRT) Stop Design Process

The ION LRT stop design concepts, developed by RT staff and the GEC, do not represent final design. The team selected to design, build, finance, operate and maintain (DBFOM) Stage 1 LRT will be responsible for completing the designs. One of the benefits of this approach is that the DBFOM contractor can apply their innovation and expertise to achieve the goals specified by the Region in the RFP. The RFP includes output specifications and concepts to indicate to the DBFOM contractor which functional and design elements are required as part of their final designs. For example, the concepts indicate that functional elements such as ticket vending machines, benches and garbage receptacles are required at all LRT stops. Throughout the procurement process, the Region will be the final approval authority on the ION LRT stop designs. Feedback received through this consultation process will be communicated to the DBFOM contractor as necessary.
ION Adapted Bus Rapid Transit (aBRT) Stop Design Process

The aBRT component of ION will be completed by the Region and is outside of the DBFOM procurement process. The Region will work with the GEC to advance the ION aBRT stops to final design. These designs will take into consideration the feedback received through this consultation process and will help staff make a recommendation on the final design of ION aBRT stops to Council in late-2013. The ION aBRT stops will be implemented through a construction contract separate from the DBFOM contract. Operation is scheduled to begin in late-2014/early-2015.

Public Art

To help establish a neighbourhood identity for each ION stop, a level of design freedom is allowed on a variety of stop elements including: public art, landscaping, and the aesthetic treatment of the “anchor wall” (see attachment B). RT staff will be working with the Public Art Advisory Committee (PAAC) and area municipalities to develop the process for providing public art at all ION stops and the surrounding area. The DBFOM contractor will be required to consult with the Region, and other relevant stakeholders as identified by the Region, on these elements for the ION LRT stops. All communications with the public shall be directed by the Region and coordinated with the DBFOM contractor. The Region and the contractor will also work with area municipal and regional staff, as required, on ION stops that necessitate site plan and/or other planning approvals.

Public Engagement

Public Consultation Centres (PCCs) to present the draft ION stop design concepts have been scheduled for:

- **Date:** Wednesday, June 19, 2013 (Drop-in from 4 to 8 p.m.)
  **Location:** Region of Waterloo Administrative Headquarters
  **Address:** 150 Frederick Street, Kitchener, Ontario

- **Date:** Thursday, June 20, 2013 (Drop-in from 4 to 8 p.m.)
  **Location:** Cambridge Chamber of Commerce
  **Address:** 750 Hespeler Road, Cambridge, Ontario

- **Date:** Tuesday, June 25, 2013 (Drop-in from 4 to 8 p.m.)
  **Location:** Knox Presbyterian Church
  **Address:** 50 Erb Street West, Waterloo, Ontario

On June 7, 2013, letters were sent to residents and businesses along the corridor, inviting them to participate in the Public Consultation Centres (PCCs). Newspaper advertisements were placed in the Waterloo Chronicle (June 12 and 19, 2013), the Record (June 14, 2013), the Cambridge Times (June 14, 2013), and the Kitchener Post (June 14, 2013). Road signs advertising the PCCs were posted between June 12 and 26, 2013. The PCCs were also advertised on the rapid transit website and through social media.

Feedback, opinions and input received at the PCCs will be used by staff when they make their final recommendation on the ION aBRT stop designs to Council, and will be communicated to the DBFOM contractor as necessary.
CORPORATE STRATEGIC PLAN:

This report supports Focus Area 3.1.1 of Council’s Strategic Focus: Develop an implementation plan for light rail transit including corridor and station area planning.

FINANCIAL IMPLICATIONS:

In June 2011, Council approved the implementation of the RT project, including LRT and aBRT, with estimated capital costs of $818 million, in 2014 dollars, with capital funding to be provided by the Province (up to $300 million), the federal government (one third of eligible project costs to a maximum of $265 million) and the Region ($253 million). The RT project and improvements to conventional transit are financed through an annual tax rate increase of 1.5% for a period of 7 years.

The costs associated with the Public Consultation Centres for Ion Stop Design Concepts are included in the General Engineering Consultant contract and as such are accommodated in the budget for the Rapid Transit Project.

The final LRT Stop Design Implementation is contained within the DBFOM contract and will be included in that component of the overall project. Costing of this component will not be fully calculated until the RFP closes and the preferred proponent is selected.

The final aBRT Stop Design Implementation is to be carried out by the Region outside of the DBFOM contract and will follow the Region’s purchasing procedures once the final design has been approved.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

None

ATTACHMENTS

Attachment A – LRT and aBRT Stop Precedents
Attachment B – ION LRT and aBRT Stop Design Concepts
Attachment C – PIC Presentation Boards
Attachment D – Invite Letter
Attachment E – Public Comment Form

PREPARED BY: Danielle Tobey, Planner, Rapid Transit

APPROVED BY: Thomas Schmidt, Commissioner, Transportation and Environmental Services
aBRT PLATFORM FUNCTIONAL CONCEPT

ANCHOR WALL CONCEPTS
- COMMON FORM OF THE SOLID ELEMENT CREATES VISUAL VARIETY USING DIFFERENT FINISH MATERIALS:

CHANNEL GLASS ANCHOR WALL
HIGH-END, CONTEMPORARY CHANNEL GLASS MAKES A REFERENCE TO LOCAL HIGH-TECH INDUSTRIES

FIELD STONE ANCHOR WALL
FIELD STONE MAKES A REFERENCE TO LOCAL HERITAGE BUILDING MATERIAL (CREATING A SENSE OF PLACE)

LIVING WALL ANCHOR WALL
"GREEN WALL" HELPS TO SOFTEN UP HARSH ENVIRONMENT OF HESPELER RD.
ION Light Rail Transit (LRT) Stops - Process

- Draft LRT stop design concepts were developed by Rapid Transit staff and the Region’s Rapid Transit General Engineering Consultant, in consultation with other stakeholders (i.e. malls, cities, etc.)
- LRT stop design concepts do not represent final design
- As part of the Design Build Finance Operate Maintain (DBFOM) procurement, the selected proponent hired by the Region, referred to as Project Co., will be responsible for completing stop designs
- Project Co. designs will be based on the output specifications and concepts included in the Region’s Request For Proposal (RFP)
- The purpose of the LRT concepts is to indicate to Project Co. which functional and design elements are required to be included in their designs (i.e. bike racks, lighting)
- One of the benefits of a DBFOM procurement method is that Project Co. can apply their innovation and expertise to achieve the goals specified by the Region in the RFP
- The Region will be the approval authority on all LRT stop final designs developed by Project Co.
LIGHTING CONCEPT

ANCHOR WALL CONCEPTS

CHANNEL GLASS ANCHOR WALL

FIELD STONE ANCHOR WALL

HISTORICAL IMAGERY/INFO ANCHOR WALL

GREEN WALL WITH FIELD STONE ANCHOR WALL
ION Adapted Bus Rapid Transit (aBRT) Stops - Process

- The aBRT component of ION will be completed by the Region and is outside of the Design Build Finance Operate Maintain (DBFOM) procurement process for LRT
- The Region will work with its Rapid Transit General Engineering Consultant to advance the aBRT stops to final design
- aBRT designs will take into consideration the feedback received throughout the public consultation process
aBRT PLATFORM FUNCTIONAL CONCEPT

ANCHOR WALL CONCEPTS
• COMMON FORM OF THE SOLID ELEMENT CREATES VISUAL VARIETY USING DIFFERENT FINISH MATERIALS:

CHANNEL GLASS ANCHOR WALL
HIGH-END, CONTEMPORARY CHANNEL GLASS MAKES A REFERENCE TO LOCAL HIGH-TECH INDUSTRIES

FIELD STONE ANCHOR WALL
FIELD STONE MAKES A REFERENCE TO LOCAL HERITAGE BUILDING MATERIALS (CREATING A SENSE OF PLACE)

LIVING WALL ANCHOR WALL
“GREEN WALL” HELPS TO SOFTEN UP HARSH ENVIRONMENT OF HESPELER RD.
LED LIGHT SIGNALLING PROXIMITY OF A BUS/TRAIN TO A STOP:
CHANGING FROM A LIGHT TONE TO A SATURATED COLOUR

Concept and Precedents

• LINEAR LANDSCAPE & HARDSCAPE ELEMENTS HELP TO DEFINE STATION "EDGE" AND CREATE CONNECTION BETWEEN STATION AND CONTEXT.
• OPPORTUNITIES FOR INTEGRATION OF PUBLIC ART, ADVERTISING, STATION BRANDING AND URBAN CONTEXT
• DIFFERENT PAVING MATERIAL, COLOUR & TEXTURE REINFORCE VARIOUS FUNCTIONS (BUS PAD, APPROACH PATH, PUBLIC PATH ETC.)
Dear Resident/Owner:

Re: Public Consultation Centre - Region of Waterloo ION Stop Design Concepts

ION, the Region of Waterloo’s Rapid Transit service is moving forward, with construction starting in 2014 and operation beginning in 2017. ION stops are the first point of contact for users of the system. Therefore, it is important that they reflect the identity of the community, while also ensuring durability, comfort, and ease of use. The Region of Waterloo, in consultation with area municipalities and stakeholders, have developed draft ION stop design concepts. The next step in the development of the stop design concepts is to gather public feedback.

You are invited to provide feedback on the draft ION stop design concepts at the following Public Consultation Centres:

Date: Wednesday, June 19, 2013 (Drop-in from 4 to 8 p.m.)
Location: Region of Waterloo Administrative Headquarters
Address: 150 Frederick Street, Kitchener, Ontario

Date: Thursday, June 20, 2013 (Drop-in from 4 to 8 p.m.)
Location: Cambridge Chamber of Commerce
Address: 750 Hespeler Road, Cambridge, Ontario

Date: Tuesday, June 25, 2013 (Drop-in from 4 to 8 p.m.)
Location: Knox Presbyterian Church
Address: 50 Erb Street West, Waterloo, Ontario

All locations are accessible by transit; please see grt.ca or call 519-585-7555 for routes and schedules. These events are also accessible for people with disabilities. If you require assistance to participate or to access information in alternative formats, please contact the Rapid Transit Infoline above at least five days prior to the consultation that you plan to attend.

If you are unable to attend but still want to be involved please visit the rapid transit website at www.regionofwaterloo.ca/rapidtransit or e-mail the Rapid Transit Division at rtinfo@regionofwaterloo.ca.

Yours truly,

Danielle Tobey
Planner, Rapid Transit Division
Please rank the following amenities based on your opinion of importance. (The Region will take your input into consideration, as well as available space, cost, and/or other technical requirements when planning for amenities at each ION stop.)

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<td>Interactive Passenger Information</td>
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<td>Landscaping</td>
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In your opinion, is there an amenity that is particularly important at a certain stop location?

___________________________________________________________________________

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Other Comments:
___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________
Name: ___________________________ Phone #: ___________________________
Address: _________________________ Email: ___________________________

The comments and submissions you provide will be used to assist the Region in making a decision on the ION stop designs. Under the Municipal Act, personal information such as name, address, telephone number and property location that may be included in a submission becomes part of the public record. Questions regarding the collection of this information should be referred to the Rapid Transit Division at 519-575-4400.
TO: Chair Jim Wideman and Members of the Planning and Works Committee
DATE: June 18, 2013
FILE CODE: A02-30/PW
SUBJECT: NORTHFIELD DRIVE AT HIGHWAY 85 INTERCHANGE MODIFICATIONS

RECOMMENDATION:

For information.

REPORT:

ION, the Region of Waterloo’s Rapid Transit service, is moving forward, with construction starting in 2014 and operation beginning in 2017. As part of the early ION functional design, the Highway 85 interchanges at Northfield Drive were proposed as full-movement, signalized intersections. Since then, Regional staff have been working with the Ministry of Transportation of Ontario (MTO) to develop a design that will maintain access to/from Highway 85, provide safe and efficient traffic operations, accommodate active transportation and provide efficient RT service in the area. The evaluation was based on the following general considerations:

- Changes to area traffic patterns
- Traffic operations and safety at subject and adjacent interchanges
- LRT operations and safety
- GRT operations and safety
- Accommodation of active transportation

The design evaluation has resulted in the need for the following modifications on Northfield Drive at the Highway 85 interchanges:

- The northbound and southbound Highway 85 interchanges at Northfield Drive will become right-in and right-out only
- The Kumpf Drive/Barta at Northfield Drive intersection will become right-in and right-out only
- A U-turn will be provided at the intersections of Northfield Drive/Parkside Drive and Northfield Drive/Colby Drive
- Accommodation of cycling lanes, sidewalks, and pedestrian crossing facilities on Northfield Drive between the rail corridor and Colby Drive are currently being evaluated

A Public Information Centre (PIC) to present these modifications has been scheduled as follows:

Date: June 27, 2013 (Drop-in from 4 to 8 p.m.)
Location: Albert McCormick Community Centre
Address: 500 Parkside Drive, Waterloo

Letters were sent out to residents and businesses in the adjacent neighbourhoods in the City of
Waterloo on June 14, 2013 inviting them to participate in the PIC. Newspaper advertisements will also be inserted in the Waterloo Chronicle (June 19, 2013), the Kitchener Post (June 21, 2013) and the Record (June 21, 2013). Road signs advertising the PIC were posted between June 13 and 28, 2013.

Feedback, opinions and input received at the PIC will be used by staff when they make their final recommendation to Council. The revised design will be reflected in the RT Request for Proposal (RFP).

CORPORATE STRATEGIC PLAN:

The report supports Focus Area 3.1 of Council’s Strategic Focus: Develop an implementation plan for light rail transit including corridor and station area planning.

FINANCIAL IMPLICATIONS:

In June 2011, Council approved the implementation of the RT project, including LRT and aBRT, with estimated capital costs of $818 million, in 2014 dollars, with capital funding to be provided by the Province (up to $300 million), the federal government (one third of eligible project costs to a maximum of $265 million) and the Region ($253 million). The RT project and improvements to conventional transit are financed through an annual tax rate increase of 1.5% for a period of 7 years.

The costs associated with the Northfield Drive at Highway 85 Interchange Modifications are contained within the DBFOM contract and will be included in that component of the overall project. Costing of this component will not be fully calculated until the RFP closes and the preferred proponent is selected.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Transportation Planning, Planning Housing and Community Services

ATTACHMENTS

Attachment A – Northfield Drive at Highway 85 Interchange Modifications
Attachment B – Invite Letter
Attachment C – PIC Presentation Boards
Attachment D – Public Comment Form

PREPARED BY: Danielle Tobey, Planner, Rapid Transit

APPROVED BY: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Dear Resident/Owner:

Re: Public Information Centre – Northfield Drive at Highway 85 Interchange Modifications

ION, the Region of Waterloo’s Rapid Transit service, is moving forward, with construction starting in 2014 and operation beginning in 2017. As part of the early ION functional design, the Highway 85 interchanges at Northfield Drive were proposed as full-movement, signalized intersections.

Recent refinements to the design, however, have identified the following modifications on Northfield Drive, between Parkside and Colby Drive, at the Highway 85 interchanges:

- The northbound and southbound Highway 85 interchanges at Northfield Drive will become right-in and right-out only
- The Kumpf Drive/Barta at Northfield Drive intersection will become right-in and right-out only
- A U-turn will be provided at the intersections of Northfield Drive/Parkside Drive and Northfield Drive/Colby Drive
- Accommodation of cycling lanes, sidewalks, and pedestrian crossing facilities on Northfield Drive between the rail corridor and Colby Drive are currently being evaluated

A Public Information Centre (PIC) to present these modifications has been scheduled as follows:

Date: June 27, 2013 (Drop-in from 4 to 8 p.m.)
Location: Albert McCormick Community Centre
Address: 500 Parkside Drive, Waterloo

If you are unable to attend, but wish to obtain information about the project, please contact the undersigned at 519-575-4757 ext. 3812.

Yours truly,

Danielle Tobey
Planner, Rapid Transit Division
Welcome
Public Information Centre
ION - Northfield Drive at Highway 85
Interchange Modifications
INTRODUCTION

- This Public Information Centre will communicate modifications being made on Northfield Drive at the Highway 85 interchanges to ensure efficient operations along the ION LRT route between the rail corridor and Colby Drive.

- The Region of Waterloo, in coordination with the Ministry of Transportation of Ontario (MTO), has developed a solution for maintaining operations and access to/from Highway 85, while also providing safe and efficient RT service in the area.

- This Public Information Centre will also address the measures being taken to minimize changes for interchange users, local residents and area businesses.
Rapid Transit

DESIGN CONSIDERATIONS

Design Considerations:

• Does the design maintain or improve access to, and traffic operations of, the Highway 85 interchanges on Northfield Drive?
• Does the design maintain or improve traffic operations of adjacent Highway 85 interchanges in Woolwich and Waterloo?
• Does the design maintain or improve area traffic patterns?
• Does the design maintain or improve ION operations?
• Does the design maintain or improve Grand River Transit integration?
• Does the design improve active transportation facilities?
• Does the design minimize out-of-direction travel for vehicles and pedestrians?
• Does the design increase land acquisition requirements?
• Does the design increase project costs?
• Is the design technically feasible?

Design Requirements:

• Left turns will only be permitted at signalized intersections by vehicles because of the centre-running LRT tracks
• Safe, accessible and efficient access should be maintained to Highway 85
• Traffic changes must be mitigated through the provision of alternative routes and/or U-turn opportunities
MODIFICATIONS - STRENGTHS/CHALLENGES

Strengthen:

- Traffic operations of both the Northfield Drive Highway 85 interchange are improved.
- Traffic circulation on Northfield Drive, and the surrounding area, is maintained.

Challenges:

- Minimal out-of-direction travel for vehicles (by providing U-turns and alternate routes).
- Potential for improved active transportation facilities (cycling lanes, sidewalks, pedestrian signals).
- Potential for improved integration between buses and ION.

Mitigation Measures:

- U-turn opportunities at the signalized intersections of Colby Drive and Parkside Drive.
- King Street North Waterlool and Woolwich Highwasy 85 interchanges can accommodate displaced trips.

- The removal of left turn movements in and out of the northbound and southbound Highway 85 interchanges, and
- Kump/Berta, at Northfield Drive will result in some changes to travel patterns.

- The removal of the westbound left (Northfield Drive westbound to Highway 85 southbound) is expected to have some impacts to area intersections.

- 180 AM peak hour vehicles and 400 PM peak hour vehicles currently making this movement.
EXISTING IMPACTED MOVEMENTS

Highway 85 interchanges at Northfield Drive and Kumpf Drive/Bartts will become right-in and right-out only, impacting existing left turn movements.

AM (PM) peak hour vehicles
ALTERNATIVE ROUTES: SOUTHBOUND LEFT (northbound Highway 85 to eastbound Northfield Drive)

- Right turn at Northfield Drive
- U-turn at Parkside Drive
- Exit at King St. N. Highway 85 Ramp
- Travel northbound on King St. N.
- Exit at King St. N. Highway 85 Ramp, Woolwich
- Travel southbound on King St. N. or eastbound on Bridge St. W.

The removal of the southbound left (northbound Highway 85 to eastbound Northfield Drive) can be mitigated by.

Alternative A
- Right turn at Northfield Drive
- U-turn at Parkside Drive
- Exit at King St. N. Highway 85 Ramp
- Travel northbound on King St. N.

Alternative B
- Exit at King St. N. Highway 85 Ramp, Woolwich
- Travel southbound on King St. N. or eastbound on Bridge St. W.
ALTERNATIVE ROUTES: WESTBOUND LEFT

(Northfield Drive westbound to Highway 85 southbound)

The removal of the westbound left (Northfield Drive westbound to Highway 85 southbound) can be mitigated by:

- Alternative A: U-turn at Parkside Drive
- Alternative B: Southbound on King St. N.
- Alternative C: Southbound on Bridge St. W.

- Right turn onto Highway 85 southbound
- Turn right onto Highway 85
- Southbound on University Ave.
- Southbound ramp in Waterloo

Rapid Transit

[Map diagram showing routes and directions]
ALTERNATIVE ROUTES: EASTBOUND LEFT
(Northfield Drive eastbound to Highway 85 northbound)

The removal of the eastbound left (Northfield Drive eastbound to Highway 85 northbound) can be mitigated by:

Alternative A
- U-turn at Colby Drive
- Right turn at Highway 85 northbound ramp

Alternative B
- Northbound on Weber St. N. and/or eastbound on Benjamin Road
- Turn right onto King St. N.
- Turn right onto Highway 85 northbound ramp
NEXT STEPS

- Continue to coordinate with MTO, the City of Waterloo, and stakeholders
- All modifications will be included in the Request for Proposal (RFP) for the Design Build Finance Operate Maintain (DBFOM) Consortium who will be building ION LRT
- August 2013: Modifications to be presented to Council for approval
- 2014: ION construction begins
- 2017: ION service begins
Thank You

Contact Us:
Rapid Transit Division
Region of Waterloo
50 Queen Street North, Suite 830
Kitchener, Ontario, Canada
N2H 6P4

Phone: 519-575-4757 ext. 3242
E-mail: rtinfo@regionofwaterloo.ca
Facebook: www.facebook.com/ROWRapidTransit
Twitter: @ROWRapidTransit
Website: www.regionofwaterloo.ca/rapidtransit
Northfield Drive at
Highway 85 Interchange Modifications
Public Information Centre - Comment Form

1. Was the purpose of the Public Information Centre clearly identified?

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

2. Did the display boards outline the process and proposed changes in a concise, meaningful and understandable way?

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

3. Was staff approachable and knowledgeable? Did they answer your questions/concerns?

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

4. Do you have any other comments?

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

Name: ____________________________ Phone #: ____________________________

Address: ____________________________ Email: ____________________________

The comments and submissions you provide will be used to assist the Region in making a decision on the Northfield Drive modifications. Under the Municipal Act, personal information such as name, address, telephone number and property location that may be included in a submission becomes part of the public record. Questions regarding the collection of this information should be referred to the Rapid Transit Division at 519-575-4400.

DOCS#1404200
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: June 18, 2013

FILE CODE: L07-20

SUBJECT: PERIODIC SUMMARY REPORT OF RAPID TRANSIT RELATED TRANSACTIONS UNDERTAKEN THROUGH PROPERTY ACQUISITION BY-LAW 11-055 – JANUARY 1, 2012 TO JUNE 7, 2013

RECOMMENDATION: For information.

SUMMARY:

By-law 11-055 (the “Property Acquisition By-law”) provides for certain delegated authority through a prescribed process and subject to certain prescribed criteria for the acquisition of real estate property in instances in which the total value of the transaction does not exceed $100,000. Section 5.2 of the Property Acquisition By-law requires a periodic report for information purposes to Council concerning all property acquisitions completed under that By-law. Appendix “A” to this Report provides a summary of such property acquisitions for the Rapid Transit Project for the period January 2012 to June 7, 2013.

REPORT:

By-law 11-055 (the “Property Acquisition By-law”) delegates certain authority for the acquisition of real estate property in instances in which the total value of the transaction does not exceed $100,000 to the respective Commissioner responsible for the project or programme in respect of which the real property interest is proposed to be acquired. The Property Acquisition By-law imposes the following conditions in respect of this delegated authority:

(a) Sufficient funds have been allocated and are available in departmental capital budgets approved by Council for the total value of the transaction and the transactional costs (the Project Manager/Engineer and Finance staff provide certification in this regard);
(b) A current market value appraisal or valuation for the interest in the real property has been obtained and approved by the Manager of Real Estate Services;
(c) The acquisition agreement and all ancillary documentation is in a form that is satisfactory to the Regional Solicitor;
(d) All applicable Regional policies have been complied with; and
(e) The Regional Solicitor approves the acquisition.

As of the writing of this report, 13 Rapid Transit-related transactions have been approved and completed under the Property Acquisition By-law. The compensation amounts ranged from $2,700.00 to $43,624.00 and all of the interests acquired were fee simple partial takings. The transactions are detailed in the chart attached as Schedule “A” to this Report.

CORPORATE STRATEGIC PLAN:
This Report is in furtherance of the Strategic Plan’s priority to ensure that Regional programs and services are efficient and effective and demonstrate accountability to the public.

FINANCIAL IMPLICATIONS:

In accordance with the requirements of the By-law, sufficient funds were and available in the Rapid Transit budget approved by Council for the total value of the transaction and the transactional costs described in this Report.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

In accordance with the By-law, Transportation and Environmental Services staff and Finance staff were involved in approving the acquisitions described in this Report.

ATTACHMENTS

Appendix “A” – Summary of Real Estate Acquisitions

PREPARED BY: Liviu Cananau, Solicitor, Rapid Transit

APPROVED BY: Gary Sosnoski, Commissioner, Corporate Resources
Appendix “A” to Report CR-RS-13-059

<table>
<thead>
<tr>
<th>Property</th>
<th>Interest Acquired</th>
<th>Purchase Price</th>
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<tbody>
<tr>
<td>618 King Street West, Kitchener:</td>
<td>Partial Taking</td>
<td>$43,624.00</td>
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<tr>
<td>Part Lots A &amp; C, Plan 437, Part Lots 53 and 54, Plan 376, Pt. 4, 58R17368</td>
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<tr>
<td>637-641 King Street West, Kitchener:</td>
<td>Partial Taking</td>
<td>$18,216.00</td>
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<td>Lot 30 and 73, Plan 377, Part Lot 29, and 72, Plan 377, being Part 7, 58R-17368, Kitchener</td>
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<td>679 King Street West, Kitchener:</td>
<td>Partial Taking</td>
<td>$21,756.00</td>
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<tr>
<td>Part Lot 36, Plan 377, being Parts 10 and 11, 58R17368, Kitchener</td>
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<tr>
<td>683 King St. West Kitchener:</td>
<td>Partial Taking</td>
<td>$24,276.00</td>
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<tr>
<td>Part Lots 36 &amp; 37, Plan 377, being Parts 12 &amp; 13, 58R17368, Kitchener</td>
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<td></td>
</tr>
<tr>
<td>655 King Street West Kitchener:</td>
<td>Partial Taking</td>
<td>$15,909.00</td>
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<tr>
<td>Part Lot 32, Plan 377, being Part 9, 58R-17368, Kitchener</td>
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<tr>
<td>209 King Street South Waterloo:</td>
<td>Partial Taking</td>
<td>$2,700.00</td>
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<tr>
<td>Part Lot 95, Plan 385, being part 2, 58R-17316</td>
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<td></td>
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<tr>
<td>647 King Street West Kitchener:</td>
<td>Partial Taking</td>
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<tr>
<td>Part Lots 31 &amp; 31, Part 8, 58R17368, Kitchener</td>
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<td>687 King Street West Kitchener:</td>
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<tr>
<td>Part Lots 37 &amp; 38, Plan 377, being Part 14, 58R173, Kitchener</td>
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<td>670 King Street West Kitchener:</td>
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<td>Part 2, WR726570</td>
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<td>617-621 King Street West Kitchener:</td>
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<td>Part 5, WR726570 LRT</td>
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<td>354 Charles Street East Kitchener:</td>
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<td>Part 5, 58R17386</td>
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<td>765 King Street West Kitchener:</td>
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<td>Part 5, 58R17699</td>
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RECOMMENDATION:

THAT the Regional Municipality of Waterloo approve the installation of raised crosswalks at the Homer Watson Boulevard (Regional Road 28) and Block Line Road roundabout, in the City of Kitchener, as outlined in Report E-13-064, dated June 18, 2013, subject to funding approval as part of the 2014 Transportation Capital Program.

SUMMARY:

NIL

REPORT:

At its meeting dated March 28, 2012, Regional Council members approved changes to the Homer Watson Boulevard (Regional Road 28) and Block Line Road roundabout as outlined in a memorandum (attached as Appendix A) to Regional Council dated March 28, 2012. The memorandum recommended a reduction to the southbound lane configuration from 3 lanes to 2 lanes using a dedicated right turn lane, appropriate painting and non-permanent delineators. Regional Council also requested that staff review the operation of the roundabout following the approved changes and report back to Council in 2013.

The roundabout changes as approved by Council were implemented on May 13, 2012. In addition to the changes outlined in the memorandum, other approved countermeasures including approach and circulatory lane designation symbols and shark’s teeth yield lines were also implemented on May 13, 2012. The above-noted changes followed several other countermeasure treatments implemented at the roundabout for the southbound direction following an October 7, 2011 pedestrian collision occurring on the west leg of this roundabout. There have been no subsequent collisions involving pedestrians at the roundabout since October 7, 2011. In comparison, signalized intersections operating in similar traffic and pedestrian environments experienced an average of 2.4 pedestrian collisions since October 7, 2011.

