Regional Municipality of Waterloo

Planning and Works Committee

Agenda

Tuesday, November 6, 2018

Approx. 10:30 a.m. (Following Closed Committee)

Regional Council Chamber

150 Frederick Street, Kitchener, Ontario

1. Motion to Reconvene into Open Session

2. Declarations of Pecuniary Interest under the “Municipal Conflict Of Interest Act”

3. Delegations

3.1 TES-TRP-18-07.1, Proposed Relocation of Intersection Pedestrian Signal (IPS) – Bridgeport Road (Regional Road 9), in the City of Waterloo

   i. Daisy Arsenault

   ii. Anne Crowe

Recommendation:

That the Regional Municipality of Waterloo approve the removal and relocation of the existing intersection pedestrian signal from its current location at the