One year has elapsed since the changes were implemented at the roundabout on May 13, 2012 giving staff the ability to adequately assess the impact of those changes over time. As collisions have been continuously trending lower at this roundabout since opening, it is important to account for the trend in collisions when assessing the effects of collision countermeasure treatments implemented May 13, 2012 so that the impacts are represented fairly. Based on the long term trend for total collisions per month at this particular location, staff expected an average of approximately 4 collisions per month between May 13, 2012 and March 31, 2013 without any additional treatment. Over the course of 10 months following the approved changes, the roundabout continued to experience an average of 4.1 collisions per month. Based on this assessment, the changes
implemented on May 13, 2013 appear to have had little to no impact on collisions at this location. The following Figure 1 illustrates the date approved countermeasures were installed, the collision regression trend, observed monthly collisions and the expected monthly collisions at this roundabout. Expected monthly collisions are based on the Region's collision prediction model and average collision rate of 1.44 collisions per million vehicles entering. Since the roundabout carries approximately 37,500 vehicles per day, it is expected that this roundabout should operate with approximately 1.6 collisions per month or 19 collisions per year. Roundabouts on Regional roads experienced an average of 13 collisions per year in 2012.

Figure 1 – Monthly Collisions at Homer Watson Boulevard and Block Line Road

The roundabout continues to experience higher than expected fail-to-yield type collisions on all approaches. The frequency of fail-to-yield type collisions is illustrated and highlighted in Appendix B.

As fail-to-yield collisions continue to occur more often than expected, other potential collision countermeasures (not yet installed) to reduce fail-to-yield collisions were considered. Staff reviewed the potential impacts of raised crosswalk platforms that have been successfully implemented in other countries. Research indicates that the design of these raised crosswalks, also being considered for Franklin Boulevard and Saginaw Parkway in Cambridge can decrease motorist entry speed to roundabouts by approximately 6 km/h. Average entry speed to the Homer Watson Boulevard and Block Line Road roundabout would therefore be reduced from 28-30 km/h to approximately 22-24 km/h should the raised crosswalks be installed. Although not explicitly detailed in the research, it is anticipated that reduced roundabout entry speed is likely to translate into improved driver yield compliance at entry points to the roundabout and circulating traffic.

In addition to the above benefits associated with raised crosswalks and even though a peer review confirmed that pedestrian crossings have been appropriately designed and perform well, raised crosswalks are also anticipated to further enhance the pedestrian environment at Homer Watson...
Boulevard and Block Line Road. Research indicates that as speed decreases drivers are more likely to yield to pedestrians. A recent Regional study determined that only 7 of 1230 pedestrian crossings of the north leg of this roundabout resulted in a pedestrian being delayed greater than 10 seconds indicating exceptional driver yield rates. Past studies have also indicated pedestrians are only delayed on average by approximately 2 seconds before a driver yields to them or they find an adequate gap in traffic to cross. As it is anticipated that raised crosswalks will reduce current average speeds by 6km/h at this location, Regional staff expects even higher yield rates than currently seen which means pedestrians will see even less delay than they experience today which is extremely low compared to delay that would be experienced at a traffic control signal.

Regional staff plan to closely monitor impacts that the raised crosswalks may have on crossing guard operations. At this time, it is not known whether or not there will be a need to maintain crossing guard presence following the installation of raised crosswalks. The Region had advised the Waterloo Catholic District School Board that crossing guard assistance will remain until legislation permits the installation of pedestrian Type 2 crossovers.

The Region has developed a design to retrofit the roundabout with raised crosswalks similar to raised crosswalks successfully implemented elsewhere. The following Figures 2 and 3 illustrate the location and design of raised crosswalks at Homer Watson Boulevard and Block Line Road roundabout.

Figure 2 – Raised Crosswalks at Homer Watson Boulevard and Block Line Road
It is recommended that raised crosswalks be constructed on all legs of the Homer Watson Boulevard and Block Line Road roundabout in 2014. Advantages that can be realized by tendering the work in 2014 include:

- Increased time to further refine the raised crosswalk design as necessary;
- Provides the ability to assemble a larger contract that would include other intersection work in other areas and attract more competitive pricing; and
- Provides time to develop a signing and pavement marking strategy for raised crosswalks; and
- Allows time for staff to develop policy regarding installation criteria for raised crosswalks at roundabouts and intersections.
The Waterloo Catholic District School Board, principal of St. Mary’s school, Grand River Transit and City of Kitchener Transportation staff have been advised of the proposed installation of raised crosswalks at this roundabout and support the installation of raised crosswalks at the roundabout. City of Kitchener fire staff has raised concerns regarding impacts to response times, vehicle wear, and potential overuse of raised crosswalks. Regional staff has advised Kitchener fire staff that response time impacts would be minimal as vehicles would already be slowing down at the proposed raised crosswalk locations and it is expected that wear and tear on vehicles would be minimal as well. The use of raised crosswalks would be limited to select locations such as near schools with high pedestrian volumes. It should be noted that Regional staff has also been in discussion with Cambridge Fire staff regarding the installation of raised crosswalks at the proposed Franklin/Saginaw roundabout. Cambridge Fire department staff raised concerns similar to those expressed by Kitchener Fire department staff. Regional staff will collaborate with all three City Fire Departments to refine the raised crosswalk design as necessary and will consider undertaking a test site application. All parties have been advised of the timing and presentation of this report to the Planning and Works Committee.

CORPORATE STRATEGIC PLAN:

This report addresses the Region’s goal to implement proven roadway safety strategies and education to enhance the safety of our roadways (Strategic Objective 3.3.2).

FINANCIAL IMPLICATIONS:

The funding required to construct raised crosswalk platforms on all four legs or the Homer Watson Boulevard and Block Line Road roundabout in 2014 is approximately $270,000 and will be considered in the 2014 Transportation Capital Program.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

NIL

ATTACHMENTS:

Appendix A – March 28, 2012 Memorandum
Appendix B – Collision Timeline

PREPARED BY: Bob Henderson, Manager, Transportation Engineering

APPROVED BY: Thomas Schmidt, Commissioner, Transportation and Environmental Services
TRANSPORTATION AND ENVIRONMENTAL SERVICES
Commissioner’s Office

Region of Waterloo Date: March 28, 2012

MEMORANDUM

To: Chair Ken Gelling and Members of Regional Council
From: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Signature: __________________________

Subject: Homer Watson Boulevard/Blockline Road Roundabout Southbound Lane Configuration
File No.: T04-10/28

At the March 20, 2012 Planning and Works Committee the possibility of adding a southbound right turn lane at the Homer Watson/Blockline roundabout was raised by Councillor Zehr. Following the Planning and Works (P&W) meeting Councillor Lorentz raised the possibility of an option that was less permanent that incorporated a right turn only lane, reduced the number of lanes in the roundabout from 3 to 2 and was less expensive than the option approved at P&W. Staff met with Councillor Lorentz and developed the attached plan showing a revised 3 lane configuration in the southbound direction for the Homer Watson/Blockline roundabout noted as “Option 4”.

The curb lane has been changed to a separate right turn lane with the other two lanes remaining as per the existing situation (i.e. one through lane and one through/left turn lane). The cost to make the changes noted on this plan would be in the range of $10,000 to $20,000.

The plan reduces the lanes in the roundabout from 3 to 2 and the roundabout should function similar to a 2 lane roundabout. The use of paint and delineators and conversion of one lane to a right turn lane reduces the cost of the changes and still allows for future revisions. Staff believe that this option is a viable option. Staff would also recommend that operation of the roundabout be reviewed in approximately one year’s time.

lbs

(11/2012)
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: June 18, 2013

FILE CODE: T02-04

SUBJECT: REVISED 2013 TRANSPORTATION BASE, SYSTEM EXPANSION, AND AIRPORT CAPITAL BUDGET

RECOMMENDATION:

THAT the Regional Municipality of Waterloo approve the revised 2013 Transportation Base, System Expansion, and Airport Capital Budgets as per Report E-13-080 dated June 18, 2013.

SUMMARY:

A mid-year review of the Transportation Base, System Expansion, and Airport Capital Budgets is carried out each year so that variations caused by actual tender results, revised project estimates based on detailed design and changes in project scheduling can be reported.

The revised 2013 Base Capital Budget has a funding decrease of $5,870,000 (total revised budget $41,870 million) which is primarily attributable to competitive contract pricing and revised project phasing. These revisions will reduce the amount required from the Roads Rehabilitation and Development Charge Reserve Funds in 2013.

The revised 2013 System Expansion Capital Budget has a funding decrease of $4,645,000 (total revised budget $65.095 million) which is primarily attributable to competitive contract pricing and project deferrals. These revisions will reduce the amount required from the Development Charge and Roads Capital Levy Reserve Funds in 2013.

The revised 2013 Airport Capital Budget has a net funding decrease of $344,000 (total revised budget $6.564 million) which is primarily attributable to revised project estimates. These revisions will reduce the amount required from debentures, grants and subsides in 2013.

Overall, the revised 2013 Transportation Capital Base, Capital System Expansion, and Airport Capital Budgets have a funding decrease of $10,859,000 (total revised budget $113.529 million).

REPORT:

Background

Each year a mid-year review of the Transportation Base, System Expansion, and Airport Capital Budgets is carried out so that variations caused by actual tender results, revised project estimates based on detail design and changes in project scheduling can be reported.

Appendix A summarizes the revisions to the previously approved 2013 Transportation Base, System Expansion, and Airport Capital Budgets.
Project Variations

The following are projects that have been added, deferred or projects that have had their budget revised to a value greater than $100,000 and a summary of the reasons are provided below. Projects in which tenders or Council reports have been approved by Regional Council are included in the project details (Appendix A) but are not addressed in this report.

1. Revised 2013 Transportation Base Capital Budget

The 2013 Transportation Base Capital Budget includes project improvements relating to ensuring the safe, efficient operation and maintenance of the existing road transportation infrastructure and is primarily funded from the Roads Rehabilitation Reserve Fund and Federal Gas Tax funding. These projects include resurfacing, reconstruction, bridge and drainage works, traffic signal modernizations, non-growth related intersection improvements, infill sidewalk installations and system management.

a) Regional Road 38 (Maple Grove Road), Hespeler Rd. (RR24) to Briardebian Rd., Cambridge (+$310,000);
   This spot resurfacing maintenance project will be added in order to extend serviceability of this road until 2020 when the major reconstruction and widening project is scheduled.

b) Regional Road 4 (Ottawa Street), Mill St. to Imperial St., Kitchener (-$175,000);
   This project estimate will be reduced since property acquisitions will now be completed in 2014.

c) Regional Road 8 (Weber Street), King St. (RR 15) to Blythwood Rd., Waterloo (-$190,000);
   This project estimate will be reduced since property acquisitions will now be completed in 2014.

d) Regional Road 20 (Bloomingdale Road), Kraft Dr. to Bridge St. (RR 52); Kitchener (-$200,000);
   This project estimate will be reduced since property acquisitions will now be completed in 2014.

e) Regional Road 33 (Townline Road), Avenue Rd./Gore Rd. to Saginaw Parkway, Cambridge (-$190,000);
   Surface asphalt will be deferred until 2014 in order to allow the contractor to undertake deficiency repairs to the sanitary sewer installed as part of this project.

f) Regional Road 53 (Courtland Road), Hwy 7/8 to Queen St., Kitchener (-$230,000);
   Surface asphalt will be deferred to 2014 to coordinate traffic management with other adjacent on-going projects.
g) Regional Road 57 (University Avenue), Lincoln Road to Weber Street North (RR 8), Waterloo (-$1,200,000);

In 2012, Region staff determined that the University Avenue Reconstruction should preferably be deferred from 2013 to 2014 in order to align with the Ministry of Transportation’s (MTO) proposed staging of its Highway 85 interchange improvements in 2013, thereby reducing inconvenience to the travelling public. However, during 2013 Transportation Capital Program (TCP) meetings with the City of Waterloo in 2012, the City requested that construction from Mayfield Avenue to Weber Street occur in 2013 as the City’s sanitary sewer was nearing capacity and needed to be replaced. This was reflected in the 2013 TCP approved by Council.

In the spring of 2013, the City advised that based on further analysis, the sanitary sewer construction could be deferred from 2013 to 2014 to allow the road reconstruction to coincide with the remainder of the Region’s 2014 planned reconstruction of University Avenue and avoid conflicts with the MTO interchange works in 2013.

h) Regional Road 50 (Westmount Road), at University Avenue (RR 57), Waterloo (-$610,000);

Project construction is to be deferred until 2014 to allow for new options to be explored that are planned to reduce costs related to temporary roadway support and sheet piling requirements.

i) Regional Road 52 (Bridge Street), Northfield Drive (RR 22) to 550 m South (toward Lexington Rd.) of Northfield Drive, Waterloo (-$195,000);

Sidewalk construction was scheduled in 2013 on Bridge Street from Northfield Drive to a point 550 metres south of Northfield Drive that was to be partially funded from a developer of a property at the intersection of Bridge Street and Northfield Drive. Since the funding has not been received from the developer, the sidewalk construction is being deferred until this funding is received from the developer.

2. Revised 2013 Transportation System Expansion Capital Budget

The Transportation System Expansion Capital Budget includes project improvements related to the population and employment growth within the Region of Waterloo and is funded from the Roads Capital Levy and Regional Development Charge Reserve Funds. These projects include intersection improvements, traffic signal installations, road widenings and road system expansions (new roads and bridges).

a) Regional Road 50 (Westmount Road), at Laurelwood Road Extension, Waterloo (+$100,000);

These funds will be advanced from 2014 to 2013 to undertake public consultation and detailed design for a possible roundabout on Westmount Road at the extension of Laurelwood Road in order to match the timing of the City of Waterloo’s proposed development in the area.
b) Regional Road 58 (Fischer-Hallman Road), at Sienna Street, Kitchener (+$450,000);

This project will be added to design and construct road improvements on Fischer-Hallman Road in conjunction with a new City of Kitchener street.

c) Regional Road 8 (King Street), Eagle Street (RR 30) to Fountain Street (RR 8) and Fountain Street – King Street (RR 8) to Shantz Hill (RR 8), Cambridge (-$900,000);

This project estimate will be reduced since property acquisitions will now be completed in 2014.

d) Regional Road 33 (Townline Road), Saginaw Parkway to Can-Amera Parkway, Cambridge (-$510,000);

Surface asphalt will be deferred until 2014 in order to allow the contractor to undertake deficiency repairs to the sanitary sewer installed as part of this project.

3. Revised 2013 Airport Capital Budget

a) Airport Fencing (-$201,000);

The fencing project scope of work and estimates will be redefined resulting in a reduction in funding required.

CORPORATE STRATEGIC PLAN:

This report addresses the Region’s Strategic Focus Area 2: Manage growth to foster thriving and productive urban and rural communities and Focus Area 3: Sustainable Transportation and the following Corporate Strategic Objectives.

- 2.2 – Develop, optimize and maintain infrastructure to meet current and projected needs
- 3.3 – Optimize the use of existing infrastructure and ensure it is adequately maintained

FINANCIAL IMPLICATIONS:

A mid-year review of the Transportation Base, System Expansion, and Airport Capital Budgets is carried out each year so that variations caused by actual tender results, revised project estimates based on detailed design and changes in project scheduling can be reported.

The revised 2013 Base Capital Budget has a funding decrease of $5,870,000 (total revised budget $41,870 million) which is primarily attributable to competitive contract pricing and revised project phasing. These revisions will reduce the amount required from the Roads Rehabilitation and Development Charge Reserve Funds in 2013.

The revised 2013 System Expansion Capital Budget has a funding decrease of $4,645,000 (total revised budget $65.095 million) which is primarily attributable to competitive contract pricing and project deferrals. These revisions will reduce the amount required from the Development Charge and Roads Capital Levy Reserve Funds in 2013.

The revised 2013 Airport Capital Budget has a net funding decrease of $344,000 (total revised budget $6.564 million) which is primarily attributable to revised project estimates. These revisions
will reduce the amount required from debentures, grants and subsides in 2013.

Overall, the revised 2013 Transportation Capital Base, Capital System Expansion, and Airport Capital Budgets have a funding decrease of $10,859,000 (total revised budget $113.529 million).

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Staff from Design & Construction, Finance and Transportation Planning have been directly involved in the preparation of this report.

ATTACHMENTS:

Appendix A – Revisions to the 2013 Transportation Base, System Expansion and Airport Capital Budget.

PREPARED BY: Kelly Walsh, Supervisor, Transportation Capital Program

APPROVED BY: Thomas Schmidt, Commissioner, Transportation and Environmental Services
### REVISIONS TO THE 2013 TRANSPORTATION BASE, SYSTEM EXPANSION, AND AIRPORT CAPITAL BUDGETS

<table>
<thead>
<tr>
<th></th>
<th>2013 TOTAL BUDGET</th>
<th>2013 REVISED BUDGET</th>
<th>VARIANCE</th>
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<td><strong>EXPENDITURES:</strong></td>
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<tr>
<td><strong>TRANSPORTATION BASE CAPITAL BUDGET</strong></td>
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<td><strong>REVENUES:</strong></td>
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<td><strong>TOTAL</strong></td>
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**LEGEND:**

A = Above Ground; B = Below Ground; C = Cycling Facility; D = Design; G = Geotechnical; GP = Cold-In-Place Resurfacing; H = Drainage Improvements; K = Design; D = Deck Repair; L = Deep Strength Asphalt; E = Environmental Assessment; P = Expanded Asphalt; P = Pedestrian Signal Installation; L = Land Purchase; LA = Landscaping; M = Traffic Signal Modernization; NC = Construction; ND = Paving; P = Planning; R = Re-Construction; RS = Re-Construction with Storm Sewers; R = Road Widening; R = Resurface Single Lift; R = Resurface Double Lift; R = Resurface Major; S = Surface Asphalt; S = Intersection Improvement; S = Traffic Signal Installation; SL = Street Lighting; SM = Storm Sewer Installation; SW = Sidewalk Installation; U = Utility Relocation.
### REVISIONS TO THE 2013 TRANSPORTATION BASE CAPITAL BUDGET

<table>
<thead>
<tr>
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<th>2013 TOTAL BUDGET</th>
<th>2013 REVISED BUDGET</th>
<th>VARIANCE</th>
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<tr>
<td><strong>EXPENDITURES:</strong></td>
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<td><strong>TOTAL</strong></td>
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<td><strong>REVENUES:</strong></td>
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<td>ROADS REHABILITATION CAPITAL RESERVE FUND</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>47,740</td>
<td>41,180</td>
<td>-6,560</td>
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**LEGEND:**
- AG - ABOVE GROUND
- BG - BELOW GROUND
- CF - CYCLING FACILITY
- CG - CURB CUTTER
- DIP - COLD IN PLACE RESURFACING
- D - DRAINAGE IMPROVEMENTS
- DE - DESIGN
- DK - BRIDGE DECK REPAIR
- DSA - DEEP STRENGTH ASPHALT
- EA - ENVIRONMENTAL ASSESSMENT
- EXP - EXPANDED ASPHALT
- IPS - PEDESTRIAN SIGNAL INSTALLATION
- LA - LANDSCAPING
- MOD - TRAFFIC SIGNAL MODERNIZATION
- NC - CONSTRUCTION
- PAD - PAVING PL.
- PL - PLANNING
- PEC - RECONSTRUCTION
- RH - REHABILITATION
- RSS - RECONSTRUCTION WITH STORM SEWERS
- RW - ROAD WIDENING
- RS - RESURFACE SINGLE LIFT
- RD - RESURFACE DOUBLE LIFT
- RM - RESURFACE MA, etc.
- SA - SURFACE ASPHALT
- SI - INTERSECTION IMPROVEMENT
- SG - TRAFFIC SIGNAL INSTALLATION
- SL - STREET LIGHTING
- ST - STORM SEWER INSTALLATION
- SW - SIDEWALK INSTALLATION
- U - UTILITY RELOCATION
## REVISIONS TO THE 2013 TRANSPORTATION CAPITAL BASE BUDGET

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<th>PROJ. NO.</th>
<th>PROJECT DESCRIPTION</th>
<th>AREA MUN</th>
<th>PROJ. LEN (KM)</th>
<th>CPWD</th>
<th>2013 BUDGET</th>
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<th>2013 REVISED BUDGET</th>
<th>VARIANCE</th>
<th>REMARKS</th>
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<td>5649</td>
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<td>5572</td>
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### TOTAL URBAN RESURFACING

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## RURAL RESURFACING

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### REVISIONS TO THE 2013 TRANSPORTATION CAPITAL BASE BUDGET

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#### RECONSTRUCTION AND MAJOR REHABILITATION

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## Revisions to the 2012 Transportation Capital Base Budget

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## REVISIONS TO THE 2013 TRANSPORTATION CAPITAL BASE BUDGET

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### TOTAL RECONSTRUCTION AND MAJOR REHABILITATION
|                     | 76.14 | 3,920 | 18,053 | 20,473 | 18,890 | -3,675 |

### INTERSECTION IMPROVEMENTS (NON-GROWTH)

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<td>80 BRICK X-WALK REMOVAL</td>
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### TOTAL INTERSECTION IMPROVEMENTS (NON-GROWTH)
|                     | 0.00  | 30    | 50    | 80    | 175    | 95     |

### BRIDGE AND DRAINAGE WORKS

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### REVISIONS TO THE 2013 TRANSPORTATION CAPITAL BASE BUDGET

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**Total Bridge and Drainage Works**

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**System Management / Other**

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<td>0</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td></td>
<td>0</td>
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</tr>
<tr>
<td>5518</td>
<td>Retaining Wall Repairs</td>
<td>0</td>
<td>150</td>
<td>150</td>
<td>75</td>
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<td>-75</td>
<td>Revised Estimate</td>
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### REVISIONS TO THE 2013 TRANSPORTATION CAPITAL BASE BUDGET

<table>
<thead>
<tr>
<th>PRJ NO.</th>
<th>PROJECT DESCRIPTION</th>
<th>AREA M(^2)</th>
<th>PROJ L(\text{EN (KM)})</th>
<th>CFWD</th>
<th>2013 BUDGET</th>
<th>2013 TOTAL BUDGET</th>
<th>2013 REVISED BUDGET</th>
<th>VARIANCE</th>
<th>REMARKS</th>
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<tbody>
<tr>
<td>9611</td>
<td>STORM WATER MANAGEMENT FOND REHABILITATION</td>
<td>50</td>
<td>50</td>
<td>100</td>
<td>100</td>
<td></td>
<td>0</td>
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<tr>
<td>9399</td>
<td>STREET LIGHTING MODERNIZATIONS/INSTALLATIONS</td>
<td>0</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td></td>
<td>0</td>
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<td>5521</td>
<td>TRAFFIC COUNT PROGRAM</td>
<td>0</td>
<td>120</td>
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<td>120</td>
<td></td>
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</table>

| TOTAL SYSTEM MANAGEMENT / OTHER | 0.00 | 2,975 | 1,961 | 4,935 | 4,880 | -75 |

<table>
<thead>
<tr>
<th>TRAFFIC SIGNAL MODERNIZATIONS</th>
</tr>
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<tbody>
<tr>
<td>9636</td>
</tr>
<tr>
<td>9631</td>
</tr>
<tr>
<td>9641</td>
</tr>
<tr>
<td>9635</td>
</tr>
<tr>
<td>9551</td>
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| TOTAL TRAFFIC SIGNAL MODERNIZATIONS | 0.00 | 95 | 1,060 | 1,155 | 1,155 | 0 |

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>9415</td>
</tr>
<tr>
<td>9532</td>
</tr>
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<td>9425</td>
</tr>
<tr>
<td>9256</td>
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<tr>
<td>9474</td>
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| TOTAL TRAFFIC ENGINEERING GENERAL | 0.00 | 1,110 | 610 | 1,220 | 1,045 | 25 |

<table>
<thead>
<tr>
<th>INFILL SIDEWALK FACILITIES</th>
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<tbody>
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## REVISIONS TO THE 2011 TRANSPORTATION CAPITAL BASE BUDGET

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<tr>
<th>PROJ NO.</th>
<th>RBC%</th>
<th>PROJECT DESCRIPTION</th>
<th>AREA MUN</th>
<th>PROJ LEN (KM)</th>
<th>CPWD</th>
<th>2013 BUDGET</th>
<th>2015 TOTAL BUDGET</th>
<th>2015 REVISED BUDGET</th>
<th>VARIANCE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>5728</td>
<td>16%</td>
<td>REG. RD. 38 (FOUNTAIN STREET), SHANTZ HILL RD (RRR) TO PRESTON PARK</td>
<td>CAM</td>
<td>0.85</td>
<td>0</td>
<td>20</td>
<td>20</td>
<td>20 DE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>5730</td>
<td>16%</td>
<td>REG. RD. 50 (WESTMOUNT ROAD), UNION BLVD. TO FORSYTH DR.</td>
<td>KIT</td>
<td>0.20</td>
<td>0</td>
<td>10</td>
<td>10</td>
<td>10 DE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>5996</td>
<td>16%</td>
<td>REG. RD. 52 (BRIDGE STREET), FROM NORTHFIELD DRIVE (FR22) TO 5500 SUTHERLY</td>
<td>WAT</td>
<td>0.54</td>
<td>0</td>
<td>185</td>
<td>185</td>
<td>185</td>
<td>0</td>
<td>PROJECT DEFERRED</td>
</tr>
<tr>
<td>5906</td>
<td>16%</td>
<td>REG. RD. 96 (CHURCH STREET), HERBERT ST. TO 70M E. OF RAISIN MILL OATE</td>
<td>WOOL</td>
<td>0.25</td>
<td>45</td>
<td>0</td>
<td>45</td>
<td>45</td>
<td>0</td>
<td>DESIGN</td>
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<tr>
<td>3779</td>
<td>16%</td>
<td>WATERLOO SPUR, MULTI-USE TRAIL</td>
<td>110</td>
<td>0</td>
<td>110</td>
<td>0</td>
<td>110</td>
<td>0</td>
<td>-110</td>
<td>CONST, DEFERRED</td>
</tr>
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</table>

| TOTAL INFILL SIDEWALK FACILITIES | 2.11 | 155 | 301 | 455 | 139 | -523 |

June 18, 2013
### REVISIONS TO THE 2013 TRANSPORTATION CAPITAL SYSTEM EXPANSION BUDGET

<table>
<thead>
<tr>
<th>(000's)</th>
<th>2013 TOTAL BUDGET</th>
<th>2015 REVISED BUDGET</th>
<th>VARIANCE</th>
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<tr>
<td><strong>EXPENDITURES:</strong></td>
<td></td>
<td></td>
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<td><strong>TRANSPORTATION SYSTEM EXPANSION CAPITAL BUDGET</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intersection Improvements (growth-related)</td>
<td>15,410</td>
<td>14,566</td>
<td>-845</td>
</tr>
<tr>
<td>Development Related Left and Right Turn Lanes</td>
<td>935</td>
<td>915</td>
<td>-20</td>
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<tr>
<td>Traffic Signal Installations</td>
<td>90</td>
<td>90</td>
<td>0</td>
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<tr>
<td>Road Widening</td>
<td>42,075</td>
<td>35,785</td>
<td>-6,280</td>
</tr>
<tr>
<td>Road System Expansion</td>
<td>19,750</td>
<td>10,740</td>
<td>-9,010</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>69,240</td>
<td>60,100</td>
<td>-9,140</td>
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<tr>
<td><strong>REVENUES:</strong></td>
<td></td>
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<tr>
<td>Development Charge Reserve Fund</td>
<td>53,723</td>
<td>49,862</td>
<td>-3,861</td>
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<tr>
<td>Road Capital Levy Reserve Fund</td>
<td>6,629</td>
<td>4,055</td>
<td>-2,574</td>
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<tr>
<td>Third Party - CP Rail</td>
<td>4,718</td>
<td>4,718</td>
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<tr>
<td>Third Party - Other</td>
<td>4,860</td>
<td>4,860</td>
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<tr>
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<td>0</td>
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<tr>
<td>Debentures</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>69,240</td>
<td>60,100</td>
<td>-9,140</td>
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</table>

**LEGEND:**
- AG = Above Ground; BG = Below Ground; CF = Cycling Facility; CG = Curb & Gutter; CIP = Cold-In-Place Resurfacing;
- D = Drainage Improvements; DE = Design; DK = Bridge Deck Repair; DSA = Deep Strength Asphalt; EA = Environmental Assessment;
- E = Expanded Asphalt; IPS = Pedestrian Signal Installation; I = Land Purchase; LA = Landscaping; MC = Traffic Signal Modernization; NC = Construction; PA = Paving; PL = Planning; RC = Reconstruction; RH = Rehabilitation; RSS = Reconstruction With Storm Sewers; RW = Road Widening; RS = Resurface Single Lift; RD = Resurface Double Lift; RM = Resurface Major; SA = Surface Asphalt; SI = Intersection Improvement; SIG = Traffic Signal Installation; SL = Street Lighting; ST = Storm Sewer Installation; SW = Sidewalk Installation; U = Utility Relocation
<table>
<thead>
<tr>
<th>PROJ. NO.</th>
<th>RDC%</th>
<th>PROJECT DESCRIPTION</th>
<th>AREA MUN</th>
<th>PROJ LEN (KM)</th>
<th>CPWD</th>
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<th>2014 TOTAL BUDGET</th>
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<th>REMARKS</th>
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</thead>
<tbody>
<tr>
<td>7294</td>
<td>100%</td>
<td>INTERSECTION IMPROVEMENTS (GROWTH-RELATED)</td>
<td>KIT</td>
<td>0.20</td>
<td>225</td>
<td>450</td>
<td>575</td>
<td>575 DE</td>
<td>0</td>
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<tr>
<td>7297</td>
<td>100%</td>
<td>REG. RD. 4 (OTTAWA STREET), HOMER WATSON BLVD (RK28) TO ALPINE RD.</td>
<td>KIT</td>
<td>0</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20 DE</td>
<td>0</td>
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</tr>
<tr>
<td>5602</td>
<td>100%</td>
<td>REG. RD. 4 (HIGHLAND ROAD), AT LAWRENCE ST. AND BELMONT AVE.</td>
<td>WIL</td>
<td>0</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200 DE</td>
<td>0</td>
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</tr>
<tr>
<td>6109</td>
<td>85%</td>
<td>REG. RD. 5 (ERS STREET), CAROLINE ST. (RR9) TO MENO ST.</td>
<td>WAT</td>
<td>0.33</td>
<td>45</td>
<td>160</td>
<td>205</td>
<td>205 DE</td>
<td>0</td>
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<tr>
<td>7293</td>
<td>100%</td>
<td>REG. RD. 9 (ERS STREET) AT WESTMOUNT RD.</td>
<td>WAT</td>
<td>1.5</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15 DE</td>
<td>0</td>
<td>DESIGN</td>
</tr>
<tr>
<td>6204</td>
<td>100%</td>
<td>REG. RD. 12 &amp; 59, NEW DUNDAS RD. AT FISCHER HALLMAN RD.</td>
<td>KIT</td>
<td>0</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20 DE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>5441</td>
<td>55%</td>
<td>REG. RD. 13 (KING STREET) AT GEXR CROSSING - SUBWAY INSTALLATION</td>
<td>KIT</td>
<td>0.5</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200 DE</td>
<td>0</td>
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<tr>
<td>7042</td>
<td>100%</td>
<td>REG. RD. 15 (KING STREET) AT WATERLOO INN SERVICE ROAD TO BLUESPRINGS DR.</td>
<td>WAT</td>
<td>0</td>
<td>33</td>
<td>33</td>
<td>60</td>
<td>80 DE</td>
<td>20</td>
<td>REVISED ESTIMATE</td>
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<tr>
<td>7216</td>
<td>100%</td>
<td>REG. RD. 15 (KING STREET) AT CONESTOGO RD.</td>
<td>WAT</td>
<td>0</td>
<td>29</td>
<td>29</td>
<td>29</td>
<td>29 DE</td>
<td>0</td>
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<tr>
<td>7249</td>
<td>100%</td>
<td>REG. RD. 17 AND REG. RD. 28, SAWMILL RD. AT ST. CHARLES ST.</td>
<td>WOOL</td>
<td>0</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60 DE</td>
<td>0</td>
<td>DESIGN</td>
</tr>
<tr>
<td>7315</td>
<td>100%</td>
<td>REG. RD. 22 (NORTHFIELD DRIVE), KING ST (RR 15) TO KRAUS DR.</td>
<td>WAT</td>
<td>0.20</td>
<td>425</td>
<td>425</td>
<td>425</td>
<td>425 DE</td>
<td>0</td>
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<tr>
<td>6334</td>
<td>55%</td>
<td>REG. RD. 24 (HESPELER ROAD) AT RAILWAY N. OF DUNDAS ST. (RR9) - GRADE SEPARATION</td>
<td>CAM</td>
<td>0</td>
<td>555</td>
<td>555</td>
<td>555</td>
<td>555 REC</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>7185</td>
<td>100%</td>
<td>REG. RD. 24 (HESPELER ROAD) AT BEAVERDALE / QUEEN ST.</td>
<td>CAM</td>
<td>0</td>
<td>2290</td>
<td>2810</td>
<td>1940</td>
<td>1940 REC</td>
<td>-770</td>
<td>CONTRACT 2015-004</td>
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<tr>
<td>7107</td>
<td>100%</td>
<td>REG. RD. 30 (PINEBUSH ROAD), AT TOWNSLINE RD. (RR33)</td>
<td>CAM</td>
<td>0</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50 DE</td>
<td>0</td>
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<tr>
<td>7259</td>
<td>100%</td>
<td>REG. RD. 30 (WESTMOUNT ROAD) AT GREENBROOK DR.</td>
<td>KIT</td>
<td>0</td>
<td>450</td>
<td>450</td>
<td>450</td>
<td>450 DE</td>
<td>-345</td>
<td>CONTRACT 2015-002</td>
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<tr>
<td>7255</td>
<td>100%</td>
<td>REG. RD. 30 (WESTMOUNT ROAD) AT QUEEN ST.</td>
<td>KIT</td>
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<td>300</td>
<td>300</td>
<td>300</td>
<td>300 DE</td>
<td>-300</td>
<td>CONTRACT 2015-002</td>
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### REVISIONS TO THE 2013 TRANSPORTATION CAPITAL SYSTEM EXPANSION BUDGET

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<th>PROJECT DESCRIPTION</th>
<th>AREA</th>
<th>LEN (KM)</th>
<th>2013 BUDGET</th>
<th>2015 TOTAL BUDGET</th>
<th>2015 REVISED BUDGET</th>
<th>VARIANCE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>7317</td>
<td>RES. RD. 50 (WESTMOUNT RD.) AT LAURELWOOD DR. EXTENSION</td>
<td>WAT</td>
<td>0</td>
<td>50</td>
<td>50</td>
<td>150 DE</td>
<td>100</td>
<td>PROJECT ADVANCED</td>
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<tr>
<td>1007</td>
<td>RES. RD. 58 (FISCHER-HALLMAN ROAD) AT SIEGBURG ST.</td>
<td>KIT</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>450 DE</td>
<td>450</td>
<td>BUDGET ADDITION</td>
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</tr>
<tr>
<td>7319</td>
<td>RES. RD. 58 (FISCHER-HALLMAN ROAD) AT COLUMBUS ST.</td>
<td>WAT</td>
<td>0</td>
<td>20</td>
<td>20</td>
<td>20 DE</td>
<td>0</td>
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<tr>
<td>7321</td>
<td>RES. RD. 70 (ERBSVILLE ROAD) AT COLUMBUS ST.</td>
<td>WAT</td>
<td>0</td>
<td>90</td>
<td>90</td>
<td>90 DE</td>
<td>0</td>
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<tr>
<td>7186</td>
<td>RES. RD. 86 (CHURCH STREET), HEBERT ST. TO BARNSWALLOW DR.</td>
<td>WOOL</td>
<td>0.66</td>
<td>1740</td>
<td>1740</td>
<td>1740 REC</td>
<td>0</td>
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<tr>
<td>7178</td>
<td>ROUNDABOUT EDUCATION PROGRAM</td>
<td>0</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>0</td>
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<td></td>
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</table>

**TOTAL INTERSECTION IMPROVEMENTS (GROWTH-RELATED)** | 1.20 | 6,505 | 9,005 | 15,410 | 14,565 | -845 |

### DEVELOPMENT RELATED LEFT AND RIGHT TURN LANES

<table>
<thead>
<tr>
<th>PROJ. NO.</th>
<th>100%</th>
<th>PROJECT DESCRIPTION</th>
<th>AREA</th>
<th>LEN (KM)</th>
<th>2013 BUDGET</th>
<th>2015 TOTAL BUDGET</th>
<th>2015 REVISED BUDGET</th>
<th>VARIANCE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>7296</td>
<td>RES. RD. 12 (NEW JUNEE ROAD), AT ROBERT FERREY DR./REICHERT DR.</td>
<td>KIT</td>
<td>20</td>
<td>200</td>
<td>220</td>
<td>170 DE</td>
<td>30</td>
<td>CONTRACT 2013-008</td>
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<tr>
<td>7309</td>
<td>RES. RD. 28 (FOUNTAIN STREET) AT LIMERICK DR.</td>
<td>CAM</td>
<td>40</td>
<td>0</td>
<td>40</td>
<td>0</td>
<td>40</td>
<td>CONST, DEFERRED</td>
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</tr>
<tr>
<td>7270</td>
<td>RES. RD. 28 &amp; 71, FOUNTAIN ST. AT DICKIE SETTLEMENT RD.</td>
<td>CAM</td>
<td>25</td>
<td>0</td>
<td>25</td>
<td>0</td>
<td>25</td>
<td>CONST, DEFERRED</td>
<td></td>
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<tr>
<td>7111</td>
<td>RES. RD. 53 (COURTLAND AVENUE) AT BLOCKLINE RD.</td>
<td>KIT</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>100 DE</td>
<td>0</td>
<td></td>
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<tr>
<td>7145</td>
<td>RES. RD. 58 (BENSON ROAD) AT FISCHER HALLMAN RD.</td>
<td>KIT</td>
<td>0</td>
<td>150</td>
<td>150</td>
<td>150 DE</td>
<td>0</td>
<td></td>
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<tr>
<td>7123</td>
<td>DEVELOPMENT RELATED BOULEVARD AND SHOULDER EXPANSIONS</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7097</td>
<td>DEVELOPMENT RELATED LEFT AND RIGHT TURN LANES TO BE IDENTIFIED</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>7160</td>
<td>PRELIMINARY DESIGN AND POST CONSTRUCTION EXPENDITURES</td>
<td>0</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>95</td>
<td>REVISED ESTIMATE</td>
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<td></td>
</tr>
</tbody>
</table>

**TOTAL DEVELOPMENT RELATED LEFT AND RIGHT TURN LANES** | 6.00 | 85 | 850 | 95 | 915 | -20 |
## REVISIONS TO THE 2013 TRANSPORTATION CAPITAL SYSTEM EXPANSION BUDGET

<table>
<thead>
<tr>
<th>PROJ NO</th>
<th>ROAD NO</th>
<th>PROJECT DESCRIPTION</th>
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<th>MUN</th>
<th>LFWD</th>
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<th>VARIANCE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>9840</td>
<td>100%</td>
<td>REG. RD. 53 (COULTAN AVENUE), AT BLOCK LINE RD.</td>
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<td>0</td>
<td>65</td>
<td>65</td>
<td>65 SIG</td>
<td>0</td>
<td></td>
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</tr>
<tr>
<td>9025</td>
<td>100%</td>
<td>GROWTH RELATED TRAFFIC SIGNAL MODERNIZATIONS</td>
<td>WAT</td>
<td>0</td>
<td>23</td>
<td>23</td>
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### TOTAL TRAFFIC SIGNAL INSTALLATIONS

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<th>MUN</th>
<th>LFWD</th>
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<td>5752</td>
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<tr>
<td>5337</td>
<td>65%</td>
<td>REG. RD. 8 (KING STREET), EAGLE ST. (RR36) TO FOUNTAIN ST. (RR8) AND FOUNTAIN ST.- KING ST. (RR8) TO SHAWTE HILL (RR8)</td>
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<td>0.63</td>
<td>270</td>
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<td>1370</td>
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<tr>
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<td>630</td>
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## REVISIONS TO THE 2013 TRANSPORTATION CAPITAL SYSTEM EXPANSION BUDGET

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### ROAD SYSTEM EXPANSION

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<th>2012 TOTAL BUDGET</th>
<th>2013 REVISED BUDGET</th>
<th>VARIANCE</th>
<th>REMARKS</th>
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# APPENDIX - A

## Report: E-13-080

### REVISIONS TO THE 2013 TRANSPORTATION CAPITAL SYSTEM EXPANSION BUDGET

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| TOTAL ROAD SYSTEM EXPANSION | 3.45 | 0.682 | 4.442 | 19,738 | 19,760 | 10 |

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### Revisions to the 2013 Airport Capital Budget

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<td>6,564</td>
<td>-556</td>
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<p>| <strong>Revenues:</strong>              |                   |                     |          |
| Grants and Subsidies       | 691               | 642                 | -49      |
| Contributions from Reserve Funds | 0          | 0                   | 0        |
| Airport Capital Reserve Fund | 1,721              | 1,981               | -254     |
| Airport/Equipment Reserve Fund | 310            | 310                 | 0        |
| Development Charges Reserve Fund (Airport) | 1,254 | 1,309 | 55 |
| Debentures                 | 2,922             | 2,922               | 0        |
| <strong>Total</strong>                  | 6,908             | 6,564               | -544     |</p>
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TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: June 18, 2013

FILE CODE: D10-70(A)

SUBJECT: RESPONSE TO THE CORONER’S REPORTS ON CYCLING AND PEDESTRIAN DEATHS

RECOMMENDATION:

THAT the Regional Municipality of Waterloo submit the comments contained in Report P-13-068/E-13-087, dated June 18, 2013, to the Ontario Ministry of Transportation and the Ontario Coroner’s Office as the Region’s formal response to the Ontario Coroner’s Reports on Pedestrian Deaths and Cycling Deaths.

SUMMARY:

The Office of the Chief Coroner of Ontario recently completed two reports reviewing accidental deaths of cyclists and pedestrians in the province. The reports analyze fatalities by time of day, demographics, road conditions, environmental factors and distractions. The Cycling Deaths review provides 14 recommendations grouped into four categories: infrastructure provisions, educational campaigns, changes to legislation, and focused enforcement. The Pedestrian Deaths review provides 26 recommendations grouped into five categories: leadership options, legislation, engineering, education and enforcement.

The Active Transportation Advisory Committee reviewed both Coroner’s reports and passed motions endorsing its recommendations in principle. The Committee also seeks the support of both report’s recommendations from Regional Council, and that the appropriate correspondence of support be forwarded to the Province of Ontario, the Ministry of Transportation and the Association of Municipalities Ontario. The City of Kitchener Council also passed a motion endorsing the cycling review’s recommendations and sent correspondence to the Region encouraging Regional council to undertake similar actions to endorse the report’s recommendations.

A number of Regional initiatives, such as the draft Active Transportation Master Plan and Regional Transportation Corridor Design Guidelines can be considered consistent with some of Coroner’s recommendations for municipalities. These initiatives continue to show a strong commitment by the Region towards the provision, encouragement and safety of active forms of transportation. Expressing support in principle for the recommendations outlined in both of the Coroner’s reports would reflect the Region’s commitment towards a safe environment for cyclists and pedestrians.

REPORT:

In 2012, the Office of the Chief Coroner of Ontario completed two reports reviewing accidental cyclists and pedestrian deaths in the province. The reports analyze fatalities by time of day, demographics, road conditions, as well as environmental factors and distractions.
Cycling Deaths Review

- Examined 129 cycling deaths from January 1, 2006 to December 31, 2010.
- Discusses 14 findings that analyze traffic conditions, environmental conditions, helmet use and other factors.
- Provides 14 recommendations grouped into four categories: infrastructure provisions, educational campaigns/curriculum, changes to legislation, and focused enforcement.

Pedestrian Deaths Review

- Examined 95 pedestrian deaths in Ontario from January 1, 2010 to December 31, 2010.
- Discusses 25 findings that analyze the locations of collisions, pedestrian and driver behaviours, and pedestrian use of distracting devices and other factors.
- Provides 17 recommendations grouped into five categories: leadership options, legislation, engineering, education, and enforcement.

Each of the Coroner’s reports makes specific recommendations to different jurisdictions. Several of the recommendations are specifically targeted to Municipalities. The following describes these recommendations and outlines how Region of Waterloo’s policies and practice relate to these recommendations. Copies of both reports are available in the Councillor’s library. Additional copies are available from the report author or by using the following links: Cycling Deaths Review: http://www.mcscs.jus.gov.on.ca/stellent/groups/public/@mcscs/@www/@com/documents/webasset/ec159773.pdf

Recommendation #1
A “complete streets” approach should be adopted to guide the development of new communities and the re-development of existing communities in Ontario. Complete streets should be designed to be safe, convenient and comfortable for every user, regardless of transportation mode, physical ability or age.

Regional Response:
The Regional Transportation Corridor Design Guidelines provide guidance on the design and implementation of active transportation infrastructure that will be incorporated on varying types of streets. The Draft Active Transportation Master Plan also provides details about how, when and where the infrastructure supports will be included in road design and reconstruction. This approach enables the Region to focus resources on roads where active transportation is most likely to occur. Although the Region recognizes the importance of accommodating all transportation modes, it is also important to note that the form of community development often lies outside the Regional jurisdiction.

Recommendation #2
As part of a recommendation to the Province of Ontario to develop a Walking Strategy, “Municipalities should be encouraged to develop policies, practices, and plans for safe and convenient pedestrian conditions for transportation including road safety, recreation and health; in essence, creating their own individual walking strategies”.

Regional Response:
Regional staff are in the final stages of completing the Regional Active Transportation Master Plan which will put into place a comprehensive plan to support and encourage safe and convenient walking and cycling on Regional properties.
The Active Transportation Master Plan augments ongoing efforts by Regional staff to encourage walking through programs like Travelwise, Active and Safe Routes to School and Waterloo Walks.

**Recommendation #3**

All municipalities in the Province of Ontario should undertake an annual forensic review of all pedestrian deaths that occurred within their jurisdictions to identify collision-prone areas. They should seek to understand the root causes of the deaths with a view to implementing engineering changes that may support enhanced safety for pedestrians and avoid future deaths. Analyzing collision patterns can assist in guiding the development of remedial or preventive measures. All municipalities in the Province of Ontario should review the collision history of a road and proactively seek to improve pedestrian safety as a component of capital planning for road reconstruction and resurfacing projects.

**Regional Response:**

The Region’s Annual Collision Report examines pedestrian deaths and is used to improve the safety of the regional transportation network through a regular and ongoing process.

It is routine for Transportation staff to undertake a detailed collision review following any fatal incident including pedestrian fatalities. Following these reviews pedestrian countermeasures are implemented when appropriate. The Region has a program already in place to identify locations experiencing higher than normal pedestrian collisions and believe that this is more effective than considering rare fatal locations only. As well, all upcoming capital projects are designed to account for and address historical collision trends including pedestrian collision trends.

**Recommendation #4**

Municipalities should consider the introduction of speed reduction strategies where speed has been implicated in the death(s) of pedestrians, and in areas where there are large populations of pedestrians utilizing the roadway including school areas, seniors’ homes, community and recreation centres and hospitals. Municipalities, in developing their complete streets approach, should consider reducing speed limits to 30 km/hr on residential streets. In addition, municipalities should adopt speed limits of 40 km/hr on other streets, unless otherwise posted, or as required by the Highway Traffic Act.

**Regional Response:**

The context sensitive Regional Transportation Corridor Design Guidelines identifies roads where complete streets designs would be most appropriate and feasible to implement. Caution needs to be used when looking at introducing speed limiting signage. Speed limit signage changes to 30km/hr should only be used on roads that are designed to encourage motorists to travel at 30km/hr. There are presently no Regional roads that have been designed to this standard. Limiting speed limits to 40km/h on all other streets should only be considered where roadways have been designed and built to influence motorists to operate their vehicles at 40 km/h. Not doing so will result in ineffective speed control and police will be expected to enforce arbitrarily low speed limits where disparity exists between driver speed and the speed limit.

**Recommendation #5**

Municipalities, in developing their complete streets approach, should consider installing leading pedestrian signal intervals (LPI) in intersections where there have been collisions or where a high occurrence of potential collisions between vehicles and pedestrians might occur. The WALK sign, turned on 3-5 seconds before the green light ensures that the vehicle intending to turn right or left has improved visibility and time to yield to pedestrians that have begun to cross, and Municipalities, in developing their complete streets approach to pedestrians, should consider strategies to benefit all pedestrians, particularly senior citizens and those with disabilities.

**Regional Response:**

At present, the Region’s signalization equipment does not allow us to make use of leading pedestrian signal intervals (LPI). LPI’s are one of a variety of different options that the Region looks
at when deciding on appropriate approaches to support safe pedestrian crossings. As part of ongoing efforts to design our streets and intersections with the needs of all regular uses, during 2012, Region of Waterloo worked with Grand River Accessibility Advisory Committee (GRAAC) and Canadian National Institute for the Blind (CNIB) to discuss and develop solutions to enhance accessibility for members of the community with visual and hearing impairments in the Region of Waterloo at intersections and roundabouts. Consequently, Council approved report E-13-014, dated January 29, 2014, which recommended a range of accessibility improvements to be considered, such as audible pedestrian signals, tactile advisory surface indicators, tactile guide strips, ladder marking, yellow curbs and Roundabout Accessible Traffic Control Signals where appropriate.

Recommendation #6
Municipalities, in developing their complete streets approach to pedestrians, should consider strategies to prevent collisions occurring at mid-block uncontrolled crossings by incorporating pedestrian crossing islands on roads with four or more lanes where pedestrian are commonly crossing at mid-block and/or pedestrian/vehicle collisions have occurred.

Regional Response:
The Region regularly incorporates pedestrian refuge islands into road projects where appropriate and has implemented median islands on 4-lane roadways where there has been a history of pedestrian collisions. Median islands have successfully demonstrated a positive impact on pedestrian collisions. The Region will continue to pursue the installation of pedestrian refuge and median islands to minimize pedestrian midblock crossing collisions.

Recommendation #7
Municipalities, in developing their complete streets approach to pedestrians, should consider strategies to prevent collisions occurring where pedestrians are walking along the road.

Regional Response:
The Region created a sidewalk policy in 2007. Installation of sidewalks along Regional roads is ongoing.

Recommendation #8
A comprehensive review and revision of the Municipal Act, the City of Toronto Act and relevant Municipal By-Laws should be conducted to ensure that they are consistent and understandable with respect to cycling and cyclists and therefore easier to promote and enforce.

Regional Response:
Regional staff provide ongoing comments to Area Municipal staff regarding local by-laws that impact consistency and clarity for active transportation users across the region (e.g. penalties for cycling on sidewalks in different municipalities).

Recommendation #9
Municipalities and police services (municipal/regional/provincial) should review local data related to cycling injuries and fatalities in order to identify and address opportunities for targeted education, public safety interventions and enforcement activities.

Regional Response:
Regional Annual Regional Collision reports examine collisions and deaths among all road users including cyclists and pedestrians. The Region has assessed cycling collisions of all severities in detail and has determined contributing factors associated with cycling collisions. In response to the assessment the Region developed a program in concert with local municipalities and the police to educate cyclists and minimize cycling collisions.
Recommendation #10
Enforcement, education and public safety activities targeted to the specific issues of cycling safety identified in a given community.
Regional Response:
In partnership with the area municipalities, the Regional is continuing to target specific cycling safety issues through programs such as the safe-cycling initiative “Happy Streets”.

Recommendations directed towards Provincial Ministries

Recommendation #11
The Province of Ontario should develop a Walking Strategy for Ontarians which encourages municipalities to develop policies, practices, and plans for safe and convenient pedestrian conditions for transportation including road safety, recreation and health.
Regional Response:
The Region of Waterloo is in support of the province developing a Walking Strategy for Ontarians. In fact, Regional staff are in the final stages of completing the Regional Active Transportation Master Pan which will put into place a comprehensive plan to support and encourage safe and convenient walking and cycling on Regional properties. However, the largest barrier will be funding and the Region would like to see the Province of Ontario prioritize a commitment to municipalities assisting with new pedestrian infrastructure funding and closing network gaps.

Recommendation #12
Develop an Ontario Cycling Plan to guide the development of policy, legislation and regulations and the commitment of infrastructure funding to support cycling in Ontario.
Regional Response:
The Regional has provided feedback on the Ministry of Transportation’s draft Ontario Cycling Strategy.

Recommendation #13
Prioritize the development of paved shoulders on provincial highways.
Regional Response:
The Region currently provides paved shoulders on specific regional corridors and has outlined a number of additional corridors planned for paved shoulders in the draft Active Transportation Master Plan.

Recommendation #14
Legislative change (Highway Traffic Act (HTA); Municipal Act; relevant Municipal By-Laws) aimed at ensuring clarity and consistency regarding interactions between cyclists and other road users.
Regional Response:
The Region is in support of the need for legislative changes to the Highway Traffic Act, Municipal Act and relevant Municipal By-Laws. Regional staff is participating in a review of the Ontario Traffic Manual for Bicycle Facilities, Book 18. The comments staff and regional commissioners are providing are providing will help to develop a number of recommendations for Provincial regulations and legislative changes. For example, Book 18 is considering recommending the use of “elephant feet” markings to allow cyclists to remain on their bikes crossing a road while on a multi-use trail. At present, the only markings that are allowed are for pedestrian crossings and so cyclists are legally required to get off their bike and walk across such crossings.

Recommendation #15
The MTO should amend the Highway Traffic Act to:
1) allow local municipalities to lower the unsigned default speed limit to 40 kilometers an hour on residential streets from the current limit of 50 kilometers an hour.
2) allow municipalities to erect non-signalized pedestrian crossings in mid-block areas.
3) establish a “one-meter” rule for vehicles when passing cyclists.
4) implement mandatory helmet legislation for cyclists of all ages, within the context of an evaluation of the impact of this legislation on cycling activity.

Regional Response:
1) Throughout Canada and the United States, statutory speed limits are set by individual provinces or states. Local jurisdictions have the ability to post lower speed limits on a site by site basis to suit local conditions by passing a by-law and erecting signs to indicate a posted speed limit different than the statutory limit. Currently, the unsigned default speed limit is fairly consistent from state to state and province to province. It is of the utmost importance to remain consistent in the unsigned posted speed limit as many motorists may not be aware of changes in road jurisdiction and subsequent changes to the unsigned posted speed limit.
2) The Region is supportive of non-signalized pedestrian crossings in mid-block areas. The Region encourages the Ministry to make changes to the Highway Traffic Act to adopt new pedestrian crossing devices consisting of a combination of specialized pavement markings and signs. The Region encourages the Ministry to consider that the application of such a device on roadways in Ontario not just be permitted at midblock locations as recommended but at intersections and roundabouts as well.
3) The Region encourages the Ministry of Transportation to proceed with caution when considering the establishment of a “one-meter” rule for vehicles when passing cyclists. The implications of this policy are complex and appropriate attention is required to anticipate many different situations that will arise (e.g. -does this apply to both moving and stopped cyclists? What if the cyclist is less than one metre away from the vehicle, but separated e.g. by a curb or delineators? Does this rule apply to a cyclist as well? -Must the cyclist stay one meter away when passing a vehicle?-What impact will this have on narrow roads, in older urban areas where, with this separation requirement, no vehicle would be able to pass a cyclist).
4) The Region supports looking at strategies to increase helmet use by road users. As a first step, we support the approach of evaluating the impact of this legislation on cycling activity and injury rates.

Recommendation #16
Transport Canada should make side-guards mandatory on heavy trucks in Canada.

Regional Response:
The Region is in support of Transport Canada making side-guards mandatory on heavy trucks in Canada subject to appropriate research being completed.

Recommendation #17
The province should implement a comprehensive pedestrian and cycling safety public awareness and education strategy, starting in public schools, and continuing through the purchase of every new and used bicycle and through driver’s license testing. This should include implementing strategies to promote and support helmet use for cyclists of all ages.

Regional Response:
The Region agrees with the MTO’s target towards creating an educational body to educate pedestrians and drivers. The province should work with municipal, public health and other organizations to help develop this strategy. The Region is in support of implementing strategies towards promoting and supporting helmet use for cyclists of all ages, and encourages the use of positive reinforcement strategies to increase helmet usage. The Region encourages collaboration between the various Ministries (e.g. Education+ MTO) and between municipalities and cycling organizations and public health.
Recommendation #18
Public education and safety campaigns for both pedestrians and drivers should promote awareness of pedestrian safety during darkness when most fatalities occur, and encourage all pedestrians to wear bright or retro-reflective clothing when walking in the evening or at night.
Regional Response:
The Region spearheaded a study by the Road Safety Committee of Ontario (ROSCO) that established a dataset of 20,000 pedestrian collisions across various municipalities in Ontario and determined that low-light condition is a statistically significant contributing factor associated with pedestrian collisions. The Region is also supportive of encouraging of pedestrians wearing bright and or retro-reflective clothing when walking during low light conditions.

Recommendation #19
Revise the Official MTO Driver’s Handbook to include a chapter which clarifies those traffic scenarios in which motorists are most likely to be involved in a collision with a pedestrian.

Regional Response:
Regional staff is in discussions with the Ministry of Transportation to incorporate cycling safety into Ontario Drivers licensing education, training and testing.

Recommendation #20
Police Services in Ontario should develop strong traffic law enforcement programs.

Regional Response:
Regional staff support Waterloo Region Police Service enforcement activities to make Regional roads safer for all users and encourage collaboration between Regional Transportation Division and WRPS in establishing such programs.

Conclusion
Regional policies and practices demonstrate that staff is actively integrating key recommendations on ways to improve the safety of pedestrians and cyclists in our community. In areas where the coroner has made recommendations directed at provincial interest, staff are working with the ministries to support productive implementation of the recommendations.

Area Municipal Consultation/Coordination
This report has been circulated to all Area Municipalities.

CORPORATE STRATEGIC PLAN:
By incorporating key recommendations on ways to improve the safety of pedestrians and cyclists, the Region is promoting the use and integration of active forms of transportation (Focus Area 3). By working with ministries to respond to recommendations involving a provincial focus, the Region is strengthening and enhancing partnerships with area municipalities and other orders of government (Focus Area 5).

FINANCIAL IMPLICATIONS:
NIL
OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Public Health was consulted in the development of this report.

ATTACHMENTS:

NIL

PREPARED BY:  Pat Fisher, Principal Planner, Transportation Demand Management
                Bob Henderson, Manager, Transportation Engineering

APPROVED BY:   Rob Horne, Commissioner, Planning, Housing and Community Services
                Thomas Schmidt, Commissioner, Transportation and Environmental Services
To: Chair Jim Wideman and Members of the Planning and Works Committee
From: Rob Horne
Subject: East Side Lands Master Environmental Servicing Plan Report
File No: D07-30

Please find attached Report P-13-069, East Side Lands (Stage 1) Master Environmental Servicing Plan Update – Notice of Completion. This report is being circulated for information purposes only at this time. The report is scheduled to be considered at either the August 13th or September 10th Planning or Works Committee meeting.
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: August 13, 2013

FILE CODE: D07-30

SUBJECT: EAST SIDE LANDS (STAGE 1) MASTER ENVIRONMENTAL SERVICING PLAN UPDATE - NOTICE OF COMPLETION

RECOMMENDATION:

THAT the Regional Municipality of Waterloo approve the East Side Lands (Stage 1) Master Environmental Servicing Plan (MESP) Report and supporting documentation, including Option 3b as the Preferred Option, as described in the East Side Lands (Stage 1) MESP prepared by Dillon Consulting Limited, and as summarized in Report P-13-046, dated August 13, 2013;

THAT the Regional Municipality of Waterloo issue the Notice of Completion and file the East Side Lands (Stage 1) Master Environmental Servicing Plan (MESP) Report and supporting documentation for a minimum 30 day public review in accordance with the Municipal Class Environmental Assessment process;

THAT the Regional Municipality of Waterloo continue to support the planning for the Regional infrastructure recommended in the East Side Lands (Stage 1) Master Environmental Servicing Plan (MESP);

THAT the Regional Municipality of Waterloo request that the City of Cambridge take the following actions:

   a) Immediately initiate an Official Plan Amendment and Zoning By-law Amendment for the “Quick Start” Lands (as shown on Attachment 8) so that the lands are designated, zoned and serviced by 2015;

   b) Include the City of Cambridge’s water and wastewater, stormwater and transportation projects recommended in the East Side Lands (Stage 1) MESP in the City’s Capital Budget for future years; and

   c) Following the minimum 30 day public review, initiate an update to the City of Cambridge Development Charges By-law of the East Side Lands (Stage 1) MESP and incorporate the City infrastructure identified in the East Side Lands (Stage 1) MESP in the Capital Program;

AND THAT the Regional Municipality of Waterloo continue to work in cooperation with the City of Cambridge to advance the development of the East Side Lands (Stage 1).

SUMMARY:

A key element in attracting and retaining employers in a competitive global economy is ensuring that the Region has an adequate supply of development ready employment land. Regional Council recognized the importance of development-ready employment land in the Region’s 2011-2014 Strategic Plan by including the action to advance the East Side Employment Lands to development readiness.
The East Side Lands (see Attachment 1) represent a key opportunity for the Region to market itself to existing and new businesses. The East Side Lands are strategically located in proximity to Provincial Highways (401, 8, and 7), the CPR rail line, a future GO Transit station in Breslau and the Region of Waterloo International Airport. The recent opening of the Fairway Road Bridge has better connected the East Side Lands with the broader region and the future construction of Highway 7 will also improve connectivity to the East Side Lands. It is expected that the area will increasingly become a key location to attract employers with recent announcements by Toyota to expand its Cambridge facility, the Region’s new Airport Master Plan (currently underway) and future plans for Light Rail Transit. At full build out, the East Side Lands (Stage 1) (approximately 300 net hectares (741 net acres)) are expected to accommodate approximately 8,000 to 10,000 new jobs and increase Regional property tax revenue annually by $5 million dollars by 2031.

The following aspects of the East Side Lands (Stage 1) are particularly noteworthy:

- Opportunity to address current shortage of large lots for employment uses in the Region of Waterloo;
- Regional Council began to designate the Stage 1 Lands in 2009, creating the Prime Industrial Strategic Reserve (PISR) lands in the City of Cambridge, south of the Region of Waterloo International Airport in the Regional Official Plan;
- The East Side Lands create opportunities for both existing businesses and new businesses;
- Canada’s Technology Triangle (CTT) has been actively supporting and promoting these lands being made development-ready, as did the consultants who recently completed the review of economic development in the Region on behalf of the Regional and all seven area municipalities;
- Infrastructure investment can be phased so that the entire capital investment can be staged over a number of years;
- The Provincial government has significant land holdings in the Stage 1 Lands and is actively working with the Region and the City of Cambridge to complete the East Side Lands (Stage 1) MESP and advance their lands to market.

**East Side Lands (Stage 1) Master Environmental Servicing Plan (MESP)**

On November 24, 2010 Regional Council retained Dillon Consulting Limited (Dillon) to provide consulting services for the East Side Lands (Stage 1) Master Environmental Servicing Plan (MESP) and Community Plan. The MESP is being co-managed by the Region of Waterloo, the City of Cambridge and the Grand River Conservation Authority (GRCA) in consultation with the City of Kitchener and the Township of Woolwich.

Master Environmental Servicing Plans are long range plans which integrate infrastructure requirements for existing and future land use with environmental assessment planning principles. The East Side Lands (Stage 1) Master Environmental Servicing Plan (MESP) looks at related transportation, water and sewer infrastructure required to provide servicing and permit the development of the Stage 1 lands. Integrating the planning of infrastructure with the subwatershed study process allows for the full impact of decisions to be evaluated and understood.

The primary focus of the MESP is on the Stage 1 lands (see Attachments 1 and 2) which include 477 gross hectares (1,179 gross acres) of land designated in the new Regional Official Plan as Prime Industrial Strategic Reserve (PISR). Of this area, approximately 252 gross hectares (622 gross acres) were designated as part of Regional Official Plan Amendment No. 28 in 2007. This MESP will advance the Stage 1 lands through the Municipal Class Environmental Assessment (EA) process towards development readiness for new employment opportunities.

The PISR designation in the Regional Official Plan provides for industrial and business park uses requiring municipal services in parcel sizes of predominantly 8 hectares (20 acres) or greater as well as for smaller parcels as a result of design limitations due to the location of environmental features,
property configurations, new roads or existing development. The provision of larger parcel, municipally-
serviced employment lands has been identified as a key step to maintain and enhance Waterloo
Region’s economic competitiveness.

This MESP describes a set of infrastructure projects that are distributed geographically over the study
area and may be implemented over a period of time. Projections of timing for individual infrastructure
projects are contained in the MESP. These projections of timing are not binding and the individual
infrastructure projects can be constructed when they are actually needed at the discretion of the
proponent. The suggested ownership of each individual infrastructure project (City/Region) is also not
binding and discussions can continue to occur on ownership after completion of the MESP.

The group of infrastructure projects presented in the MESP are related through the purpose of
providing a servicing and transportation strategy for the East Side Lands (Stage 1) with full recognition
of the impacts to the environment. This MESP provides a comprehensive, integrated approach to
determine the necessary transportation, environmental, water and wastewater servicing, subwatershed,
stormwater management and community planning information required to inform specific development
applications. A Staging of Development Plan is also included which confirms the ability to service the
“Quick Start” lands of approximately 85 net hectares (210 net acres) in the short term with minimal
infrastructure and expense (see Attachment 8) as well as flexible staging options to respond to
development demand. It is estimated that the “Quick Start” lands could be designated in the City of
Cambridge Official Plan and be appropriately zoned, serviced and ready for development in 2015.

Throughout the MESP process, a comprehensive consultation program with the public, landowners and
government agencies was conducted which included three Public Information Centres (PICs). There
were a number of issues identified throughout the consultation including: impact to natural features and
wells, flooding / drainage issues, traffic, maintaining Riverbank Drive as a Scenic Heritage Road, land
use compatibility, need for employment lands / economic competitiveness and access issues for
specific development lands.

The Preferred Option

Five servicing options to provide water, wastewater and transportation infrastructure for the Stage 1
lands were developed as part of the MESP and presented at the second PIC. The proposed options
were evaluated against the following criteria: development and sustainability, cost, land use, socio-
economic and cultural environment, natural environment and transportation.

The Preferred Option of the Project Team (Region, City, GRCA staff and consultants) to provide water,
wastewater and transportation infrastructure for the Stage 1 lands is Option 3b (see Attachment 3).
This option was selected as preferred as it provides full water and wastewater servicing to the Stage 1
lands and Creekside lands (see Attachment 9), a north-south transportation connection through the
East Side Lands (Stage 1) from Middle Block Road to King Street East, reduces traffic on Riverbank
Drive, provides two municipal roads for the Creekside lands, avoids impacts to a Provincially Significant
Wetland and Core Environmental Feature, and major avoids structural and operational impacts to the
Regional Operations Centre.

The Regional and City infrastructure required to implement the Preferred Option is included as
Attachments 5, 6 & 7. The estimated base cost for the new infrastructure is approximately $110 million,
which includes both Regional and City capital costs. The costs will not all be incurred up front as
infrastructure will be phased in as required to support development. The capital costs for the Regional
infrastructure identified is between approximately $10 and $50 million. These projects are included in
the Region’s 2013 capital program and can be funded by development charges. The City’s infrastructure is not yet included in their capital program and will need to be addressed as part of the City’s development charge By-law update, which is expected to be complete by the end of 2013.
The MESP satisfies the Environmental Assessment (EA) requirements for the majority of the infrastructure projects that fall under Municipal Class EA Schedules A, A+ or B, with the exception of the pumping stations, and no further EA work is required. For the pumping stations and Schedule C projects, further EA work separate to this MESP process is required including an Environmental Study Report. The Regional EA for the Region’s pumping station (SPS#2 as shown on Attachment 3) is currently underway (please refer to Report E-13-021) and is anticipated to be complete by early 2015. It is expected the pumping station will be operational by 2017. In the interim, there is existing capacity in the Preston Wastewater Treatment Plant to service the Stage 1 lands, including the “Quick Start” lands. When the Regional Pumping Station is operational, some or all of the flow can be redirected to the Kitchener Wastewater Treatment Plant.

The evaluation of alternatives, supporting technical information and public consultation information are documented in the MESP. Regional staff is recommending that Regional Council approve Option 3b as part of the approval of the MESP Report and supporting documentation, issue the Notice of Completion, and make the documentation available for a minimum 30 day public review in order to complete the required Class Environmental Assessment Process. The supporting documentation will include the Freeport Creek and Tributary to the Grand Subwatershed Study, the Master Drainage Plan, the Transportation Systems Assessment and the Municipal Water and Wastewater Service Requirements Assessment. The Fiscal Impact Analysis will be available separately once completed.

The Project Team, including staff from the City of Cambridge and the GRCA, unanimously supported the selection of the Preferred Option. Staff from the City of Kitchener and Township of Woolwich has advised they are supportive of the Preferred Option.

The East Side Stage 1 Lands Community Plan is also being prepared for consideration for the City of Cambridge. The Community Plan will integrate the findings of the subwatershed study, transportation, and servicing studies and will be implemented through future City of Cambridge Official Plan and Zoning By-law Amendments. The Community Plan provides greater detail on specific elements for the development of the Stage 1 lands (e.g. major collector roads).

Throughout the MESP, a comprehensive consultation program was conducted which included three Public Information Centres (PICs). Approximately 100 people attended each of the three Public Information Centres (PICs). Participants included local residents, business owners, engineering / planning consultants, landowners and developers.

**Next Steps**

Subject to Regional Council approval of the recommendations of this report, a Notice of Completion of the MESP and supporting documentation will be filed according to Class EA requirements, by means of advertisements in local newspapers, the Region’s website and mailings to affected property owners and others who requested notice, municipalities and agencies. The Notice of Completion will be made available for a minimum 30 day public review period.

Part II Orders (“bump up” requests) can be submitted for individual projects (Schedule B projects only). If no Part II Orders are received, the MESP will be deemed complete and the Ministry of Environment will file the Notice of Completion. If a Part II Order is received, the proponent will be responsible for trying to resolve the issue. It ultimately lies with the Minister of Environment to make a ruling. There are no Part II orders allowed for Schedule A or A+ projects. Once the MESP is complete, all Schedule A and A+ projects can immediately proceed to detailed design and implementation subject to funding. Provided there are no Part II orders, the Schedule B projects can proceed without any further EA work (with the exception of the Pumping Stations).

After the completion of the MESP, several important next steps must follow to implement the Preferred Option 3b, including the completion of EA requirements for specific projects by the applicable
municipality. In addition, the City of Cambridge must amend its Official Plan, Zoning By-law and Development Charges By-law. As the majority of the implementation falls under the jurisdiction of the City of Cambridge, Regional Staff recommend Regional Council request City of Cambridge Council prioritize these next steps and to budget for them accordingly.

Finally, the Region’s EA process for the Regional Pumping Station and forcemain will continue, and the subwatershed study and Master Drainage Plan will be formally tabled with Regional Council later this year.

**REPORT:**

One of the key elements of implementing the Regional Growth Management Strategy and the Region’s Strategic Plan, is planning for the development of the East Side Community and ensuring the availability of new employment lands. In 2006, the Region of Waterloo, in co-operation with the Prosperity Council of Waterloo Region and economic development officers from the local municipalities completed an “Industrial and Business Park Vacant Land Inventory and Demand Analysis.” This report identified the need to expand the ROPP’s City Urban Area designation to provide for 300 net hectares (741 net acres) of fully serviced land in parcels greater than 8 hectares (20 acres) in size.

In June 2007, Regional Council approved Regional Official Policies Plan Amendment No. 28 (ROPPA 28) to designate approximately 150 net hectares of land for large lot employment uses. As a result of an Ontario Municipal Board (OMB) Settlement additional land west of Fountain Street and south of Allendale Road, and east of Speedsville Road were included. In June 2009, Regional Council adopted the new Regional Official Plan (ROP) which includes the land designated as part of ROPPA 28, plus additional land for a total of approximately acres 300 net hectares (741 net acres) as Prime Industrial Strategic Reserve (PISR) (please see Attachment 2).

The main purpose of the PISR designation is to ensure that an adequate supply of development ready employment land is available within the Region of Waterloo for new large-lot manufacturing or business park uses requiring municipal water and wastewater services. Lands designated as PISR will be developed in parcels 8 hectares (20 acres) or greater unless otherwise restricted by design limitations associated with environmental features, property configurations, the provision of new roads or existing development. It is anticipated that some smaller lots will result due to these design limitations.

To continue to advance the PISR lands towards development readiness, a Master Environmental Servicing Plan (MESP) was identified as the preferred way to address the outstanding studies and the Environmental Assessment work required. Given the multi-jurisdiction, multi-disciplinary approach to a MESP, the Region worked with the City of Cambridge and the Grand River Conservation Authority to develop the Terms of Reference for East Side Lands (Stage 1) Master Environmental Servicing Plan (MESP) and Community Plan. The City of Kitchener and the Township of Woolwich were also consulted throughout the development of the MESP.

In addition to designating the land, a number of other related Regional initiatives to advance the development of the Broader East Side Lands, have been completed over the past few years, including the Wastewater Treatment Master Plan and associated AECOM East Side Servicing Review, environmental monitoring of the East Side Watersheds, and completion of the Regional Transportation Master Plan.

**East Side Lands (Stage 1) Master Environmental Servicing Plan (MESP)**

On November 24, 2010 Regional Council retained Dillon Consulting Limited (Dillon) to provide consulting services for the East Side Lands (Stage 1) Master Environmental Servicing Plan (MESP) and Community Plan. The MESP is being co-managed by the Region of Waterloo, the City of Cambridge and the Grand River Conservation Authority (GRCA). The MESP advances the lands
through the Municipal Class Environmental Assessment (EA) process towards development readiness to provide for new employment opportunities. The MESP was conducted in accordance with the Municipal Engineers Association Class Environmental Assessment Process (2007) including public consultation and preparation of the MESP Report.

The primary focus of the MESP is on the Stage 1 lands (see Attachment 1), which are strategically positioned north of Highway 401 near the Region of Waterloo International Airport. The MESP also considered the impact on infrastructure from the Broader East Side Lands area to be developed beyond 2031. The Stage 1 lands include the 477 gross hectares (1,179 gross acres) of land designated in the new Regional Official Plan as Prime Industrial Strategic Reserve (PISR). Of this, approximately 250 gross hectares (618 gross acres) were designated as part of the Regional Official Policies Plan (ROPP Amendment No. 28). The Stage 1 lands also include the Study Area for the subwatershed study for Freeport Creek and the area that drains directly to the Grand River, which is included as a technical appendix to the MESP.

The MESP provides a comprehensive, integrated approach to answer the broader questions about the necessary transportation, environmental, water and wastewater servicing, subwatershed, stormwater management and community planning information required to inform specific development applications.

The Preferred Option

Five servicing options to provide water, wastewater and transportation for the Stage 1 lands were developed as part of the MESP and presented at the second PIC. As required by the Class EA process, the options were evaluated against the following criteria: development and sustainability, cost, land use, socio-economic and cultural environment, natural environment and transportation.

The Preferred Option of the Project Team (Region, City and GRCA staff and consultants) to provide water, wastewater and transportation servicing for the Stage 1 lands is Option 3b (see Attachment 3). This option was selected as preferred as it provides full municipal water and wastewater servicing to the Stage 1 and Creekside lands, a north-south transportation connection through the East Side lands from Middle Block Road to King Street East, reduces traffic on Riverbank Drive, provides two municipal roads for the Creekside lands, avoids impacts to a Provincially Significant Wetland and Core Environmental Feature, and avoids structural and operational impacts to the Regional Operations Centre complex. The evaluation results summary table for all options is included as Attachment 4.

For a list of all infrastructure projects (both Region and City) required to implement the Preferred Option, please see Attachments 5, 6 & 7. The estimated base cost for the new infrastructure specifically required for this option is approximately $110 million, which includes both Regional and City capital costs. Infrastructure will be phased in as required to support development and not all of the costs will be incurred upfront.

The following Regional water and wastewater infrastructure projects are required to implement the Preferred Option and are included in the 2013 Capital Program:

- 450 mm watermain along Fountain Street (from Kossuth Road to Maple Grove Road), (Schedule A);
- Forcemain to direct wastewater to the Preston Wastewater Treatment Plant (Schedule A+ Pre-approved); and,
- Proposed new Regional Sewage Pump Station (SPS#2) and Forcemain to Kitchener Wastewater Treatment Plant (Schedule B).

For Schedule A, A+ and B projects (with the exception of the pumping stations), the MESP satisfies the EA requirements and no further EA work is required. For the pumping stations and forcemain, further EA work is required including an Environmental Study Report. The Regional EA for the Region’s pumping station (SPS#2) and forcemain to the Kitchener Wastewater Treatment Plant is currently
underway (refer to Report E-13-021) and is anticipated to be complete by the end of 2014. It is expected the pumping station will be operational by 2017. The 2013 Capital Program includes the pump station SPS #2 and the forcemain to the Kitchener WWTP.

The transportation infrastructure projects required to implement Option 3b are included in Attachment 5. Upgrades to Fountain Street and Maple Grove Road are also required and were assumed in the analysis as they were identified in the Regional Transportation Master Plan and are already budgeted as part of the Region’s 10 Year Transportation Capital Program.

Timing for the proposed infrastructure projects is based on the anticipated rate of uptake and development of the Stage 1 area of about 20 hectares per year. Since it is intended to only construct infrastructure as it is required to service development areas, the construction projects will be spread over the planning period for financial considerations and for managing cash flow. As it is not possible to dictate or predict where and when development will occur within the Stage 1 lands, the staging plan for constructing infrastructure to support this development is flexible and can be adjusted accordingly throughout the planning period. The proposed timing for each of the individual infrastructure projects should be regularly reviewed and updated based on the actual and anticipated development patterns within the Stage 1 lands. In this way, the servicing of the area can be synchronized with the actual development.

Water and Wastewater Servicing

The main objective of the Water and Wastewater component was to develop a water and wastewater servicing strategy for the Stage 1 lands, including: alignment and size of major trunk water mains; connection and impacts on the Integrated Urban Water System (IUS); the need for other ancillary facilities such as pumping stations, pressure reducing valves (PRVs), re-chlorination stations, alignment, size and depths of major sanitary trunk sewers; and location, size and depth of required pumping stations.

The proposed infrastructure is to be planned in a timely, systematic, cost-effective manner while minimizing environmental impacts. Infrastructure is also being planned to take into account future development (oversizing) of the balance of the East Side Lands. All options for water and wastewater servicing were developed to build on and leverage the existing system.

The MESP recommends that the existing water supply mains be used to supply water to the Stage 1 lands. Timing for some water main extensions will be dependent on absorption rates of employment lands in the Stage 1 area and adjacent lands. Given the existing transmission and distribution system in the Stage 1 area, phasing of water servicing for specific areas can be accomplished through construction of local mains, as required, as shown on Attachment 6. All areas of the Stage 1 lands can be serviced for water by extending the existing system. Timing for some of the proposed water projects will be dependent on other infrastructure improvements, such as road improvements.

The MESP recommends directing wastewater via gravity and City pumping station (SPS #1) to the Preston Wastewater Treatment Plant (PWWTP) in the interim until the Regional Pumping Station (SPS #2) is constructed. The ultimate long term plan is to direct wastewater from the Stage 1 lands to the Kitchener Waste Water Treatment Plan via the Regional Pumping Station. This was confirmed as part of the Region’s Wastewater Treatment Master Plan (2007). Since 2011, the Region has been diverting wastewater flows generated in the Industrial Road Area of the City of Cambridge from the Preston Waste Water Treatment Plant (PWWTP) to the Galt Waste Water Treatment Plant to free up capacity at the PWWTP. Through the MESP, sufficient capacity was confirmed at the PWWTP to accommodate the Stage 1 lands as well as other planned development in the PWWTP catchment area (see Attachment 7 for the list of wastewater projects).
Transportation

Transportation analyses related to the East Side Lands has occurred over the past several years, including the completion of the Regional Transportation Master Plan (RTMP) in 2010. The RTMP included recommendations for several transportation projects in the 0 to 20 year frame that are key to the East Side Lands Transportation Network. The RTMP also included preliminary long-term transportation needs of the East Side Lands by identifying key corridors that require protection and widening. The MESP built upon previous studies to provide recommendations for an internal collector road system and connections to Regional Roads.

The MESP recommends a North-South collector from Middle Block Road, crossing Allendale Drive through to the Creekside lands connecting to King Street. Based on the detailed evaluation, the North-South collector to King Street will distribute traffic and reduce demand on Riverbank Drive while providing improved network connectivity for transit, walking and cycling. Other local roads may be considered through individual development applications. As development applications are submitted, more detailed transportation analysis will need to occur to recommend required intersection improvements and to confirm planned capital project timing.

The widening of Fountain Street, Maple Grove Road, and various intersection improvements are also required to service the area. These Regional projects were assumed in the analysis as they were identified in the Regional Transportation Master Plan and are budgeted as part of the Region’s 2013 10 year Transportation Capital Program funded by Regional Development Charges. Additional City of Cambridge transportation infrastructure projects required to implement Option 3b are included in Attachment 5.

Upgrades and the widening of Speedsville Road have been identified in the list of infrastructure projects required to implement the preferred option. Regional and City staff have been in discussions over the ownership of Speedsville Road, and the MESP does not need to resolve this matter. The financial analysis completed for the infrastructure projects includes both scenarios for Speedsville Road (City ownership and Region ownership). The costs to upgrade Speedsville Road between Eagle Street and Maple Grove Road to support the East Side Lands are estimated to be in the range of $40 million. The allocation of these costs will be part of the proposed discussions regarding ownership of the road.

“Quick Start” Lands and Staging of Development

In order to respond to the potential for immediate development demands, lands that can be easily serviced with minimal infrastructure are identified on Attachment 8 and are referred to as the “Quick Start” lands. Approximately 85 net hectares (210 net acres) adjacent to Fountain Street can be serviced by gravity sanitary mains without the need for any pump stations, forcemains or significant road upgrades. Depending upon the extent of servicing and the specific area, it is estimated that the capital cost to service these “Quick Start” lands would be between $1.5 million and $5 million. This “Quick Start” infrastructure could continue to be used for servicing throughout the Stage 1 development period (until 2031) and beyond if needed.

The area west of the “Quick Start” lands extending towards Riverbank Drive could be serviced with on-site, wastewater pumping stations feeding into the gravity sewers previously identified with the “Quick Start” lands. Localized road improvements may be needed to service this area.

The infrastructure projects associated with the “Quick Start” lands are City of Cambridge projects and are marked with an asterisk (*) on Attachment 8. All fall under Schedules A (pre-approved projects) or A+ (pre-approved but require public consultation before implementation). These EA requirements are satisfied by the MESP. They are all City projects and no further EA work will be required. Following completion of the MESP, the City could proceed with detailed design and implementation subject to
financing. It is estimated that the “Quick Start” lands could be designated in the City of Cambridge Official Plan and be appropriately zoned, serviced and ready for development in 2015.

Freeport Creek and Tributary to the Grand River Sub-Watershed Study and Master Drainage Plan

The Freeport Creek and Tributary to the Grand River Sub-Watershed Study and Master Drainage Plan are part of the MESP-coordinated approach to developing the East Side lands (Stage 1). This allows for the integration of the environmental components of the subwatershed plan with the planning and infrastructure components. The subwatershed study and Master Drainage Plan will be formally tabled with Regional Council later this year.

Public and Stakeholder Consultation

The following is a chronology of the opportunities for public and stakeholder consultation:

- **May 30, 2011 - Notice of Commencement**
  Advertisements were placed in local newspapers informing the public of the commencement of the East Side Lands (Stage 1) Master Environmental Servicing Plan and Community Plan. In addition, the area municipalities, relevant agencies, landowners within the Study Area and First Nations were notified by letter.

- **Project Team Meetings**
  The MESP was co-managed by Region, City of Cambridge and GRCA staff. The Project Team consisted of representatives from the consultant team, the Region’s Planning, Housing and Community Services Department, Transportation and Environmental Services Department, and the Region of Waterloo International Airport. Staff from the City of Cambridge and the GRCA were also represented and staff from the City of Kitchener and Township of Woolwich were also consulted at relevant points in the project. A total of nine Project Team Meetings were held throughout the project in addition to numerous meetings with relevant staff to address specific issues.

- **Public Information Centres (PICs)**
  A total of three PICs were held at École Secondaire Père-René-de-Galinée on Maple Grove Road in Cambridge. The PICs were advertised in the local papers and individual notice was sent to landowners within the Stage 1 Study Area, First Nations and anyone who requested notice.

  The first Public Information Centre (PIC) was held on June 14, 2011 to introduce the project, present background information and identify next steps. The PIC was an open house format with a presentation.

  The second PIC was held on June 26, 2012. The PIC was an open house format with a presentation and opportunity for questions and answers. The purpose of the meeting was to respond to issues identified at the first PIC, present the servicing and transportation options and evaluation criteria and seek public input. Draft environmental mapping was also presented for comment.

  Landowners within the Prime Industrial Strategic Reserve area and the developer of the Creekside lands were invited to a special meeting with the consultants and members of the Project Team to give them an opportunity to review the panels and ask questions.

  The third and final PIC was held on January 31, 2013 and followed the same format as the second PIC. The purpose of the meeting was to present and seek input on the Preferred Option and the detailed evaluation.
Spring 2013: Notice of Completion

Upon Council approval, advertisements will be placed in the local newspapers and the Region’s website informing the general public of the 30 day review period for the Final Report. Notice will be sent to those individuals who requested to be notified at PIC #3. All comments received will become part of the project file.

Summary of Public Information Centres (PICs)

Approximately 100 people attended each of the PICs. Participants included local residents, business owners, engineering / planning consultants, landowners and developers.

There were a number of issues identified throughout the consultation including: impact to natural features and wells, flooding / drainage issues, traffic, Riverbank Drive as a scenic heritage road, desire to maintain agricultural land, and use compatibility, need for employment lands / economic competitiveness, questions / concerns about timing of development and access issues for specific development lands (Creekside). A detailed summary of the comments and responses from PICs 1-3 is appended as Attachment 10.

Fiscal Impact Analysis

A Fiscal Impact Analysis was prepared as part of the East Side MESP to understand the costs associated with developing the Stage 1 lands as well as the associated economic benefits. The analysis looked at the costs of infrastructure required to implement the Preferred Option, with and without amortization as well as the associated tax revenues. Regional and City of Cambridge staff worked together and agreed on the infrastructure and cost assumptions used in the analysis.

The City of Cambridge will use the Fiscal Impact Analysis as the basis for proposing updates to their Development Charges By-law. This process is expected to start this year and be complete by the end of 2013.

Other Employment Lands in Proximity to East Side Lands

Boxwood Subdivision

The Boxwood Business Park includes approximately 44 hectares (110 acres) of serviced industrial land the City of Cambridge and is expected to be offering for sale in the summer of 2013. The lands are located east of the Toyota assembly plant and south east of the PISR lands. The Boxwood Business Park is the next phase of the Cambridge Business Park expansion and land is zoned for general industrial use, allowing manufacturing, processing, production assembly and some office uses. The Boxwood Business Park will make available lots ranging in size from 1-20 acres and will complement the larger parcels within the PISR land expected to be ready for development in 2015.

Creekside Lands

The Creekside (Phase 1) lands are approximately 30 net hectares (74 acres) and are located south of the PISR lands, west of Fountain Street and north of King Street East (please see Attachment 9). These lands have been within the Urban Area boundary for many years and currently only permit agricultural uses and golf related uses. At the request of the developer and the City, there is a deferral on the designation of the property in the City’s recently adopted Official Plan, which is currently under appeal. The Creekside lands are included in the Stage 1 Study Area for the purposes of the Study Area boundary for the Freeport Creek and Tributary to the Grand Subwatershed Study. The Creekside (Phase 1) lands were also considered as part of some of the servicing and transportation options.
Ultimately, the Preferred Option included connecting the Creekside lands in the overall servicing and transportation solution identified.

The Creekside lands have experienced a number of issues that have delayed them from developing for more urban uses, including limited / constrained access, servicing and outstanding work related to the natural environment. The Creekside lands, however, do represent an opportunity for the shorter term location of future employment uses subject to the resolution of these issues.

The MESP includes a substantial amount of technical work to answer some of the broader questions about how the Creekside lands can develop, including a plan for two municipal roads that provide access to the property, completion of the subwatershed study work required to designate the developable land in the City of Cambridge Official Plan and a plan for municipal water and wastewater services. As determined through the MESP, the PWWTP has available capacity to provide wastewater servicing to the Creekside lands.

The Creekside developer submitted an application to amend the City’s Official Plan in 2010. The developer recently submitted a revised Official Plan Amendment which scopes the range of permitted uses to employment and employment related uses and recreational/automobile sales. The application is currently in the development review process and the Region is working with the developer and the City of Cambridge to advance the lands to development readiness.

Next Steps

Subject to Regional Council approval of the recommendations of this report, a Notice of Completion of the MESP and supporting documentation will be issued according to Class EA requirements, by means of advertisements in local newspapers, the Region’s website and mailings to affected property owners and others who requested notice, municipalities and agencies. Upon Regional Council approval, the MESP will be made available for a 30 day public review period.

Part II Orders (“bump up” requests) can be submitted for individual projects (Schedule B projects only). If no Part II Orders are received, the MESP is complete and the Ministry of Environment will file the Notice of Completion. If a Part II Order is received, the proponent will be responsible for trying to resolve the issue. It ultimately lies with the Minister of Environment to make a ruling. There are no Part II orders allowed for Schedule A, A+ and C projects. Once the MESP is complete, all Schedule A and A+ projects can immediately proceed to detailed design and implementation subject to funding. Provided there are no Part II orders, the Schedule B projects can proceed without any further EA work (with the exception of the Pumping Stations and Regional forcemain).

Following completion of the MESP, several important next steps must follow to implement the Preferred Option, including the completion of EA requirements for specific projects by the applicable municipality and the City of Cambridge updating their Official Plan, Zoning By-law and Development Charges By-law. The Region’s EA process is currently underway for the Regional Pumping Station and forcemain, and the subwatershed and master drainage plans will be formally tabled with Regional Council later this year, as described in this report.

As the majority of the remaining implementation falls under the jurisdiction of the City of Cambridge, Regional Staff recommend Regional Council formally request City of Cambridge Council prioritize these next steps and budget for them accordingly.

The analyses done to date also provide the transportation and servicing requirements for the balance of the East Side Lands. It is anticipated another MESP could be completed for lands beyond the Stage 1 lands.
Area Municipal Consultation/Coordination

This project is being co-managed by the City of Cambridge and the Grand River Conservation Authority (GRCA). Representatives from the City of Cambridge and GRCA are also members of the Project Team and staff from the City of Kitchener and Township of Woolwich have been involved at relevant points in the project.

The Project Team, including staff from the City of Cambridge and the GRCA, unanimously supported the selection of the Preferred Option. Staff from the City of Kitchener and Township of Woolwich have advised they are supportive of the Preferred Option.

CORPORATE STRATEGIC PLAN:

The East Side Lands (Stage 1) Master Environmental Servicing Plan (MESP) supports the implementation of Region of Waterloo 2011-2014 Strategic Focus Area 2: Growth Management and Prosperity, Strategic Objective 2.2, Develop, optimize and maintain infrastructure to meet current and projected needs, Strategic Objective 2.3: Support a diverse, innovative and globally competitive economy and Action 2.3.1: Advance New East Side Employment Lands toward Development Readiness.

FINANCIAL IMPLICATIONS:

The Region's 2013 Capital Program provides $43 million for Regional infrastructure projects within the East Side Lands study area. This includes the Regional infrastructure projects identified in the MESP (approximately $10 million) as well as additional Region infrastructure projects in the study area that were previously identified and included in the 2013 Capital Program such as improvements to Fountain Street and Maple Grove Road. Any improvements required for Speedsville Road are not in the 2013 Capital Program or the Development Charge Background Study.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Planning, Housing and Community Services and Transportation and Environmental Services staff were part of the Project Team recommending the Preferred Option. Staff from Hydrogeology and Source Water Protection, Water Services and Corporate Services (Finance and Legal) was also consulted through the process and preparation of this report.

ATTACHMENTS:

Attachment 1 – Study Area Location
Attachment 2 – ROP Prime Industrial Strategic Reserve (PI SR) lands
Attachment 3 – Preferred Option
Attachment 4 - Summary of Evaluation Results
Attachment 5, 6 & 7 – List of Infrastructure Projects to Implement Preferred Option
Attachment 8 – “Quick Start” Lands
Attachment 9 – Creekside lands
Attachment 10 – Summary of Responses from Public Information Centres 1-3

PREPARED BY:  Brenna MacKinnon, Manager, Greenfield Planning
               Amanda Kutler, Acting Director, Community Planning

APPROVED BY:  Rob Horne, Commissioner, Planning, Housing and Community Services
Attachment 1 – Study Area Location
Attachment 2 – ROP Prime Industrial Strategic Reserve (PISR) lands
Attachment 3 – Preferred Option
### Attachment 4 – Summary of Evaluation Results (preferred option in **bold**)

<table>
<thead>
<tr>
<th>Criteria Category</th>
<th>Option 1: No Freeport Creek Crossing</th>
<th>Option 2: Access to the Creekside Lands with No Freeport Creek Crossing</th>
<th>Option 3a: Access Through the Creekside Lands with Connections to King Street and Maple Grove Road</th>
<th>Option 3b: Access Through the Creekside Lands with Connection to King Street</th>
<th>Option 3c: Access Through the Creekside Lands with Connection to Maple Grove Road</th>
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<tbody>
<tr>
<td>Development and Sustainability</td>
<td>Options 1 and 2 are least preferred for the development and sustainability criteria as: It limits transportation access for the Stage 1 Lands to Middle Block Road and Allendale Road. It is noted that all water and sanitary servicing options provide for logical extension to the Broader East Side Lands.</td>
<td>Options 1 and 2 are least preferred for the development and sustainability criteria as: It limits transportation access for the Stage 1 Lands to Middle Block Road and Allendale Road. It is noted that all water and sanitary servicing options provide for logical extension to the Broader East Side Lands.</td>
<td>Option 3a is most preferred for the development and sustainability criteria category as: It provides the most efficient transportation servicing, and It provides maximum access potential for the Stage 1 Lands with access to both King Street and Maple Grove Road. It is noted that all water and sanitary servicing options provide for logical extension to the Broader East Side Lands.</td>
<td>Options 3b and 3c are less preferred than Option 3a for the development and sustainability criteria category as: They provide very good access potential for the Stage 1 Lands, however Option 3b only provides access to King Street. It is noted that all water and sanitary servicing options provide for logical extension to the Broader East Side Lands.</td>
<td>Options 3b and 3c are less preferred than Option 3a for the development and sustainability criteria category as: They provide very good access potential for the Stage 1 Lands, however Option 3c only provides access to Maple Grove Road. It is noted that all water and sanitary servicing options provide for logical extension to the Broader East Side Lands.</td>
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<td><strong>Land Use</strong></td>
<td>Option 1 is least preferred for the land use criteria category as: It does not provide servicing for the Creekside lands, and It relies on private sector investment for infrastructure. The net developable area for this option is also least preferred. Option 1 provides approximately 311 hectares of developable area in the PISR lands, however the Creekside lands have not been included in the net developable area for this option it does not provide any servicing for the Creekside lands. It is noted that all options provide full servicing of the Stage 1 Lands.</td>
<td>Option 2 is considered preferred when compared to Option 1 for the land use criteria category as: It provides servicing for the Creekside lands. However it is less preferred than Options 3a, 3b and 3c as: Access from the Stage 1 Lands to the south would need to be constructed through private sector investment if deemed necessary and this could impact development timing and availability of land. The net developable area for Options 2, 3a, 3b and 3c are all similar. Option 2 provides approximately 311 hectares of developable area in the PISR lands and 35 hectares for the Creekside lands. It is noted that all options provide full servicing of the Stage 1 Lands.</td>
<td>Options 3a, 3b and 3c are preferred for the land use criteria category as: They provide servicing for the Creekside lands, and They increase development potential by providing a connection for the Stage 1 Lands to the south and to the Creekside lands. The net developable area for Options 2, 3a, 3b and 3c are all similar. Option 3a provides approximately 308 hectares of developable area in the PISR lands and 34 hectares for the Creekside lands. It is noted that all options provide full servicing of the Stage 1 Lands.</td>
<td>Options 3a, 3b and 3c are preferred for the land use criteria category as: They provide servicing for the Creekside lands, and They increase development potential by providing a connection for the Stage 1 Lands to the south and to the Creekside lands. The net developable area for Options 2, 3a, 3b and 3c are all similar. Option 3b provides approximately 308 hectares of developable area in the PISR lands and 35 hectares for the Creekside lands. It is noted that all options provide full servicing of the Stage 1 Lands.</td>
<td>Options 3a, 3b and 3c are preferred for the land use criteria category as: They provide servicing for the Creekside lands, and They increase development potential by providing a connection for the Stage 1 Lands to the south and to the Creekside lands. The net developable area for Options 2, 3a, 3b and 3c are all similar. Option 3c provides approximately 308 hectares of developable area in the PISR lands and 36 hectares for the Creekside lands. It is noted that all options provide full servicing of the Stage 1 Lands.</td>
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<tr>
<td><strong>Socio-</strong></td>
<td>Option 1 is least preferred for the land use criteria category as: It does not provide servicing for the Creekside lands, and It relies on private sector investment for infrastructure. The net developable area for this option is also least preferred. Option 1 provides approximately 311 hectares of developable area in the PISR lands, however the Creekside lands have not been included in the net developable area for this option it does not provide any servicing for the Creekside lands. It is noted that all options provide full servicing of the Stage 1 Lands.</td>
<td>Options 2, 3a and 3c are preferred for the land use criteria category as: They provide servicing for the Creekside lands, and They increase development potential by providing a connection for the Stage 1 Lands to the south and to the Creekside lands. The net developable area for Options 2, 3a, 3b and 3c are all similar. Option 2 provides approximately 311 hectares of developable area in the PISR lands and 35 hectares for the Creekside lands. It is noted that all options provide full servicing of the Stage 1 Lands.</td>
<td>Options 2, 3a and 3c are preferred for the land use criteria category as: They provide servicing for the Creekside lands, and They increase development potential by providing a connection for the Stage 1 Lands to the south and to the Creekside lands. The net developable area for Options 2, 3a, 3b and 3c are all similar. Option 3b provides approximately 308 hectares of developable area in the PISR lands and 35 hectares for the Creekside lands. It is noted that all options provide full servicing of the Stage 1 Lands.</td>
<td>Options 3b is preferred for the land use criteria category as: They provide servicing for the Creekside lands, and They increase development potential by providing a connection for the Stage 1 Lands to the south and to the Creekside lands. The net developable area for Options 2, 3a, 3b and 3c are all similar. Option 3b provides approximately 308 hectares of developable area in the PISR lands and 35 hectares for the Creekside lands. It is noted that all options provide full servicing of the Stage 1 Lands.</td>
<td>Options 2, 3a and 3c are preferred for the land use criteria category as: They provide servicing for the Creekside lands, and They increase development potential by providing a connection for the Stage 1 Lands to the south and to the Creekside lands. The net developable area for Options 2, 3a, 3b and 3c are all similar. Option 3c provides approximately 308 hectares of developable area in the PISR lands and 36 hectares for the Creekside lands. It is noted that all options provide full servicing of the Stage 1 Lands.</td>
</tr>
<tr>
<td>Criteria Category</td>
<td>Option 1: No Freeport Creek Crossing</td>
<td>Option 2: Access to the Creekside Lands with No Freeport Creek Crossing</td>
<td>Option 3a: Access Through the Creekside Lands with Connections to King Street and Maple Grove Road</td>
<td>Option 3b: Access Through the Creekside Lands with Connection to King Street</td>
<td>Option 3c: Access Through the Creekside Lands with Connection to Maple Grove Road</td>
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</tr>
<tr>
<td>Economic and Cultural Environment</td>
<td>preferred for the socio-economic and cultural environment criteria category as: It increases the potential for disruption to existing businesses on Middle Block Road and Allendale Road due to a potential increase in traffic on these roads, It does not allow closure of Riverbank Drive at CPR crossing and thus does not limit traffic impacts to residents on Riverbank Drive, and It does not promote human health improvements resulting from increased mode choice. It does, however, have the advantage of not impacting the Region’s Operations Centre but this advantage is outweighed by the disadvantages noted. It is noted that there are no listed built heritage or archaeological features</td>
<td>more preferred than Option 1 for the socio-economic and cultural environment criteria category as: They reduce the potential disruption impact to existing residents and businesses on Middle Block Road and Allendale Road, They provide alternative mode choice opportunities which can positively impact human health, and They provide for an option to cul-de-sac Riverbank Drive at the rail tracks to limit traffic impacts. However they are less preferred than Option 3b as: They impact the Region’s Operation Centre, an important existing business in the area. It is noted that there are no listed built heritage or archaeological features identified within the Stage 1 lands. Riverbank Drive has been identified as a scenic road in the</td>
<td>are more preferred than Option 1 for the socio-economic and cultural environment criteria category as: It reduces potential disruption impacts to existing residents and businesses on Middle Block Road and Allendale Road, They provide for an option to cul-de-sac Riverbank Drive at the rail tracks to limit traffic impacts. However they are less preferred than Option 3b as: They impact the Region’s Operation Centre, an important existing business in the area. It is noted that there are no listed built heritage or archaeological features identified within the Stage 1 lands. Riverbank Drive has been identified as a scenic road in the</td>
<td>preferred for the socio-economic and cultural environment criteria category as: It reduces potential disruption impacts to existing residents and businesses on Middle Block Road and Allendale Road, It provides alternative mode choice opportunities which can positively impact human health, and It provides for an option to cul-de-sac Riverbank Drive at the rail tracks to limit traffic impacts, and It results in no impacts to Region’s Operations Centre. It is noted that there are no listed built heritage or archaeological features identified within the Stage 1 lands. Riverbank Drive has been identified as a scenic road in the</td>
<td>are more preferred than Option 1 for the socio-economic and cultural environment criteria category as: It reduces potential disruption impacts to existing residents and businesses on Middle Block Road and Allendale Road, It provides alternative mode choice opportunities which can positively impact human health, and It provides for an option to cul-de-sac Riverbank Drive at the rail tracks to limit traffic impacts. However they are less preferred than Option 3b as: They impact the Region’s Operation Centre, an important existing business in the area. It is noted that there are no listed built heritage or archaeological features identified within the Stage 1 lands. Riverbank Drive has been identified as a scenic road in the</td>
</tr>
<tr>
<td>Criteria Category</td>
<td>Option 1: No Freeport Creek Crossing</td>
<td>Option 2: Access to the Creekside Lands with No Freeport Creek Crossing</td>
<td>Option 3a: Access Through the Creekside Lands with Connections to King Street and Maple Grove Road</td>
<td>Option 3b: Access Through the Creekside Lands with Connection to King Street</td>
<td>Option 3c: Access Through the Creekside Lands with Connection to Maple Grove Road</td>
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<td>identified within the Stage 1 lands. Riverbank Drive has been identified as a scenic road in the Cambridge Heritage Master Plan. Impacts to cultural heritage and archaeology are similar for each option.</td>
<td>Cambridge Heritage Master Plan. Impacts to cultural heritage and archaeology are similar for each option.</td>
<td>heritage or archaeological features identified within the Stage 1 lands. Riverbank Drive has been identified as a scenic road in the Cambridge Heritage Master Plan. Impacts to cultural heritage and archaeology are similar for each option.</td>
<td>identified as a scenic road in the Cambridge Heritage Master Plan. Impacts to cultural heritage and archaeology are similar for each option.</td>
<td>heritage or archaeological features identified within the Stage 1 lands. Riverbank Drive has been identified as a scenic road in the Cambridge Heritage Master Plan. Impacts to cultural heritage and archaeology are similar for each option.</td>
<td></td>
</tr>
<tr>
<td>Transportation</td>
<td>Option 1 is least preferred for the transportation criteria category as: It provides the least amount of internal roads and relies on the existing road network, It does not provide transportation servicing for the Creekside lands, It relies on the private sector to provide additional access, and It does not provide for community connectivity in the form of continuous capacity for transit and other non-motorized travel options for the Creekside lands, and It provides two municipal transportation access points and full servicing to the Creekside lands. However it is less preferred than Option 3a, 3b and 3c as: It does not provide community connectivity</td>
<td>Option 2 is more preferred than Option 1 for the transportation criteria category as: It provides good east-west network connections for automotive, transit and other non-motorized travel options for the Creekside lands, and It provides two municipal transportation access points and full servicing to the Creekside lands.</td>
<td>Option 3a is preferred for the transportation criteria category as: It provides maximum internal network connectivity for automotive, transit and other non-motorized travel options for the Stage 1 Lands, It provides three municipal transportation access points and full servicing to the Creekside lands, and It provides multiple access options from the Stage 1 Lands to Options 3b and 3c are more preferred than Option 1 and Option 2 for the transportation criteria category as: They provide very good network connectivity for automotive, transit and other non-motorized travel options, and They provide two municipal transportation access points and full servicing to the Creekside lands.</td>
<td>Options 3b and 3c are more preferred than Option 1 and Option 2 for the transportation criteria category as: They provide very good network connectivity for automotive, transit and other non-motorized travel options, and They provide two municipal transportation access points and full servicing to the Creekside lands.</td>
<td></td>
</tr>
<tr>
<td>Criteria Category</td>
<td>Option 1: No Freeport Creek Crossing</td>
<td>Option 2: Access to the Creekside Lands with No Freeport Creek Crossing</td>
<td>Option 3a: Access Through the Creekside Lands with Connections to King Street and Maple Grove Road</td>
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<tr>
<td>Natural Environment</td>
<td>Option 1 is preferred for the natural environment criteria category as: It has the least impact to the natural environment, It has no impacts to the Region of Waterloo Core Environmental Feature south of the Regional Stormwater Management facility, It has no impact to the Provincially Significant Wetland adjacent to the Region's Operations Centre and Freeport Creek, and It has no crossing of Freeport Creek and no associated impacts. However, the north-south road between</td>
<td>Option 2 is less preferred than Option 1 for the natural environment criteria category as: The east-west road will severely impact the linear Region of Waterloo Core Environmental Feature south of the Regional Stormwater Management facility, and Impacts to the Provincially Significant Wetland adjacent to the Region’s Operations Centre. However it is more preferred than Option 3a and 3c as: It has no crossing of Freeport Creek and no associated impacts. The north-south road</td>
<td>Option 3a and 3c are least preferred for the natural environment criteria category as: The east-west road will severely impact the linear Region of Waterloo Core Environmental Feature south of the Regional Stormwater Management facility, The east-west road will impact the Provincially Significant Wetland adjacent to the Region’s Operations Centre, and There are anticipated natural environmental impacts associated with the loss of wetland. However it is more preferred than Option 3a and 3c as: It has no impact to the Provincially Significant Wetland adjacent to the</td>
<td>Option 3b is less preferred than Option 1 for the natural environment criteria category as: The east-west road will severely impact the linear Region of Waterloo Core Environmental Feature south of the Regional Stormwater Management facility, The east-west road will impact the Provincially Significant Wetland adjacent to the Region’s Operations Centre, and There are anticipated natural environmental impacts associated with the loss of wetland area at the proposed new crossing of Freeport Creek. However it is more preferred than Option 3a and 3c as: It has no impact to the Provincially Significant Wetland adjacent to the</td>
<td>Option 3a and 3c are the least preferred for the natural environment criteria category as: The east-west road will severely impact the linear Region of Waterloo Core Environmental Feature south of the Regional Stormwater Management facility, The east-west road will impact the Provincially Significant Wetland adjacent to the Region’s Operations Centre, and There are anticipated natural environmental impacts associated with the loss of wetland area at the proposed new crossing of Freeport Creek. However it is more preferred than Option 3a and 3c as: It has no impact to the Provincially Significant Wetland adjacent to the</td>
</tr>
<tr>
<td>Criteria Category</td>
<td>Option 1: No Freeport Creek Crossing</td>
<td>Option 2: Access to the Creekside Lands with No Freeport Creek Crossing</td>
<td>Option 3a: Access Through the Creekside Lands with Connections to King Street and Maple Grove Road</td>
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<td>Option 3c: Access Through the Creekside Lands with Connection to Maple Grove Road</td>
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<td></td>
<td>Allendale Road and Middle Block Road in all options will severely impact the wildlife corridor/linkage between the Hespeler West PSW Complex (Hespeler West Wetland) and the Tributary to the Grand (Allendale Creek) Natural Features and the Grand River Valley.</td>
<td>between Allendale Road and Middle Block Road in all options will severely impact the wildlife corridor/linkage between the Hespeler West PSW Complex (Hespeler West Wetland) and the Tributary to the Grand (Allendale Creek) Natural Features and the Grand River Valley.</td>
<td>area at the proposed new crossing of Freeport Creek. The north-south road between Allendale Road and Middle Block Road in all options will severely impact the wildlife corridor/linkage between the Hespeler West PSW Complex (Hespeler West Wetland) and the Tributary to the Grand (Allendale Creek) Natural Features and the Grand River Valley.</td>
<td>Region’s Operations Centre, and It has no impact on the linear Region of Waterloo Core Environmental Feature south of the Regional Stormwater Management facility. The north-south road between Allendale Road and Middle Block Road in all options will severely impact the wildlife corridor/linkage between the Hespeler West PSW Complex (Hespeler West Wetland) and the Tributary to the Grand (Allendale Creek) Natural Features and the Grand River Valley.</td>
<td>impacts associated with the loss of wetland area at the proposed new crossing of Freeport Creek. The north-south road between Allendale Road and Middle Block Road in all options will severely impact the wildlife corridor/linkage between the Hespeler West PSW Complex (Hespeler West Wetland) and the Tributary to the Grand (Allendale Creek) Natural Features and the Grand River Valley.</td>
</tr>
<tr>
<td>Criteria Category</td>
<td>Option 1: No Freeport Creek Crossing</td>
<td>Option 2: Access to the Creekside Lands with No Freeport Creek Crossing</td>
<td>Option 3a: Access Through the Creekside Lands with Connections to King Street and Maple Grove Road</td>
<td>Option 3b: Access Through the Creekside Lands with Connection to King Street</td>
<td>Option 3c: Access Through the Creekside Lands with Connection to Maple Grove Road</td>
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</tr>
<tr>
<td>Cost**The numbers provided are for comparison purposes only. The capital costs provided are for the total cost of all identified infrastructure.</td>
<td>Option 1 is preferred for the cost criteria category as it is the lowest cost option. It has an approximate capital cost of $50 million directly related to this option. Operation and maintenance costs for all options are similar.</td>
<td>Options 2 and 3a, 3b and 3c have similar costs and are all less preferred for the cost criteria category. Option 2 has an approximate capital cost of $65 million directly related to this option. Operation and maintenance costs for all options are similar.</td>
<td>Options 2 and 3a, 3b and 3c have similar costs and are all less preferred for the cost criteria category. Option 3a has an approximate capital cost of $72 million directly related to this option. Operation and maintenance costs for all options are similar.</td>
<td>Options 2 and 3a, 3b and 3c have similar costs and are all less preferred for the cost criteria category. Option 3b has an approximate capital cost of $69 million directly related to this option. Operation and maintenance costs for all options are similar.</td>
<td>Options 2 and 3a, 3b and 3c have similar costs and are all less preferred for the cost criteria category. Option 3c has an approximate capital cost of $65 million directly related to this option. Operation and maintenance costs for all options are similar.</td>
</tr>
</tbody>
</table>
**Attachment 5 – List of Infrastructure Projects to Implement Preferred Option 3b – Transportation Infrastructure**

**Preferred Option Infrastructure Projects**

Municipal Class EA Schedules:

**Schedule A**: Pre-approved projects.

**Schedule A+**: Pre-approved but require public notice before implementation.

**Schedule B**: Environmental screening process required.

**Schedule C**: Full planning and documentation process required and an Environmental Study Report must be prepared (beyond this project).

The EA requirements for all Schedule A, A+ and B projects have been satisfied through this project.

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Project Description</th>
<th>From</th>
<th>To</th>
<th>Ownership</th>
<th>MEA Class Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle Block Road</td>
<td>Upgrade and widen to 4 lanes</td>
<td>N-S Collector</td>
<td>Fountain Street</td>
<td>City of Cambridge</td>
<td>Schedule B</td>
</tr>
<tr>
<td>N-S Collector</td>
<td>New 4 lane and Freeport Creek crossing structure</td>
<td>Middle Block Road</td>
<td>South of Freeport Creek</td>
<td>City of Cambridge</td>
<td>Schedule C</td>
</tr>
<tr>
<td>E-W Collector</td>
<td>New 4 lane and potential CPR crossing structure</td>
<td>King Street</td>
<td>N-S Collector</td>
<td>City of Cambridge</td>
<td>Schedule B</td>
</tr>
<tr>
<td>Middle Block Road</td>
<td>Upgrade 2 lanes</td>
<td>Fountain Street</td>
<td>Speedsville Road</td>
<td>City of Cambridge</td>
<td>Schedule B</td>
</tr>
<tr>
<td>Allendale Road</td>
<td>Upgrade 2 lanes and potentially widen to 4 lanes</td>
<td>N-S Collector</td>
<td>Fountain Street</td>
<td>City of Cambridge</td>
<td>Schedule B</td>
</tr>
<tr>
<td>Speedsville Road</td>
<td>Upgrade 2 lanes</td>
<td>Middle Block Road</td>
<td>Maple Grove Road</td>
<td>City of Cambridge</td>
<td>Schedule B</td>
</tr>
<tr>
<td>Speedsville Road</td>
<td>Upgrade and widen to 4 lanes</td>
<td>Maple Grove Road</td>
<td>Eagle Street</td>
<td>TBD</td>
<td>Schedule B</td>
</tr>
</tbody>
</table>
### Attachment 6 - List of Infrastructure Projects to Implement Preferred Option – Water Infrastructure

<table>
<thead>
<tr>
<th>Project Description</th>
<th>From</th>
<th>To</th>
<th>Servicing by:</th>
<th>Size (mm)</th>
<th>MEA Class Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watermain along Middle Block Road*</td>
<td>New N-S Collector</td>
<td>Fountain Street</td>
<td>City of Cambridge</td>
<td>300 mm</td>
<td>Schedule A</td>
</tr>
<tr>
<td>Watermain along Allendale Road*</td>
<td>New N-S Collector</td>
<td>Fountain Street</td>
<td>City of Cambridge</td>
<td>300 mm</td>
<td>Schedule A</td>
</tr>
<tr>
<td>Watermain along Middle Block Road</td>
<td>Fountain Street</td>
<td>Speedsville Road</td>
<td>City of Cambridge</td>
<td>400 mm</td>
<td>Schedule A</td>
</tr>
<tr>
<td>Watermain along Speedsville Road</td>
<td>Middle Block Road</td>
<td>Maple Grove Road</td>
<td>City of Cambridge</td>
<td>400 mm</td>
<td>Schedule A</td>
</tr>
<tr>
<td>Watermain along Fountain Street*</td>
<td>Banat Road</td>
<td>Middle Block Road</td>
<td>City of Cambridge</td>
<td>300 mm</td>
<td>Schedule A</td>
</tr>
<tr>
<td>Watermain along Fountain Street</td>
<td>Kossuth Road</td>
<td>Maple Grove Road</td>
<td>Region of Waterloo</td>
<td>450 mm</td>
<td>Schedule A</td>
</tr>
<tr>
<td>Watermain (loop for N-S collector and E-W collector through Creekside lands)</td>
<td>N-S Collector</td>
<td>Existing Regional Watermain</td>
<td>City of Cambridge</td>
<td>300 mm</td>
<td>Schedule A</td>
</tr>
</tbody>
</table>

“Quick Start” projects have been identified with an asterisk (*)
### Attachment 7 - List of Infrastructure Projects to Implement Preferred Option 3b – Wastewater Infrastructure

<table>
<thead>
<tr>
<th>Project Description</th>
<th>From</th>
<th>To</th>
<th>Servicing by:</th>
<th>Size (mm)</th>
<th>MEA Class Schedule</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanitary sewer Middle Block Road*</td>
<td>N-S collector</td>
<td>Fountain Street</td>
<td>City of Cambridge</td>
<td>300 mm</td>
<td>Schedule A+</td>
<td>Includes short section of sewer east of Fountain Street</td>
</tr>
<tr>
<td>Sanitary Sewer Fountain Street*</td>
<td>Middle Block Road</td>
<td>Maple Grove Road</td>
<td>City of Cambridge</td>
<td>450 mm</td>
<td>Schedule A+</td>
<td></td>
</tr>
<tr>
<td>Sanitary sewer Allendale Road*</td>
<td>N-S collector</td>
<td>Fountain Street</td>
<td>City of Cambridge</td>
<td>300 mm</td>
<td>Schedule A+</td>
<td></td>
</tr>
<tr>
<td>Sanitary sewer Speedsville Road</td>
<td>Middle Block Road</td>
<td>Maple Grove Road</td>
<td>City of Cambridge</td>
<td>300 mm</td>
<td>Schedule A+</td>
<td></td>
</tr>
<tr>
<td>Sanitary sewer Speedsville Road</td>
<td>Maple Grove Road</td>
<td>New SPS#1</td>
<td>City of Cambridge</td>
<td>525 mm</td>
<td>Schedule A+</td>
<td></td>
</tr>
<tr>
<td>Royal Oak sanitary sewer to divert Boxwood Pumping Station to new SPS #1</td>
<td>Boxwood Pumping Station</td>
<td>New SPS #1</td>
<td>City of Cambridge</td>
<td>300 mm</td>
<td>Schedule A+</td>
<td></td>
</tr>
<tr>
<td>Proposed new SPS#1 (East Side Stage 1 lands, Hunt Club, Boxwood)</td>
<td>-</td>
<td>-</td>
<td>City of Cambridge</td>
<td></td>
<td>Schedule B</td>
<td>New facility requires acquisition of land and separate EA process</td>
</tr>
<tr>
<td>Forcemain to direct sewage to Preston WWTP</td>
<td>New SPS#1</td>
<td>Existing forcemain on Cherry Blossom Road</td>
<td>TBD</td>
<td>300 mm</td>
<td>Schedule A+</td>
<td>Being looked at as part of a separate process. Ultimate plan is for direction of forcemain to be reversed to convey flows from SPS#1 to SPS#2</td>
</tr>
<tr>
<td>Trunk sewer along Fountain Street</td>
<td>South of Kossuth Road</td>
<td>Middle Block Road</td>
<td>City of Cambridge</td>
<td>900 mm</td>
<td>Schedule A</td>
<td>Oversized for Broader East Side Lands</td>
</tr>
<tr>
<td>Trunk sewer along Middle Block Road</td>
<td>Fountain Street</td>
<td>N-S Collector</td>
<td>City of Cambridge</td>
<td>900 mm</td>
<td>Schedule A</td>
<td>Oversized for Broader East Side Lands</td>
</tr>
<tr>
<td>Trunk sewer</td>
<td>Middle Block</td>
<td>Allendale Road</td>
<td>City of Cambridge</td>
<td>900 mm</td>
<td>Schedule A</td>
<td>Oversized for Broader East</td>
</tr>
<tr>
<td>along N-S collector</td>
<td>Road</td>
<td>Cambridge</td>
<td></td>
<td>Side Lands</td>
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<tr>
<td>Trunk sewer to</td>
<td>Allendale Road</td>
<td>SPS#2</td>
<td>City of</td>
<td>Schedule A</td>
<td></td>
<td></td>
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<tr>
<td>SPS#2</td>
<td></td>
<td></td>
<td>Cambridge</td>
<td>Oversized for Broader East Side Lands</td>
<td></td>
<td></td>
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<tr>
<td>Proposed New</td>
<td></td>
<td></td>
<td>Region of</td>
<td>Schedule B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional SPS#2</td>
<td></td>
<td></td>
<td>Waterloo</td>
<td>EA underway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultimate forcemain</td>
<td>SPS32</td>
<td>Kitchener WWTP</td>
<td>Region of</td>
<td>Schedule B</td>
<td></td>
<td></td>
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<tr>
<td>extension to service</td>
<td></td>
<td></td>
<td>Waterloo</td>
<td>Separate process underway.</td>
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<td>the Broader East Side Lands</td>
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</tbody>
</table>

“Quick Start” projects have been identified with an asterisk (*)
Attachment 8 – “Quick Start” Lands
Attachment 9 – Map of Creekside Lands
Public Information Centre #1: Summary of Key Issues and Responses

The following is a summary of key issues based on the June 14, 2011 Public Information Centre held at the École secondaire Père-René-de-Galinée (450 Maple Grove Road, Cambridge ON). A number of comments and questions from this meeting were received from members of the community. The Project Team’s responses to all written comments received are provided in the following table.

| East Side (Stage 1) Master Environmental Servicing Plan and Community Plan – PIC #1 |
|---|---|
| Comment | Response |
| 1. Concern regarding land use changes in the area. | Land Use Changes – Existing land uses will be able to remain and there will be appropriate setbacks and buffers established to integrate the new employment uses with sensitive land uses. |
| 2. Traffic concerns at Riverbank Drive and Allendale Road. | Traffic – Potential traffic impacts for existing residents is a key indicator of the “Potential Impacts on Existing Area Businesses and Residents” criterion, and this will be evaluated for each option. The options vary in their ability to reduce traffic on the existing road network, and some options include the ability to cul-de-sac Riverbank Drive at the rail track, which could have a positive impact on local traffic. |
| 3. Concerns with level of detail available at Public Information Centre (PIC) #1. | Consultation – PIC #1 was an introductory meeting for the purpose of providing background information, explaining the process and providing an opportunity for community input. |
| 4. Concern from resident on Riverbank Drive about as to traffic, drainage, loss of frontage and adjacent land uses. | Traffic - Potential traffic impacts for existing residents is a key indicator of the “Potential Impacts on Existing Area Businesses and Residents” criterion, and this will be evaluated for each option. The options vary in their ability to reduce traffic on the existing road network, and some options include the ability to cul-de-sac Riverbank Drive at the rail track, which could have a positive impact on local traffic. Drainage - As part of the Master Environmental Servicing Plan and Community Plan, a Subwatershed Study and Master Drainage Plan is being completed for the Freeport Creek and Tributary to the Grand subwatersheds. These studies will provide recommendations for how drainage should be managed. Loss of Frontage – Widening of Riverbank Drive is not anticipated. Land Use – The Study area for the Master Environmental Servicing Plan and Community Plan is the Stage 1 lands which are approximately 855 gross hectares. Of those lands, approximately 477 gross hectares have been designated in the Regional Official Plan as Prime Industrial/Strategic Reserve to accommodate future serviced large lot industrial development. Specific uses would be determined as part of future City planning processes. |
| 5. Interested in information on impacts to wells, water levels, water quantities and hydrological flow. | Impacts to Wells, Water Levels, Water Quantities and Hydrological Flow - The Subwatershed Study and Master Drainage Plan will consider impacts to wells, water levels, water quality and hydrological flow. The evaluation of options will also consider a number of natural... |
East Side (Stage 1) Master Environmental Servicing Plan and Community Plan – PIC #1

<table>
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<tr>
<td>environmental criteria including potential impacts to surface water and aquatic environment, groundwater resources and wetlands. Future development applications will also consider these potential impacts.</td>
<td>Consultation – A comprehensive consultation program has been designed for the Master Environmental Servicing Plan and Community Plan project to provide opportunities for landowners in the study area and any other interested parties to participate in the public consultation process. People who are not landowners can contact designated staff to have their name included on a mailing list for this project. Notices will be provided in local newspapers prior to all Public Information Centres. Project information is posted on the Region’s website at <a href="http://www.regionofwaterloo.ca/eastside">www.regionofwaterloo.ca/eastside</a></td>
</tr>
<tr>
<td>Concern with level of consultation with residents to date. Concern about whether the heritage value of landscape identified in the Cambridge Heritage Master Plan has been considered. Concerns with land use and need for large lot industrial. Concerns with property values, traffic and potential expropriation.</td>
<td>Cultural Heritage – The City of Cambridge Heritage Master Plan identifies Riverbank Drive as a scenic heritage road. Impact on built heritage and archaeology is a criterion for the evaluation of options.</td>
</tr>
<tr>
<td>The Study area for the Master Environmental Servicing Plan and Community Plan is the Stage 1 lands which are approximately 855 gross hectares. Of those lands, approximately 477 gross hectares have been designated in the Regional Official Plan as Prime Industrial/Strategic Reserve to accommodate future serviced large lot industrial development.</td>
<td>Land Use - The Study area for the Master Environmental Servicing Plan and Community Plan is the Stage 1 lands which are approximately 855 gross hectares. Of those lands, approximately 477 gross hectares have been designated in the Regional Official Plan as Prime Industrial/Strategic Reserve to accommodate future serviced large lot industrial development.</td>
</tr>
<tr>
<td>The need for large lot employment lands was first identified as background work to the Regional Growth Management Strategy (2003) and reconfirmed in the Regional 2006 Business Park and Vacant Land Inventory. The need is still relevant today.</td>
<td>Land Need – The need for large lot employment lands was first identified as background work to the Regional Growth Management Strategy (2003) and reconfirmed in the Regional 2006 Business Park and Vacant Land Inventory. The need is still relevant today.</td>
</tr>
<tr>
<td>Traffic – Traffic for existing residents is a key indicator of the “Potential Impacts on Existing Area Businesses and Residents” criterion, and this will be documented in the advantages and disadvantages of each option. The options vary in their ability to reduce traffic on the existing road network.</td>
<td>Traffic – Traffic for existing residents is a key indicator of the “Potential Impacts on Existing Area Businesses and Residents” criterion, and this will be documented in the advantages and disadvantages of each option. The options vary in their ability to reduce traffic on the existing road network.</td>
</tr>
<tr>
<td>Residential Servicing – Existing land uses will be able to remain and there will be appropriate setbacks and buffers established to integrate the new employment uses. The servicing of existing homes on Riverbank Drive is not a primary objective of the study. To date the objective of minimizing impacts to these residences has been a key issue.</td>
<td>Residential Servicing – Existing land uses will be able to remain and there will be appropriate setbacks and buffers established to integrate the new employment uses. The servicing of existing homes on Riverbank Drive is not a primary objective of the study. To date the objective of minimizing impacts to these residences has been a key issue.</td>
</tr>
<tr>
<td>We are also commencing a Sanitary Sewer Master Plan Study for the entire city. Part of this study is to review the needs and by-laws addressing existing homes and septic tanks. Currently, if services are available, residences must connect.</td>
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</tr>
<tr>
<td>Based on the outcome of the public processes for both of these studies there may be requirements to connect. However, at this time, the MESP is considering options that likely won't impose this immediate requirement. Once trunk sanitary sewers are in the industrial</td>
<td>Based on the outcome of the public processes for both of these studies there may be requirements to connect. However, at this time, the MESP is considering options that likely won't impose this immediate requirement. Once trunk sanitary sewers are in the industrial</td>
</tr>
</tbody>
</table>
## Comment

area, the City would be better positioned to provide services to the residential area in the future as needed or requested. Ultimately, at some point in the future it is expected that services will be provided. Based on current objectives of the studies this is not expected in the 10 year future, and may be many years beyond that.

## Response

**Components of the MESP** – The MESP will be developed to identify how to effectively and efficiently service the Prime Industrial/Strategic Reserve lands in an environmentally sustainable manner. The MESP process includes the development of a Transportation Master Plan, Water/Wastewater Master Plan and Subwatershed Plan and Master Drainage Plan.

**Land Use** – These lands are designated for employment uses in the Regional Official Plan to accommodate future serviced large lot industrial development. The City of Cambridge Official Plan provides further direction on land use types and will need to be updated following the completion of this Master Environmental Servicing Plan.

**Community Plan** – The Community Plan will synthesize the findings of the subwatershed, traffic and transportation and servicing studies to provide a comprehensive plan for the use of land in the Stage 1 study area. It will be completed in sufficient detail to guide and direct the preparation of development applications for the community.

**Impacts to Existing Land Use** - Impacts to existing land use is a key consideration in the evaluation of options as part of the “Potential impacts on existing area businesses and residents” criteria. Alternatives that limit the potential negative impacts on existing area businesses and residential areas are preferred and alternatives that promote positive impacts are preferred. The Community Plan will provide recommendations for land use compatibility.

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8. Questions around the components of the study and whether type of industrial land use, transportation road access, evaluation of stormwater and drainage and impacts to surrounding land uses will be considered.
Public Information Centre #2: Summary of Key Issues and Responses

The following is a summary of key issues based on the June 26, 2012 Public Information Centre held at the École secondaire Père-René-de-Galinée (450 Maple Grove Road, Cambridge ON). A number of comments and questions from this meeting were received from members of the community. The Project Team’s responses to all written comments received and questions posed at the PIC are provided in the following table.

<table>
<thead>
<tr>
<th>East Side (Stage 1) Master Environmental Servicing Plan and Community Plan – PIC #2</th>
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<tbody>
<tr>
<td><strong>Comment</strong></td>
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<td>---------------------------------</td>
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<tr>
<td><strong>PUBLIC INFORMATION CENTRE (PIC) AND PRESENTATION FORMAT</strong></td>
</tr>
<tr>
<td>Landowner meeting prior to PIC was successful</td>
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<tr>
<td>Very informative presentation that was polite to all concerns</td>
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<tr>
<td><strong>LAND USE DESIGNATION</strong></td>
</tr>
<tr>
<td>Concern with land use and believes prime agricultural use should be maintained and not developed</td>
</tr>
<tr>
<td>Clarification of the land included in the PISR designation</td>
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### East Side (Stage 1) Master Environmental Servicing Plan and Community Plan – PIC #2

<table>
<thead>
<tr>
<th>Comment</th>
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<tbody>
<tr>
<td>Concern with the need for large lot industrial land due to current industry trends</td>
<td>The need for large lot employment lands was first identified as background work to the Regional Growth Management Strategy (2003) and reconfirmed in the Regional 2006 Business Park and Vacant Land Inventory Study and subsequent updates. The Region of Waterloo must ensure there is a supply of strategically located, large lot employment lands to meet the needs of future industrial growth.</td>
</tr>
<tr>
<td>Suggestion to incent existing vacant industrial lots in Cambridge versus servicing more land</td>
<td>The City of Cambridge supports the development of vacant industrial lands within the City. In addition to these efforts, the need for additional large lot employment land was identified as background work to the Regional Growth Management Strategy (2003) and reconfirmed in the Regional 2006 Business Park and Vacant Land Inventory Study and subsequent updates. There is a long term plan to ensure the Region of Waterloo has large strategically located employment lands to accommodate future growth. The purpose of the MESP and Community Plan is to provide a framework for the creation of such new lots and does not preclude future programs that can be implemented to promote other Cambridge industrial lands.</td>
</tr>
<tr>
<td>Question as to the size of the lots and consideration for need for smaller lots</td>
<td>Based on the Region’s Business Park and Vacant Land Inventory there is an identified land need of 300 net hectares (741 net acres) for large lot employment purposes. While the intent of the Regional Official Plan policy is to maximize larger parcels, there is recognition that some lots may be less than 8 hectares (approximately 20 acres) where compromised by environmental features, property configurations, provision of new roads or existing development.</td>
</tr>
<tr>
<td>Question as to how the development would occur since the land is privately owned</td>
<td>For PISR land that is privately owned, it would be up to the current and future land owners to develop the land. The Region and the City will support the development of the PISR lands by putting in place the planning framework and developing a plan for the municipal services required.</td>
</tr>
</tbody>
</table>

### NATURAL ENVIRONMENT

Concerns around some lands identified on the Development Constraints Map.

A key component of the MESP project is the undertaking of a Subwatershed Study and Master Drainage Plan for the Stage 1 lands. This task involves the mapping, evaluation, and characterization of the network of natural environmental features and their ecological functions. This is essential in order to assess the environmental impacts of the servicing options for the Stage 1 lands. A fundamental principle of the infrastructure options is that options should avoid impacts on the network of natural features, and where unavoidable, impacts should be minimized and mitigated. The Potential Development Areas map presented at PIC #2 was in draft form and all features are still under review and subject to change as the Subwatershed Study and Master Drainage Plan are still being developed. PIC #3 will present the final draft Potential Development Areas map for this project.

Concerns around and support for the priority given to the preservation of natural features as well as specific concerns for the significance of crossing Freeport Creek.

The Provincial Policy Statement gives strong direction for the protection of significant natural environmental features and the linkages among them. Policies in municipal Official Plans and planning decisions must be consistent with these directions. This project must be consistent with Provincial policy as well as satisfying the requirements of the
<table>
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<tr>
<td>Municipal Class Environmental Assessment (EA) process, as outlined by the Municipal Engineers Association. The review of options against natural environmental criteria is a key component to the evaluation of options and decision making process, as outlined by the Municipal Class EA document. The evaluation of servicing options for the Stage 1 lands considered the evaluation results under six criteria groups: development and sustainability; cost; land use; socio-economic and cultural environment; natural environment; and transportation network.</td>
<td></td>
</tr>
<tr>
<td>Clarification of hatched area and process to delineate these on the Potential Development Areas Map</td>
<td>The area delineated with a hatched line on the Potential Development Areas map is regulated by the GRCA pursuant to Ontario Regulation 150/06. This area is currently under review and PIC #3 will present a revised Regulation limit and Potential Development Areas Map. Analysis to determine opportunities for development within the GRCA regulated areas would be conducted on a site specific basis at the development approvals stage in accordance with GRCA policies. Applicable Provincial and Municipal policies would also need to be considered. More information on the GRCA Regulation and Policies can be obtained at <a href="http://www.grandriver.ca">www.grandriver.ca</a> in the Planning and Regulations Section.</td>
</tr>
<tr>
<td>Flooding and drainage issues from Regional Stormwater Management pond</td>
<td>The City of Cambridge has recently completed maintenance work on the central Stormwater Management Pond. Further discussion with the City of Cambridge Transportation and Public Works Department is encouraged.</td>
</tr>
<tr>
<td>Tile under driveway of 4455 Fountain Street N</td>
<td>This is an existing localized drainage issue. For drainage issues on Fountain Street, the Region’s maintenance department should be consulted.</td>
</tr>
<tr>
<td>Concern with floodline delineation</td>
<td>Floodplain mapping is currently being completed and will be presented at PIC #3.</td>
</tr>
<tr>
<td>INFRASTRUCTURE</td>
<td></td>
</tr>
<tr>
<td>Timely servicing of the Creekside Lands and alternative to service through SPS-2 if the Regional Pump Station takes too long to develop</td>
<td>The purpose of the MESP is primarily to service the PISR lands and to consider the ability for other lands to be serviced. The Creekside lands (see PIC panel for location) are considered to be other lands that would benefit from the servicing for the PISR lands, and have been considered in the evaluation of each option. As evident in the evaluation, the benefits of servicing the Creekside lands include increasing total serviceable land and efficiency of servicing. Staging of the Creekside lands will be considered during development of a detailed staging plan for the preferred option.</td>
</tr>
<tr>
<td>Concern with long timeline for infrastructure development, staging of infrastructure (what lands will be first) and need for additional requirements prior to development</td>
<td>The purpose of the MESP is primarily to service the PISR lands and to consider the ability for other lands to be serviced. One of the fundamental principles of the infrastructure options was that options should provide optimal flexibility for the staging of the lands to allow some lands to be developed before others. Staging will take into consideration costs and timing to provide services with the ultimate servicing strategy servicing the entire PISR lands. The staging plan will be developed for the preferred option and presented at PIC #3. There is a strong interest to provide a servicing solution that allows some lands to develop before major infrastructure construction is needed. This was presented at PIC #2 and will be refined for PIC #3. Methods to expedite the development approvals process are being considered as part of the implementation</td>
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### East Side (Stage 1) Master Environmental Servicing Plan and Community Plan – PIC #2

<table>
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<tr>
<td>plan for the Stage 1 lands. As this is a large area of land with significant servicing requirements, a number of activities will need to be implemented after the MESP and Community Plan before development. The implementation plan will outline these activities and a suggested approach.</td>
<td></td>
</tr>
<tr>
<td>No requirement for grade separation at CPR tracks</td>
<td>CPR is a stakeholder and discussions with CPR will be needed as the project proceeds. The study team is considering options with and without a grade separation.</td>
</tr>
<tr>
<td>Inclusion of future LRT plans in MESP documents</td>
<td>The Region of Waterloo Rapid Transit project is an important transit project in the Region. The MESP will consider the future Rapid Transit plans along with all other transportation and transit plans as part of the background information and review of options.</td>
</tr>
<tr>
<td>Support for traffic lights at Middle Block Road and Fountain Street</td>
<td>The transportation component of the MESP considers the need for new roads as well as existing road improvements in order to improve traffic and the efficient movement of people and goods within the Stage 1 lands. In the future, detailed turning movement forecasts and traffic control will be decided. At this time, there is nothing to preclude the installation of signals at Middle Block Road and Fountain Street when, or if, they become warranted according to Regional policy.</td>
</tr>
<tr>
<td>Consider rail spurs to provide goods movement option</td>
<td>For sites adjacent to the existing rail line, planning for rail spurs would be conducted at the site plan stage.</td>
</tr>
<tr>
<td>Concern around location of pump stations</td>
<td>The general location of the Regional Pump Station was identified in the Region of Waterloo Wastewater Master Plan. The specific location for the pump station and forcemain will not be determined through this process. There will be a separate Environmental Assessment conducted by the Region of Waterloo with the associated legislative requirements for notification and public input. It is expected that the EA process would start in early 2013.</td>
</tr>
<tr>
<td>Clarification is needed on which side of the road the sewer will be on and where sewage is pumped to in short and long term basis</td>
<td>Sewers will be located within the road right-of-way and location will be decided on a case-by-case basis. The sewage from the East Side Stage 1 lands will be collected and treated at either the Kitchener or Preston Wastewater Treatment Plants.</td>
</tr>
<tr>
<td>Question as to whether there may be a new Highway 401 interchange due to large amounts of truck traffic</td>
<td>Highway 401 is under Provincial jurisdiction. The province has completed a review of the interchanges and because of the inability to meet highway design criteria have decided to not pursue any new accesses or interchanges in this area at this time.</td>
</tr>
<tr>
<td>Question as to whether the residents on Riverbank Drive might be able to connect to the proposed sewer if it went behind their property</td>
<td>The MESP considers the location of trunk sewers, and has shown a trunk sewer alignment option behind the Riverbank Drive residential properties on some of the options. This sewer is a trunk sewer, and typically residents would not connect to a trunk sewer. The City of Cambridge would evaluate this on a case by case basis and consider this as an option if this was deemed to be desirable. The scope of this MESP has not considered servicing the residential properties on Riverbank Drive.</td>
</tr>
<tr>
<td>Question as to the timing for the Broader East Side Lands</td>
<td>Based on the approved (but currently under appeal) Regional Official Plan, the Broader East Side Lands are considered to be beyond the 2031 planning time horizon. There has not been a specific time horizon established as land use planning is typically done on a 20 year time horizon. The Region will consider land needs as part of their five year review of the Regional Official Plan.</td>
</tr>
<tr>
<td>Question as to whether access to the Creekside lands was ever considered from Riverbank Drive</td>
<td>The project team has not specifically considered an access for the Creekside lands from Riverbank Drive. It is a fundamental principle of the infrastructure options that Riverbank Drive is a local road and it is not desirable to increase the volume of traffic utilizing this road, therefore no</td>
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### East Side (Stage 1) Master Environmental Servicing Plan and Community Plan – PIC #2

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<tr>
<td>major servicing was considered on Riverbank Drive, only minor local improvements. The value of Riverbank Drive as a scenic heritage road was identified in the Cambridge Heritage Master Plan and has been recognized throughout this project.</td>
<td></td>
</tr>
<tr>
<td>Question as to the status of the Creekside lands development</td>
<td>An Official Plan Amendment has been submitted for the Creekside (Stage 1) lands and is in the review process.</td>
</tr>
<tr>
<td>Question as to the timing of zoning</td>
<td>The Community Plan will consider the general land uses of the Stage 1 lands. After the completion of the MESP and Community Plan, the City of Cambridge will need to amend its Official Plan and Zoning By-law for this area.</td>
</tr>
<tr>
<td>Question as to whether the City or Region would need a municipal-owned right-of-way for any services</td>
<td>The City of Cambridge would have a city-owned easement for maintenance purposes where needed.</td>
</tr>
<tr>
<td>Question as to whether the servicing from the Toyota plant will assist the servicing for the Stage 1 Lands</td>
<td>The sanitary and water investments from the Toyota plant will assist in allowing the servicing of the Stage 1 lands to move forward.</td>
</tr>
<tr>
<td>Question as to the cost implications of each option</td>
<td>The cost implications will be included for each option on the PIC #3 panels and included in the MESP document</td>
</tr>
</tbody>
</table>

### SPECIFIC IMPACTS ON PRIVATE RESIDENTS AND INDUSTRY

| Clarification of the plans for expropriation of private lands | Where a development application is submitted for a property abutting a public road and widening may be needed now or in the future, in part to accommodate the increased traffic generated from the development application, the City may require a road widening as a condition of approval for the development, subject to the maximum Right-of-Way limits established in the Official Plan. In a proposed plan of subdivision, the local road would be constructed by the developer and then eventually transferred to the City of Cambridge as part of the development approvals process. If a new road was proposed through an undeveloped area, the market value of the land would be established through a property appraisal and then negotiating the purchase of the land from the property owner. In the event an agreement on price cannot be reached and there is an established need for the property the provisions of the Expropriations Act are followed. The same process is followed where there is an established need to widen a public road and there is no development application made for a property abutting the road. |
| Some support and some concern with the option to cul-de-sac Riverbank Drive | One of the fundamental principles of the infrastructure options was that Riverbank Drive is a local road and it is not desirable to increase the volume of traffic utilizing this road, therefore no major servicing will be considered on Riverbank Drive, only minor local improvements. The value of Riverbank Drive as a scenic road was identified in the Cambridge Heritage Master Plan and has been recognized throughout this project. A number of the evaluation criteria consider the potential for impact to both the cultural value of and the residents along Riverbank Drive. As part |
### East Side (Stage 1) Master Environmental Servicing Plan and Community Plan – PIC #2

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<tr>
<td>of this MESP, there will be no decisions made with respect to a cul-de-sac of Riverbank Drive. The option to be able to cul-de-sac Riverbank Drive due to providing an alternative transportation access to King Street provides potential to mitigate traffic concerns on Riverbank Drive. Even without developing a cul-de-sac on Riverbank Drive, alternative access to King Street will assist in mitigating traffic concerns on Riverbank Drive. The decision to cul-de-sac Riverbank would involve a future public process undertaken by the City of Cambridge.</td>
<td></td>
</tr>
<tr>
<td>Effect of industry on existing residents</td>
<td>Impacts to existing land uses are a key consideration in the evaluation of options as part of the “Potential impacts on existing area businesses and residents” criterion. Within that criterion, alternatives that limit the potential negative impacts on existing area businesses and residential areas are preferred and alternatives that promote positive impacts are preferred. The Community Plan will provide recommendations for land use compatibility.</td>
</tr>
<tr>
<td>Impact on private residential wells</td>
<td>A hydrogeological review is a component of the Subwatershed Study and Master Drainage Plan. Site specific development applications will also consider the localized impacts on wells.</td>
</tr>
<tr>
<td>Impacts to property values</td>
<td>Impacts to existing land uses is a key consideration in the evaluation of options as part of the “Potential impacts to existing residents” and “Potential impacts to area businesses” criteria. Within that criterion, alternatives that limit the potential negative impacts on existing area businesses and residential areas are preferred and alternatives that promote positive impacts are preferred. The Community Plan will provide recommendations for land use compatibility.</td>
</tr>
<tr>
<td>Ensure inclusion of Hunt Club and Arriscraft lands within the MESP and area specific development charge</td>
<td>The purpose of the MESP is to primarily service the PISR lands and optimize the ability for other lands to be serviced. The plans for the Hunt Club and Arriscraft lands have been considered as part of the infrastructure analysis.</td>
</tr>
</tbody>
</table>

### FEEDBACK ON SPECIFIC OPTIONS RECEIVED FROM PUBLIC

- **Option 1:** No access to Creekside lands, impacts to residents on Riverbank due to location of sewers, doesn’t resolve traffic issues, not efficient transportation network, less damaging and most advantageous

- **Option 2:** impacts to residents on Riverbank due to location of sewers, not efficient transportation network, less damaging and most advantageous

- **Option 3a:** preferred transportation and servicing network, provides maximum access, sewers can be located in road ROWs, alternative for traffic and Riverbank. Not concerned about crossing Freeport Creek. Development and new investment can occur in short-term, phasing makes sense, efficient use of existing infrastructure, greater efficiency for access and servicing

Varying perspectives were provided on each of the options. This feedback has been considered as part of the evaluation process, and the evaluation results have been revised where appropriate. The preferred option will be presented at PIC #3 for public review and comment.
<table>
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<tbody>
<tr>
<td><strong>Option 3b:</strong> less efficient transportation route than 3a</td>
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</tr>
<tr>
<td><strong>Option 3c:</strong> does not resolve traffic issues on Riverbank Drive, less efficient transportation route than 3a</td>
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Public Information Centre #3: Summary of Key Issues and Responses

The following is a summary of key issues based on the January 31, 2013 Public Information Centre held at the École secondaire Père-René-de-Galinée (450 Maple Grove Road, Cambridge ON). A number of comments and questions from this meeting were received from members of the community. The Project Team’s responses to all written comments received and questions posed at the PIC are provided in the following table.

| East Side (Stage 1) Master Environmental Servicing Plan and Community Plan – PIC #3 |
|-----------------------------------|-----------------------------------|
| **Comment**                       | **Response**                     |

**PUBLIC INFORMATION CENTRE**

Lack of detailed information provided at PIC #3

PIC #3 presented a summary of the evaluation results and identified the preliminary preferred option. All materials from PIC #3 have been provided on the project website: [http://www.regionofwaterloo.ca/en/aboutTheEnvironment/eastsidearea.asp](http://www.regionofwaterloo.ca/en/aboutTheEnvironment/eastsidearea.asp). The MESP documentation will provide detailed information on process, selection and the preferred option. The MESP documents will be provided for public review and comment.

**LAND USE DESIGNATION**

Limit noise producing businesses in area near homes

The Community Concept Plan has identified transition areas to provide buffers, setbacks and appropriate landscaping to mitigate impacts to existing residents. The City of Cambridge Official Plan Amendment and Zoning By-law Amendment will include policies and standards to deal with separation distances, screening and buffering requirements between sensitive uses and new employment uses for these transition areas and the rest of the Stage 1 Lands.

Private land should be fenced off from new development to not allow access

This is a site development level issue which will be reviewed during the City of Cambridge Official Plan Amendment and Zoning By-law Amendment process.

There is an absence of analysis of the impacts of the development constraints on the original land use planning objectives for the PISR designation (parcels greater than 8 hectares with half being parcels 20-40 hectares in size)

The Regional Official Plan outlines “unless otherwise compromised by design limitations associated with environmental features, property configurations, the provision of new local roads or existing development, the lands will be developed as parcels greater than eight hectares in size.” This policy has been used as a guide in the development of the preferred servicing and community plan concept.

Concern about property values due to proposed industrial land use next to existing residential areas and how the City compensation for loss of property values

It is not possible to predict the future values of property in the study area as there are many factors both locally and over a broader area that affect the price of land. However, there will be significant servicing improvements and increased transportation access which could have a positive impact on property value.
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<tr>
<th>Comment</th>
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<tbody>
<tr>
<td>Land between Banat Road and Hammer's bush should be half acre estate lots</td>
<td>The Regional Official Plan has established the land use as Prime Industrial Strategic Reserve.</td>
</tr>
<tr>
<td>Existing noise issues due to existing industrial facilities</td>
<td>This is a site specific issue relating to existing businesses within and outside of the study area. The City of Cambridge should be contacted directly for any concerns relating to existing land uses.</td>
</tr>
<tr>
<td><strong>NATURAL ENVIRONMENT</strong></td>
<td></td>
</tr>
<tr>
<td>Green roofing requirement for industrial areas</td>
<td>The guiding principles of the Community Plan include developing in a way that protects key environmental resources, promotes a high standard of urban design and promotes energy efficient and environmentally sensitive development. Specific site level design features will be established during the City of Cambridge Official Plan Amendment and Zoning By-law Amendment processes.</td>
</tr>
<tr>
<td>Buffer areas to be naturalized with trees, grasslands, etc</td>
<td>Transition areas have been identified in the Community Plan Concept and are areas where buffers, setbacks and landscaping would be required. Site level design features will be considered during the City of Cambridge Official Plan Amendment and Zoning By-law Amendment processes. Those site level design features would be implemented at the individual plan of subdivision or site plan stage.</td>
</tr>
<tr>
<td>Ensure no well contamination to home wells</td>
<td>A hydrogeological review is a component of the Subwatershed Study and Master Drainage Plan. Potential impacts to groundwater supplies are being assessed and recommendations for protecting these supplies will be identified. Site specific development applications will also consider the localized impacts on wells.</td>
</tr>
<tr>
<td>Build community areas and parks, walking trails, etc</td>
<td>Provision for community areas, parks and walking trails will be confirmed during the City of Cambridge Official Plan Amendment and Zoning By-law Amendment processes.</td>
</tr>
<tr>
<td>Water retention ponds/wetlands closer to buffer areas</td>
<td>The Subwatershed Study and Master Drainage Plan identify the approximate area and location of storm management facilities. The decision on the precise location and number of these facilities will occur as part of future development applications.</td>
</tr>
<tr>
<td>An assessment of the potential impacts of development on the source water resources of the Region should be provided, as should any potential constraints on employment uses that will result from source water protection requirements</td>
<td>The Subwatershed Study and Master Drainage Plan consider the impacts of the development on the source water resources and recommend measures to protect these resources.</td>
</tr>
<tr>
<td>Issues relating to the floodline and culvert at Middle Block Road and Fountain Street</td>
<td>These comments are being reviewed by the GRCA and City of Cambridge and will be responded to separately.</td>
</tr>
<tr>
<td><strong>INFRASTRUCTURE</strong></td>
<td></td>
</tr>
<tr>
<td>Bike lanes should be built on new roadways</td>
<td>The MESP identifies a typical cross section for the proposed roads including bike lanes along the new roads. Finalization of the new road cross section will be confirmed through detailed design and during the Draft Plan and Site Plan processes.</td>
</tr>
</tbody>
</table>
## East Side (Stage 1) Master Environmental Servicing Plan and Community Plan – PIC #3

<table>
<thead>
<tr>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riverbank Road cul-de-sac is not needed as new bridge at Fairway Road has reduced traffic significantly</td>
<td>As part of this MESP, there will be no decisions made with respect to a cul-de-sac of Riverbank Drive. The option to be able to cul-de-sac Riverbank Drive was an evaluation criterion in the review of the options. The decision to cul-de-sac Riverbank Drive, if deemed valid for consideration, would require future public process undertaken by the City of Cambridge.</td>
</tr>
<tr>
<td>Need detailed costs for options</td>
<td>The MESP will outline the comparable costs for each servicing option.</td>
</tr>
<tr>
<td>Servicing strategy appears to be different from that contemplated by the RGMS</td>
<td>Comment noted. Further detail on the servicing strategy will be provided as part of the MESP document.</td>
</tr>
<tr>
<td>Missing assessment of the implications of the proposed servicing scheme on treatment plant capacity and the impacts on the servicing of other lands within the Region</td>
<td>Based upon the City’s identification of the remaining treatment plant capacity, it is anticipated that there will be enough capacity in the Preston treatment plant to accommodate the forecasted growth of the Stage 1 Lands to 2031. As an alternative, there is sufficient servicing capacity in the Kitchener treatment plant to service the Stage 1 Lands. Please refer to the Region of Waterloo 2012 Water and Wastewater Monitoring Report which provides details on the wastewater treatment plant capacity.</td>
</tr>
<tr>
<td>Need to identify the area to be ultimately serviced by the proposed Regional pump station</td>
<td>The MESP will provide a description of the area being serviced by the proposed Regional pump station.</td>
</tr>
<tr>
<td>Creekside lands should be included within the “Quick Start” lands</td>
<td>Comment noted. The Creekside lands are included within the City of Cambridge urban area and can proceed at the same time as the “Quick Start” lands if all of the required planning approvals for the Creekside proposal are in place.</td>
</tr>
</tbody>
</table>

## COMMUNITY PLAN

<table>
<thead>
<tr>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does not confirm or otherwise deal with land use or land use policies related to implementation</td>
<td>The Community Plan serves as the link between the policy directions in the Regional and City Official Plans, the Master Environmental Servicing Plan for the Stage 1 Lands and the subsequent planning, environmental and development approvals required for the lands to be made available for development. The City of Cambridge will need to conduct an Official Plan Amendment and Zoning By-law Amendment to confirm the land use policies and zoning standards relating to the Stage 1 Lands.</td>
</tr>
<tr>
<td>Decisions regarding the Region's urban boundary should be made prior to decisions regarding a detailed community plan and servicing</td>
<td>Servicing studies and subwatershed studies for large land areas assist in informing the viability of future development as well as help to determine appropriate staging options.</td>
</tr>
<tr>
<td>The extent of the actual constrained areas is unclear. The draft Community Plan appears to identify development within the areas regulated by GRCA and it is not clear whether areas identified</td>
<td>The environmental constraints shown include floodplains, Core Environmental Features and Supporting Environmental Features with their recommended buffers and linkages, as well as environmental constraints that are subject to a scoped Environmental Impact Statement (as identified on the PIC #3 panels). These environmental</td>
</tr>
</tbody>
</table>
### East Side (Stage 1) Master Environmental Servicing Plan and Community Plan – PIC #3

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>as &quot;environmental constraints&quot; includes all required buffers</td>
<td>constraints are considered non-developable. For the purposes of the MESP, the lands outside of the identified environmental constraints, but within the GRCA Regulation Limit, were considered developable. Please note that a permit from the GRCA is required prior to undertaking any development, as defined in the Conservation Authorities Act, within the regulated areas.</td>
</tr>
<tr>
<td>Not clear if transition areas have been mapped based on the Province's Land Use Compatibility Guideline</td>
<td>The Community Plan serves as the link between the policy directions in the Regional and City Official Plans, the Master Environmental Servicing Plan for the Stage 1 Lands and the subsequent planning, environmental and development approvals required for the lands to be made available for development. Land use compatibility has been recognized as an important consideration for the Stage 1 Lands. The Community Plan identifies that transition areas, setbacks, buffers, provision for outdoor storage, fencing, design standards and landscaping will be given consideration during implementation to ensure land use compatibility. The City of Cambridge will need to conduct an Official Plan Amendment and Zoning By-law Amendment to confirm the land use policies relating to the transition areas and the Province’s Land Use Compatibility Guidelines.</td>
</tr>
</tbody>
</table>

### FEEDBACK ON PREFERRED OPTION

<p>| In support of option 3A, Intermarket is willing to modify their plans to pay for the road connection to Maple Grove Road, alter the alignment to have no impact on the wetland adjacent to the Regional Operations yard and have minimal impacts on the Regional Operations yard facilities. | Comment noted. The connection to Maple Grove Road is not anticipated to be required for the East Side Lands development. Separate communications with the Region of Waterloo, City of Cambridge and the GRCA will be required to consider this road to satisfy specific development needs. |
| Proposed “Quick Start” servicing plan will help unlock future development opportunities in the short-term in an area that is contiguous to existing employment uses and well connected by the existing road network | Comment noted.                                                                                                                                                                                                 |
| Costs for infrastructure related to East Side Lands, including the &quot;quick Start&quot; will be recovered through Development Charges | Comment noted.                                                                                                                                                                                                 |
| The proposed servicing along Speedsville Road north of Maple Grove Road will unlock future development potential for the east side of the Provincial land | Comment noted.                                                                                                                                                                                                 |</p>
<table>
<thead>
<tr>
<th>Comment</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Support the confirmation that the Preston Wastewater Treatment Plan will have sufficient capacity to accommodate new development activity within the Stage 1 East Side Lands</td>
<td>Comment noted.</td>
</tr>
</tbody>
</table>
REGION OF WATERLOO
PLANNING, HOUSING AND COMMUNITY SERVICES
Transportation Planning

TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: June 18, 2013

FILE CODE: D10-20(A)

SUBJECT: KING & VICTORIA MULTI-MODAL TRANSIT HUB – MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT STUDY COMPLETION

RECOMMENDATION:

THAT the Regional Municipality of Waterloo receive the King & Victoria Multi-Modal Transit Hub – Municipal Class Environmental Assessment Study as described in Report No. P-13-063, dated June 18, 2013;

AND THAT the Commissioner of Planning, Housing and Community Services be authorized to issue the Notice of Study Completion, and to post the King & Victoria Multi-modal Transit Hub – Municipal Class Environmental Assessment: Project File Report for public review and comment for a 30-day period in accordance with the Municipal Class Environmental Assessment Process.

SUMMARY:

The new Region of Waterloo Multi-modal Transit Hub (the Hub) being developed at the intersection of King & Victoria Streets in Downtown Kitchener is envisaged as a high-density, mixed use node that will integrate various transportation services including ION (rapid transit), GO Transit, VIA Rail and Grand River Transit.

Building on the 2009 Metrolinx Georgetown to Kitchener Rail Expansion Environmental Study, the Region commenced the King & Victoria Multi-modal Transit Hub – Environmental Assessment (EA) Study in September 2012. The purpose of this EA is to examine and obtain approvals for the public infrastructure components (e.g. rail platforms, access interfaces, and pathways, and public open space and amenities) of the Hub which have not yet been approved under the Environmental Assessment Act. This Study was conducted in accordance with the requirements of the Municipal Class Schedule ‘B’ process, and the key activities undertaken to date in order to meet the requirements are as follows:

- Reviewed the context of the proposed development;
- Identified the opportunity to integrate various travel modes at the Hub;
- Identified potential environmental impacts and mitigation measures;
- Developed and evaluated alternative concepts of the infrastructure works; and
- Included extensive stakeholder consultation.

Subject to authorization by Regional Council and in accordance with the Class EA requirements, the Notice of Study Completion will be published, and relevant documentation from the planning, consultations and decision-making activities will be made available on the public record for a public review period of at least 30 days. During this review period, an interested party may object to the proposed elements and features of the Preferred Concept through a formal request to the Minister of Environment to grant a Part II Order under the Environmental Assessment Act. If no Part II Order requests are received or approved by the Minister of Environment, the Region is cleared to proceed with the subsequent detailed design, procurement, and construction phases.
This EA Study was carried out under the direction of assigned Regional staff. The Region retained IBI Group to assist with the Study.

REPORT:

The new Region of Waterloo Multi-modal Transit Hub (the Hub) being developed at the intersection of King & Victoria Streets in Downtown Kitchener is envisaged as a high-density, mixed use node that will integrate various transportation services including ION (rapid transit), GO Transit, VIA Rail and Grand River Transit.

The Region commenced the King & Victoria Multi-modal Transit Hub – Environmental Assessment (EA) Study in September 2012 to provide EA reviews and obtain approvals for those public infrastructure components of the proposed Hub development which have not yet been assessed and approved under the Environmental Assessment Act.

Further to the progress status described in Report No. P-12-076, dated August 14, 2012, this report describes the key activities and events carried out to satisfy the requirements of the statutory EA process and recommends that the EA study be formally filed for final public review.

Georgetown to Kitchener Rail Expansion (G2KREX) Environmental Study

In 2009, Metrolinx/GO Transit completed the Georgetown to Kitchener Rail Expansion (G2KREX) Environmental Study in order to examine the feasibility of extending the GO Train commuter rail service beyond Georgetown to Guelph and Waterloo Region by using the existing CN Rail track corridor. The G2KREX Study was conducted as a GO Transit Class Group ‘B’ undertaking.

The study concluded that expanding GO Train commuter service to Waterloo Region was feasible and proposed improvements to the existing track infrastructure in order to enable smooth operations and high levels of rail safety. The Study also concluded that sites at Greenhouse Road in Breslau and Downtown Kitchener were the best future GO station locations in the Waterloo Region.

It was further recommended that a combined GO/VIA station be constructed at the King St & Victoria St intersection where the GO and VIA services could be integrated with the Region’s planned LRT service.

King & Victoria Multi-modal Transit Hub EA: Objectives, Scope and Process

The EA builds on the G2KREX Study with the purpose of mainly providing review and approval for the public infrastructure components of the proposed Multi-modal Transit Hub which have not yet been assessed and approved under the Environmental Assessment Act, and to establish the Region of Waterloo as the proponent of the proposed works.

At a functional design level, this EA basically establishes an “it works” type of evidence for the composition and layout of the public infrastructure elements of the integrated Hub site. Future detailed designs will further refine the how these elements will be integrated, both functionally and structurally.

Based on a review of the EA procedural options, it was determined that the Municipal Class Schedule ‘B’ regime would apply. The subject public infrastructure components were subsequently identified as follows:

- A new GO Train and VIA Rail platform (with retirement of the existing VIA Rail Station near Weber & Victoria intersection);
- Passenger pick-up and drop-off (PPUDO);
- Pedestrian and cycling access and interfaces;
- Platforms and circulation infrastructure for bus services and rapid transit (e.g. operated by the local Grand River Transit (GRT) and inter-city operators);
- Public open spaces and amenities (appropriate accommodations for operations such as ticket sales offices as well as passenger conveniences such as retail shops, food stalls, and washroom are implied); and
- Closure of the Waterloo Street public right-of-way for vehicular traffic (which is a pre-approved EA undertaking, but is being included to provide a comprehensive picture for the public).

Case for an Integrated Multi-modal Hub and Evaluation of Alternatives

Trip Terminals and Patterns
The geographical context and location of the King & Victoria Transit Hub site in Downtown Kitchener is shown in Exhibit 1 (Attachment 1).

The King & Victoria site has the potential to integrate several transportation nodes, corridors and services in the Downtown Kitchener area. Examples of the potential integration include:

- Central Transit Corridor (CTC) and King Street: runs north-south; is the most travelled corridor in the Waterloo Region; and serves as the main corridor for transit services connecting to regional centres at north Waterloo, the University of Waterloo, Wilfrid Laurier University, Uptown Waterloo, Fairview Mall, and Cambridge;
- Victoria Street / Highland Road iXpress corridor;
- King & Victoria intersection: serves a prominent transportation function as the intersection of two major arterials which carry significant volumes of auto, transit and active transportation trips everyday;
- ION Rapid Transit line: is presently under implementation and will connect regional centres in the Cities of Cambridge, Kitchener and Waterloo along the CTC;
- Grand River Transit (GRT) Charles Street Terminal: serves as the central exchange/transfer facility for transit riders using the local GRT service and inter-city buses; and
- GO/VIA Station near Weber & Victoria: serves the GO Train, VIA Rail and GO Bus service and is expected to be relocated to the new Transit Hub facility. In the interim, the existing station and platform continue to be used.

Case for an Integrated Multi-Modal Hub
An integrated Multi-modal hub at the King & Victoria will significantly help cut travel times, promote transit and active modes of transportation, reduce congestion, reduce emissions, and minimize impact on the natural environment. This statement, which is consistent with the recommendations of the Metrolinx 2009 G2KREX Study, serves as the Opportunity Statement of the current King & Victoria Multi-modal Transit Hub EA Study exercise as required by the Phase 1 of the Municipal Class EA Process.

Evaluation of Alternatives
In accordance with requirements of the Municipal Class Schedule ‘B’ EA Process, alternative scenarios for providing integrated transportation services at the Hub site were developed and evaluated through criteria similar to those used in the G2KREX Study. This analysis also assessed the existing state and potential impacts due to proposed works upon the natural environment, socio-economic environment, socio-cultural environment, transportation/traffic network, and utility networks. Special studies were undertaken to analyze the state and impacts on air quality, traffic, noise and cultural heritage. The scenario which offered the best performance across the evaluation accounts was deemed the “Preferred Concept”.

1407256
Mobility-related Infrastructure of the Preferred Concept

At final build-out, the Hub site is expected to feature a set of public mobility-related infrastructure combined with transit-oriented land development. Several functional and structural components are expected to be integrated and shared between the mobility-related infrastructure and the land development. The complexity of the associated engineering and design challenges is compounded by the fact that the exact mix and size of the proposed development use may be delivered in partnership with (and driven by) the private sector, and therefore, will advance at its own pace. Consequently, the EA study focusses on confirming the feasibility of the proposed development concept, rather than establishing a final built form.

In order to advance the planning process, the Region commissioned the Preliminary Site Design and Access Plan (PSDSAP) Study. The PSDSAP Study is separate from the EA process and is meant to provide an “it works” type of evidence of the “building blocks” of the Hub, and establish guiding principles for subsequent detailed design and construction.

Based on recommendations from the PSDSAP Study, the fundamental mobility-related elements and features of the Preferred Concept are as follows:

The “Hub” Vision: Convergence and Integration of Transit
The King & Victoria site was selected because it is a location that can be centrally served by all modes of transit including the new ION RT service, GRT buses, VIA Rail, GO trains and inter-city buses. All transit functions will be located in close proximity to one another so that maximum walking times will generally be under five minutes for all transfer movements. Barrier-free public access between transit modes is also anticipated, as will multiple circulation routes throughout the site. Similarly, there are expected to be multiple ways of moving between floors, stairs, ramps and elevators to cross between floor levels. The site will be developed to accommodate vehicular traffic as well. The Hub Vision is illustrated in Exhibit 2 (Attachment 2).

Pedestrian Flows
Key elements include a main entry plaza; common covered “transit plaza” space; internal circulation routes; stairs, ramps and elevators for vertical circulation; a pedestrian tunnel underneath the tracks along the present Waterloo Street alignment to connect to the north side; and pedestrian-friendly environment along the King Street & Victoria Street frontages.

Vehicular Access and Parking
Vehicular access requirements and constraints depend on the size and nature of the mixed use development and associated parking supply and the commuter parking provided– none of which has been finalized. As a general planning guideline, the goal for this site will be to maximize transit-oriented development potential with commensurate parking supply (i.e. adequate to support development needs and transit use). Through a technical analysis, it was determined that vehicular access requirements for the scale of transit-oriented development being considered can be adequately addressed.

Commuter parking (Park and Ride) at or near the Hub is expected to be especially attractive to commuters whose trips originate from the western parts of Waterloo Region. It is understood that GO Transit is evaluating a Park and Ride facility in the vicinity of the planned GO station near Greenhouse Road in Breslau.

Passenger Pick-up and Drop-off
A prototype integrated site build-out scenario (including land development assumptions) shows that a passenger pick-up and drop-off (PPUDO) facility can be provided at the GO/VIA platform level, thus minimizing transfer times and maximizing passenger convenience. In addition, as with other transit stations, some informal pick-up and drop-off activity will likely occur on adjacent streets.
Reconfiguration of Waterloo Street
The integrated Transit Hub concept assumes that the segment of Waterloo Street between Victoria
Street North and CN Rail tracks will be closed to vehicular traffic. The closure is necessary in order
to accommodate the new GO/VIA train platform. A pedestrian access tunnel will be built to connect
the Hub interior to Breithaupt Street and Waterloo Street which are located to the north of the
tracks.

Closure of a public road/street requires a Schedule ‘A+’ EA which is a pre-approved undertaking.
This process was completed through the issuance of public notices on September 25, 2012 and
October 2, 2012.

Consultations
Key activities undertaken during the Class EA consultations are summarized below:

Notice of Study Commencement
The Notice of Study Commencement of the King & Victoria Multi-modal Transit Hub Municipal
Class ‘B’ Environmental Assessment was published in The Record on September 19 and
September 25, 2012. A dedicated Regional website was created for the EA Study and the Notice
was posted on that website.

Agencies, special interest groups and First Nations were notified of the EA Study by mail dated
October 12, 2012. Property owners within a 300 metre radius from the study area were mailed a
Notice of Study Commencement on September 25, 2012.

Consultations with Agencies, Utilities and Interest Groups
Input was received from the City of Kitchener, Metrolinx/GO Transit, GEXR and VIA Rail
regarding various design aspects of the Preferred Concept. Official comments from them are
included in the Project File Report which serves to provide further clarification on specific site
development issues.

The Rapid Transit (RT) Project has required relocation of utility infrastructure from King Street to
Waterloo Street. RT Project staff is taking the lead to coordinate the optimum placement of utility
infrastructure with the respective infrastructure and rights-of-way owners (e.g. municipalities and
utilities).

Consultations with First Nations Groups, Northern Affairs and Aboriginal Affairs Canada,
and the Ministry of Aboriginal Affairs
Identified First Nations Groups were contacted during project commencement and were informed
about the Public Consultation Centre. Northern Affairs and Aboriginal Affairs and the Ministry of
Aboriginal Affairs were also contacted. No concerns were identified by any of these stakeholders.

Public Consultation Centre
Per requirements of the Class EA process, a Public Consultation Centre (PCC) was held on
November 20, 2012 in order to provide residents and stakeholders with the opportunity to
participate in the EA Study. Notice of the event was advertised in The Record on November 16,
and November 20, 2012 and also by mail to residents within 300 metres of the Hub, to agencies
and to other stakeholders. Information was available at the time of the meeting and online, and
staff members were present to answer questions. Comments were collected via drop-in or mailed
comment forms, email and an online survey until December 4, 2012. A total of 62 individuals
formally signed in at the PCC, and 17 comments were received.
In general, the comments were supportive of the integrated Transit Hub concept. Feedback focussed on having adequate capacity to serve future demands, design excellence, positive user experience, accessibility by all modes, and amenities for pedestrians and cyclists.

**Next Steps**

Subject to approval by Regional Council to post the Notice of Study Completion, the following next steps will be undertaken:

- Publish and advertise the Notice of Study Completion. The earliest opportunity to do so is Thursday, June 27, 2013 which would also commence the 30-day public review period. The Notice is required to include instructions on how a Part II Order can be requested under the [Ontario Environmental Assessment Act](http://www.ontario.ca/en/health-social-services/environment/enforcement/assessment.html).
- Circulate the King & Victoria Multi-modal Transit Hub Environmental Assessment Study – Project File Report to the reviewing agencies for confirmation. A copy of the Project File Report will also be made available on public record through the Region’s website dedicated to this project.
- If no objections are submitted by the review period deadline, the project will be considered to have met the requirements of Municipal Class EA process, and the Region will be cleared to proceed further with detailed design, procurement and construction of the Preferred Concept works. If a Part II Order is filed and approved by the Minister of Environment, the Preferred Concept may need to be revised in order to resolve outstanding concerns and obtain the required approval.
- During the detailed design and construction stages of the Hub’s mobility-related infrastructure, the Region will continue to engage with key stakeholders, including Metrolinx, GEXR, VIA Rail and the City of Kitchener. The timing of site development is to be determined, and other associated studies and approvals (e.g. Market Scoping Risk Management) are still to be completed.

**Area Municipal Consultation/Coordination**

City of Kitchener staff was consulted throughout the EA Study and endorse the Preferred Concept as described in this report.

**CORPORATE STRATEGIC PLAN:**

The completion of the Class Environmental Assessment will contribute towards accomplishing the following Action Items of the [Region of Waterloo Strategic Focus 2011–2014](http://www.regionofwaterloo.ca/strategic-plan):

- 3.4.1 Implement the multi-modal transportation hub at Victoria & King Streets.
- 2.3.2 Continue to identify and support partnership opportunities that foster innovation and economic development (e.g. post secondary institutions, technology, manufacturing, food processing, etc.).
- 2.1.2 Work with area municipalities to develop and implement a comprehensive strategy to promote intensification and reurbanization within existing urban areas.

**FINANCIAL IMPLICATIONS:**

Funding for land acquisitions and project preparation costs for the King & Victoria Multi-modal Transit Hub was provided under the approved budget for property acquisitions and other project development expenditures for the RT Project. Funding for the King & Victoria Multi-modal Transit Hub Environmental Assessment (EA) is included in the approved budget for the Multi-modal Transit Hub design to be funded from the RTMP Reserve Fund.
OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

The Rapid Transit Office (Transportation and Environmental Services), Facilities Management and Legal Services (Corporate Resources) and Procurement of Finance (Finance) were involved in the preparation of this report.

ATTACHMENTS:

Attachment 1 - King & Victoria Multi-modal Transit Hub Location and Geographical Context
Attachment 2 - Proposed (Conceptual) Convergence and Integration of Transit

PREPARED BY:  Shiva Tiwari, Transportation Planning Engineer

APPROVED BY:  Rob Horne, Commissioner of Planning, Housing and Community Services
ATTACHMENT 1

Exhibit 1: King & Victoria Multi-modal Transit Hub Location and Geographical Context
ATTACHMENT 2

Exhibit 2: Proposed (conceptual) Convergence and Integration of Transit
RECOMMENDATION:

THAT The Regional Municipality of Waterloo approve the 2013 Implementation Plan, as described in Report No. P-13-070, dated June 18, 2013, regarding the Transit Supportive Strategy to enhance transit ridership in the City of Cambridge.

SUMMARY:

As part of its multi-phased plan to implement rapid transit in Waterloo Region, Regional Council approved the allocation of $1,000,000 annually for a 10-year period to implement transit-supportive strategies to enhance transit ridership and encourage transit-supportive development in the Central Transit Corridor in Cambridge (see Report E-11-072). The Transit Supportive Strategy is a series of initiatives that are identified and undertaken by either the Region or the City of Cambridge during the ten-year term of the Strategy. Regional and City staffs prepare a proposed implementation plan to be considered by Regional Council, including budgetary estimates for each of the proposed initiatives.

The proposed 2013 Implementation Plan includes initiatives carried over from the 2012 Implementation Plan, such as improvements to the Ainslie Street Terminal, the installation of 30 transit shelters (10 shelters per year for three years), and the funding of a Transportation Demand Management (TDM) professional to help implement the strategy in the City of Cambridge. In addition to continuing these initiatives, three additional actions have been identified for planning and funding in 2013. These actions include:

- Installing sidewalks in the Lovell Industrial Park to connect transit stops to major employers;
- Establishing expanded Grand River Transit service connecting the Hespeler area of Cambridge to the Sports World and Cambridge Centre aBRT stations, and beginning to serve the “East Side” lands;
- Providing an additional 15 percent discount on transit passes for Conestoga College students to build Grand River Transit ridership.

This strategy has been collaboratively developed by staff of the City of Cambridge and the Region of Waterloo. Future initiatives have been discussed that include specific policy measures to increase transit-oriented development within key intensification areas, such as the Hespeler Road corridor. Regional and City staff will continue to develop the Strategy and recommend specific initiatives annually.

REPORT:
On June 15, 2011 Regional Council approved Light Rail Transit (LRT) as the preferred technology for the Region of Waterloo’s Rapid Transit system connecting Waterloo, Kitchener and Cambridge (see Report No. E-11-072). The Region’s ultimate goal is to implement a full LRT system along the Central Transit Corridor, but a staged implementation was endorsed by Regional Council to reflect differences in transit ridership, development potential, and capital and operating costs along the route and their impact on the tax base. The first stage is the implementation of LRT north of Fairview Park Mall in Kitchener and adapted Bus Rapid Transit (aBRT) south of Fairview Park Mall to the Ainslie Street Terminal in downtown Cambridge (Galt). The second stage is the completion of the LRT system from Fairview Park Mall to the Ainslie Street Terminal.

As part of its multi-phased plan to implement rapid transit in Waterloo Region, Regional Council approved the allocation of $1,000,000 annually for a 10-year period to implement transit-supportive strategies to enhance transit ridership and encourage transit-supportive development in the Central Transit Corridor in Cambridge (see Report E-11-072). In response to this direction, City of Cambridge and Region of Waterloo staff collectively developed the 2012 Implementation Plan that was presented to the Planning and Works committee on February 28, 2012, and subsequently approved by Regional Council (see Report P-12-023/E-12-028).

2013 Implementation Plan – Carryover Initiatives

On February 28, 2012, the 2012 Implementation Plan was presented to the Planning and Works Committee for consideration and subsequently approved by Regional Council (see Report P-12-023/E-12-028). The report initiated five actions for Year 1 of the Transit Supportive Strategy. The progress of each initiative is summarized below.

City of Cambridge Core Areas Parking Master Plan

The Core Areas Parking Master Plan (Master Plan) was identified as a short-term transit supportive initiative in 2012 and Regional Council approved $760,000 to provide the major capital installations associated with the Master Plan.

In March 2009, City of Cambridge Council approved the Master Plan (see Cambridge Report TPW-17/09). A key objective of the Master Plan was to assess existing and future parking needs and to develop a forward-looking and sustainable parking framework. The Master Plan was developed through extensive consultation with various stakeholders and technical agencies. Further, the process involved close collaboration between the City of Cambridge and the Region of Waterloo, which resulted in a Master Plan that addressed several joint interests.

On September 24, 2012, City of Cambridge Council directed staff to proceed with the Master Plan’s Communication Plan as approved in March 2009. Throughout the Communication Plan process, the public expressed overwhelming opposition to the implementation of the Master Plan. Residents were concerned by the time lapse between the approval and implementation of the Master Plan and the persistent economic challenges faced by the City during that time. Local businesses and residents suggested several changes to the approved plan, especially related to on-street parking and transit service.

On November 12, 2012, the City of Cambridge cancelled the implementation of the Master Plan and directed staff to work with the Region of Waterloo to identify other appropriate initiatives for Transit Supportive Strategy funding.

Funding to expand the TravelWise Transportation Management Association and associated Transportation Demand Management (TDM) services to the L.G. Lovell Industrial Park

Identifying the reasons why people do (or do not) ride transit in a particular area is an important first step in designing a successful Transportation Demand Management (TDM) program. To start the
conversation at the Lovell Industrial Park, the Region conducted an in-depth survey at a sample group of businesses to specifically ask employees why they do or do not ride transit. A total of 441 responses were received from an estimated employee sample of 3,730; a 12 percent response rate. The margin of error for this survey is +/-4 percent. The key findings of the survey as they relate to the Transit Supportive Strategy are listed below.

- Respondents specifically requested more sidewalks in the Lovell Industrial Park.
- Six percent of respondents take transit to work, while 80 percent drive alone and 10 percent carpool.
- Current transit riders are satisfied with GRT service.
- Several managers are receptive to providing TDM programing at their worksite as stated by survey respondents.
- The programs that are most likely to increase sustainable transportation rates include, but are not limited to: reduced cost transit passes; personalized transit information; and assistance finding a carpool partner. These programs are provided by the Region at participating TravelWise employers in other areas.

While the development of the program is ongoing, some examples of proposed transit-supportive initiatives directly tied to the survey include:

- The expansion of the TravelWise TMA (TravelWise@Work) to the Lovell Industrial Park to provide reduced-fare corporate transit passes, personalized transit information, and assistance finding a carpool partner; and
- Pedestrian improvements such as sidewalks and bus shelters to make transit a more comfortable and attractive option.

Focus groups are planned with employees from the Lovell Industrial Park to explore potential future initiatives that could be used to address barriers to transit use. The focus groups will be held with users of sustainable transportation as well as employees who currently drive alone to work. Results of the TDM initiatives will be monitored and analysed for their applicability to other areas within the Region, especially along the Central Transit Corridor.

Funding for Strategic Pedestrian and Transit Infrastructure Investments in the City of Cambridge

i. The Ainslie Street Terminal Pedestrian Environment

Constructed in the 1990s, the Ainslie Street Terminal is one of GRT’s busiest stations in Cambridge with approximately 4,000 passenger boardings per day. There are many existing challenges at the terminal including its large paved surface. Also, most of the waiting areas do not have transit shelters. Given its importance to Grand River Transit, as well as to the future rapid transit system, this project is intended to identify and design improvements to better integrate it with downtown Cambridge. Improvements could include on-site wayfinding signage, more transit shelters, benches, landscaping, public art and bicycle parking, as well as better pedestrian and cyclist connections to the surrounding street network.

The Terms of Reference seeks a qualified consulting team to help identify strategic improvements for the Ainslie Street Terminal with the ultimate goal of increasing transit ridership and creating a more comfortable place for people. A key objective of this study is to identify changes that will improve the integration of transit in downtown Cambridge and connections between GRT and aBRT, and ultimately LRT.

ii. Transit Shelters for the City of Cambridge
Grand River Transit has seen substantial increases in service levels and ridership since it assumed the operations of the regional transit system in 2000; however, in some locations there are still too few riders to warrant transit shelters. As part of the Transit Supportive Strategy, Council approved the installation of 30 additional shelters along various routes in Cambridge to respond to resident requests and to support ridership in the Central Transit Corridor. It was recommended that the implementation these shelters be phased in over a three year period, with 10 shelters constructed per year at a cost of $130,000 in 2012, $133,000 in 2013 and $136,000 in year 2014.

In spring 2012, the decision was made to delay installation of the Transit Supportive Strategy bus shelter pads until 2013 because the price quotes received for the new pads were considerably higher than quotes received in previous years. By waiting to include both the 2012 and 2013 pads in Design and Construction’s 2013 contract tender, GRT will be able to secure a much better price than was available in 2012.

Twenty shelters are scheduled for installation in 2013, including 6 shelters in the Lovell Industrial Park and the Cambridge Business Park.

**Funding for a Transportation Demand Management Coordinator/Station Area Planner in the City of Cambridge**

The proposed funding will pay for a dedicated staff person at the City of Cambridge to help implement the Transit Supportive Strategy. The 2012 Implementation Plan included the pro-rated cost of hiring a TDM professional to work with City and Regional staff to further develop, implement, monitor and report on the Transit Supportive Strategy, and to support station area planning at the City of Cambridge. The preliminary 2013 budget assumed that the costs of the new TDM planner position would be supplemented by revenues generated by the Core Areas Parking Master Plan, which is no longer being pursued by the City of Cambridge. Therefore, staff recommends reallocating funds from year 1 to pay for a 3-year TDM coordinator contract for the City. The total three year cost of this position is $270,000 including wages and benefits.

**Proposed 2013 Implementation Plan**

In Report P-12-023/E-12-028, Regional Council authorized unspent funds from the Transit Supportive Strategy to be carried over in a capital fund for future initiatives identified and recommended by the City of Cambridge and the Region of Waterloo. A two-step evaluation process was developed in 2012 to assist with the consideration of potential initiatives. This evaluation process continues to guide the selection of appropriate initiatives for the Strategy. To increase transit ridership in target market segments, the Transit Supportive Strategy also allows for transit related improvements to be funded for up to three years when no other, more appropriate, budget source exists. The proposed 2013 Implementation Plan recommends the continuation of the 2012 initiatives and identifies three additional transit and active transportation related projects that require planning and/or funding starting in 2013. These projects include the following.

**Sidewalk Installation**

The road corridors in the Lovell Industrial Park are designed to accommodate large volumes of truck traffic. Sidewalks have not been a high priority because of the expense of serving large employment blocks, which are typically low generators of pedestrian activity. However, when asked in a recent survey, employees at every major employer in the Lovell Industrial Park consistently rated sidewalks as the highest priority infrastructure for the area. Survey respondents also identified sidewalks as being important for transit ridership and for improving their sense of safety in the industrial park.

Using GRT ridership data, as well as information gathered through the survey, approximately 950 metres of high priority sidewalks were identified in 7 locations within the Lovell Industrial Park. These
sidewalk sections would connect existing transit stops to major employers or to adjacent sidewalk segments. As part of the Transit Supportive Strategy, staff recommend installing these sidewalks on both City and Regional roads at an estimated total cost of $260,000. The cost of the sidewalk installation includes 8 transit pads, which are not included in the shelter implementation plan approved in 2012.

Transit Service Improvements

To generate additional ridership in the Central Transit Corridor and to improve connections to aBRT stations, staff recommends a new route (Route 112) from Cambridge Centre to Sportsworld Drive, via the Hespeler core and Maple Grove Road (Attachment 4: Proposed Transit Service Improvements for 2014). Route 112 would replace the section of Route 53 north of Bishop Street and serve the Cambridge Business Park, Lovell Industrial Park, the new Boxwood Industrial Park, nearby lands that are planned for new employment opportunities (the East Side lands), as well as several residential, institutional and commercial districts in Cambridge. The route would also continue west of Sportsworld Drive to connect to the Conestoga College campus. Direct connections would also be made from Hespeler to the new aBRT stations at Sportsworld Drive and Cambridge Centre. Route 53 would continue to operate from Cambridge Centre to Ainslie Street Terminal via Franklin Boulevard, allowing direct connections to aBRT at both locations.

The proposed Route 112 is similar to the Mid-Region iXpress proposed for 2017 in the GRT Business Plan. The accelerated service along Maple Grove Road, if funded by the Transit Supportive Strategy, will help build ridership for the planned iXpress service by supporting sustainable commuting patterns as the area grows, rather than trying to influence them after they are established in 2017. Additional advantages to Route 112 include:

- Direct access to Cambridge Centre from the Franklin Street corridor;
- Direct access to the Eastern Industrial Park from Cambridge Centre aBRT station;
- Direct trip to St. Benedict High School for students in Hespeler;
- Reduced travel times for Hespeler residents connecting to Kitchener;
- A by-product of the new route is a faster transit option to Conestoga College for the 250 students currently living there;
- Additional transit service to the South Cambridge Shopping Centre; and
- Proactive provision of GRT service for the forthcoming East Side employment lands.

Optimizing Route 53 and adding Route 112 will cost approximately $484,400 annually for three years, starting in 2014. The Route 112 expansion requires three new buses to provide 30-minute headways during the peak commuter travel periods. The cost of this service will be absorbed in 2017 by the Regional Transportation Master Plan Reserve Fund when the Mid-Region iXpress is introduced.

Conestoga College Transit Pass Discount

In concurrence with the City of Cambridge, Regional staff recommends offering Conestoga College students a further 15 percent discount on their transit passes. As of July 1, 2013, the cost of a four month College Pass will be $240 compared to $288 for four adult monthly passes (the closest comparable rate). The proposed discount would reduce the price of the College Pass to $204 for four months. The estimated cost to the Transit Supportive Strategy for the 2013-2014 school year is $152,000 and staff recommends funding this initiative for three years. A contingency of approximately $25,000 is included to help GRT respond to increased demand with additional service on routes 61, 111 and 112, if warranted.
Memorandum of Understanding (MOU)

The foundation of the Transit Supportive Strategy and the text of the MOU were finalized with the City of Cambridge in 2012. However, changes to the MOU may be required to reflect the deferral of the Core Areas Parking Master Plan and to incorporate additional initiatives in 2013.

Potential Future Initiatives (Not recommended as part of this report)

Addressing the challenges of lower-density and non-transit-supportive land uses has been identified as an important objective of the Transit Supportive Strategy. To build ridership potential and to realize opportunities for intensification and redevelopment along Hespeler Road, these potential future initiatives include specific policy measures to increase transit-oriented development. Regional and City staff continue to develop the strategy and will recommend specific initiatives annually for implementation as appropriate.

Examples of potential initiatives include:

- Improvements to the Cambridge Centre Transit Terminal;
- Groff Mill Creek Watershed Study to support the reurbanization of Hespeler Road;
- Exploring the possibility of a shared parking structure or Park and Ride facility in Galt, near the Ainslie Street Terminal;
- Utilizing the tools/programs provided for in the Region’s Reurbanization Community Improvement Plan;
- Station Area Plans; and
- Transit-Oriented Development policy development, financial incentives, and/or Guidelines.

The two-step evaluation process that was developed for the 2012 Implementation Plan and guided the 2013 Implementation Plan will also be used to select initiatives in future years of the Transit Supportive Strategy. For more information on the evaluation process, please see Attachment 3.

Next Steps

If approved, Region and City staff will move to implement the action items identified in this report and summarized in Attachment 2, the Proposed 2013 Transit Supportive Strategy for Cambridge Implementation Plan Summary.

As identified in Report P-12-023/E-12-028, staff will continue to work with the City of Cambridge to identify and recommend transit-supportive initiatives for consideration by Regional Council. Staff will also continue to include progress reports highlighting key evaluation metrics so that the incremental improvements related to this strategy can be measured.

Area Municipal Consultation/Coordination

This strategy has been collaboratively developed by staff of the City of Cambridge and the Region of Waterloo. Given the various interests involved and the multi-disciplinary nature of the exercise, several different departments at both the City and Region have been involved as required. Representation from the City of Cambridge has included senior staff from Planning Services as well as from Transportation and Public Works.

CORPORATE STRATEGIC PLAN:

The Cambridge Transit Supportive Strategy is consistent with Focus Area 2: Growth Management and Prosperity: Manage growth to foster thriving and productive urban and rural communities. It is also consistent with Focus Area 3: Sustainable Transportation: Develop
greater, more sustainable and safe transportation choices.

FINANCIAL IMPLICATIONS:

The Cambridge Transit Supportive Strategy was identified as part of the Preferred Rapid Transit System Implementation Option and Staging Plan approved June 15, 2011, including an allocation of $1,000,000 annually, for an initial 10-year period, subject to budget approval (see Report E-11-072).

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Staff from Planning, Housing and Community Services, Transportation and Environmental Services, Corporate Resources (Legal) and Finance, Grand River Transit and the Rapid Transit Project Team continue to be involved with the development, implementation and monitoring of the Cambridge Transit Supportive Strategy.

ATTACHMENTS:

Attachment 1 – 2012 Transit Supportive Strategy for Cambridge Implementation Plan Summary
Attachment 2 – Proposed 2013 Transit Supportive Strategy for Cambridge Implementation Plan Summary
Attachment 3 – Transit Supportive Strategy Screening Process
Attachment 4 – Proposed Transit Service Improvements for 2014

PREPARED BY:  John Hill, Principal Planner, Strategic Policy Development

APPROVED BY:  Rob Horne, Commissioner, Planning, Housing and Community Services
### Approved 2012 Transit Supportive Strategy for Cambridge

#### Attachment 1

Implementation Plan Summary

The following tables provide a summary of how the $1,000,000 annual budget for the Cambridge Transit Supportive Strategy was approved to be allocated in 2012.

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Focus</th>
<th>Estimated Budget *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambridge Core Area Parking Master Plan</td>
<td>One Time Expenditures (i.e. Off-street pay-and-display equipment and bicycle parking)</td>
<td>$760,000</td>
</tr>
<tr>
<td>TravelWise Program</td>
<td>Employer/Employee Surveys L.G Lovell Industrial Park</td>
<td>$5,000</td>
</tr>
<tr>
<td>Pedestrian and Transit Infrastructure Investments</td>
<td>Ainslie Street Terminal Improvements - Study</td>
<td>$35,000</td>
</tr>
<tr>
<td></td>
<td>Transit Shelters (10)</td>
<td>$130,000</td>
</tr>
<tr>
<td>TDM Coordinator/Station Area Planner</td>
<td>Strategy Implementation – Parking Master Plan and TDM</td>
<td>$70,000*</td>
</tr>
<tr>
<td>Other Associated Costs (to be agreed upon by the Region of Waterloo and the City of Cambridge)</td>
<td>To Be Determined</td>
<td>Dependant on savings</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$1,000,000</strong></td>
</tr>
</tbody>
</table>

*Specific allocations may vary slightly in order to provide for the implementation of complementary programs, cost efficiencies or other variables that may be identified in collaboration with Area Municipal and Regional staff.

**Funding for initial length of 12-month commitment – assuming contract begins April 1, 2012. The allocation between 2012 and 2013 will depend on the commencement date of the contract. Any additional funds available in 2012 due to a later contract commencement will be reallocated to the Pedestrian and Transit Infrastructure Improvements.
Proposed 2013 Transit Supportive Strategy for Cambridge
Attachment 2
Implementation Plan Summary

The following table provides a summary of how the $1,000,000 annual budget for the Cambridge Transit Supportive Strategy is recommended to be allocated in 2013 and 2014 by Regional and City of Cambridge staff.

<table>
<thead>
<tr>
<th>Year</th>
<th>CTSS Annual Budget</th>
<th>Initiative</th>
<th>Focus</th>
<th>Project Budget</th>
<th>CTSS Budget Carryover</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>$1,000,000</td>
<td>Cambridge Core Area Parking Master Plan</td>
<td>One Time Expenditures (i.e. Off-street pay-and-display equipment and bicycle parking)</td>
<td>$760,000 (cancelled)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TravelWise Program</td>
<td>Lovell Industrial Park TDM Survey</td>
<td>$28,000</td>
<td>(scope increased)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pedestrian and Transit Infrastructure Investments</td>
<td>Ainslie Street Terminal Improvements - Study</td>
<td>$35,000 (carry forward)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Transit Shelters</td>
<td>$130,000 (carry forward)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TDM Coordinator/ Station Area Planner</td>
<td>CTSS Strategy Implementation</td>
<td>$70,000 (carry forward)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other Associated Costs</td>
<td>TBD</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Actual</td>
<td></td>
<td>$28,000</td>
<td>$972,000</td>
</tr>
<tr>
<td>Proposed</td>
<td>$1,972,000</td>
<td>TravelWise Program</td>
<td>Conestoga College Transit Pass subsidy</td>
<td>$152,000</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td>Pedestrian and Transit Infrastructure Investments</td>
<td>Ainslie Street Terminal Improvements - Study (carry over)</td>
<td>$50,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sidewalk installation L.G. Lovell Industrial Area based on survey results</td>
<td>$260,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Transit Shelters (carry over and previously approved)</td>
<td>$263,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TDM Coordinator/ Station Area Planner</td>
<td>CTSS Strategy Implementation (first 6 months of 3-year contract)</td>
<td>$45,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sub-Total</td>
<td></td>
<td>$770,000</td>
<td>$1,202,000</td>
</tr>
<tr>
<td>Proposed 2014</td>
<td>$2,202,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>---------------</td>
<td>------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TravelWise Program</td>
<td>Conestoga College Transit Pass subsidy</td>
<td>$163,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedestrian and Transit Infrastructure Investments</td>
<td>Transit Shelters</td>
<td>$36,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transit Route enhancements</td>
<td>$484,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ainslie Street Terminal Improvements</td>
<td>$227,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning Studies</td>
<td>Groff Mill Creek Plan</td>
<td>$70,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDM Coordinator/Station Area Planner</td>
<td>CTSS Strategy Implementation</td>
<td>$90,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td><strong>$1,170,000</strong></td>
<td><strong>$1,032,000</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Transit Supportive Strategy Screening Process (2012)  Attachment 3

Strategic Themes

1. Research/Marketing Initiatives - Examples of this include detailed surveys/research with employers, workers and students to increase data on current transit usage and demand. Further, this information could lead to targeted education and TDM individualized marketing campaigns to help overcome barriers to transit usage.

2. Physical Infrastructure Improvements - Examples include improvements to pedestrian amenities that could be made relatively quickly and have a tangible benefit in the short term. It could also include funding to help the City implement various transit supportive initiatives such as the Core Areas Parking Master Plan.

3. Transit Related Improvements - Free transit passes, subsidies or other improvements, modifications or acceleration of transit service provision may be considered as part of this strategy in order to accelerate ridership increases in target market segments.

4. Studies - Studies related to transportation, land use, infrastructure requirements as well as environmental conditions will all be required in order to realize the reurbanization potential along the rapid transit corridor.

A list of potential initiatives that fit the strategic themes of the Transit Supportive Strategy is identified by Regional and City staff for further discussion and evaluation.

2 Step Evaluation Process

Step 1: Pass/Fail Screening

The screening criteria listed will be applied to each of the potential action items. Any action item that fails on one or more of these criteria will be screened out from further consideration as part of this strategy. The yes/no response in the last column, indicates the response that will receive a “Pass”.

<table>
<thead>
<tr>
<th>Screening Criteria</th>
<th>Pass/Fail Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Alignment</td>
<td>Is this action item consistent with the goal of the Cambridge Transit Supportive Strategy to expedite the development of LRT in the City of Cambridge by enhancing transit ridership and/or encouraging transit supportive development, specifically within the Central Transit Corridor?</td>
<td>Yes = Pass</td>
</tr>
<tr>
<td>Budgetary Considerations</td>
<td>Can this action item be funded in the short-term (1 to 2 years) through another, more appropriate, budgetary source?</td>
<td>No = Pass</td>
</tr>
<tr>
<td>Rapid Transit Infrastructure</td>
<td>Is this action item part of the infrastructure improvements required as part of the rapid transit project (i.e. design, utility/infrastructure relocations, or construction of the physical RT corridor/stations)?</td>
<td>No = Pass</td>
</tr>
</tbody>
</table>
Step 2: Ranking of Potential Action Items

The purpose of the following criteria is to provide a basis to rank different action items proposed. The purpose of this evaluation is not to eliminate action items, but rather to determine the relative rankings of each option (and priority). Action Items will be ranked “High, Medium and Low”. The factor and criteria proposed are as follows:

<table>
<thead>
<tr>
<th>Criteria Group</th>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>Ridership Potential</td>
<td>Has the potential to support improved ridership along the rapid transit corridor and feeder routes in Cambridge.</td>
</tr>
<tr>
<td></td>
<td>Connectivity</td>
<td>Improves the connectivity of the rapid transit corridor with the overall transportation system (including active forms of transportation).</td>
</tr>
<tr>
<td>Land Use</td>
<td>Supports Reurbanization</td>
<td>Supports reurbanization adjacent to the rapid transit corridor and/or within in the broader station areas (including residential and institutional uses).</td>
</tr>
<tr>
<td></td>
<td>Supports Employment</td>
<td>Has the potential to generate employment along the rapid transit corridor and/or within in the broader station areas.</td>
</tr>
<tr>
<td>Implementation</td>
<td>Feasible</td>
<td>Can be feasibly implemented within the context of existing City/Regional work plans and available staff resources (if additional support is required).</td>
</tr>
<tr>
<td></td>
<td>Reproducible</td>
<td>Has the potential to serve as a pilot (with lessons learned) for future application elsewhere along the RT corridor.</td>
</tr>
</tbody>
</table>
Attachment 4 - Proposed Transit Service Improvements for 2014
<table>
<thead>
<tr>
<th>Meeting date</th>
<th>Requestor</th>
<th>Request</th>
<th>Assigned Department</th>
<th>Anticipated Response Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>28-Mar-12</td>
<td>Council</td>
<td>Staff to review the operation of the Homer Watson Boulevard/Block Line Road roundabout and report back to Council in 2013.</td>
<td>Transportation and Environmental Services</td>
<td>Sept. 2013</td>
</tr>
<tr>
<td>08-May-12</td>
<td>P&amp;W</td>
<td>Report detailing the rationale for the Injury Crash Cost calculation used by staff in reports for roadway improvements. (E-12-045 page 48 authored by Frank Kosa)</td>
<td>Transportation and Environmental Services</td>
<td>Spring 2013</td>
</tr>
<tr>
<td>08-May-12</td>
<td>P&amp;W</td>
<td>Staff to review options for signalized vehicle lights and signalized pedestrian crosswalks in Roundabouts in the detailed design report prepared later in 2012 for Franklin Boulevard Improvements.</td>
<td>Transportation and Environmental Services</td>
<td>May 28, 2013</td>
</tr>
<tr>
<td>05-Jun-13</td>
<td>G. Lorentz</td>
<td>Staff to review signage on Trussler Road/Ira Needles Boulevard</td>
<td>Transportation and Environmental Services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>J. Haalboom</td>
<td>Staff continue to lobby the Province for changes to the Highway Traffic Act providing right of way to pedestrians and on an as needed basis provide an update to Council</td>
<td>Transportation and Environmental Services</td>
<td>as required</td>
</tr>
</tbody>
</table>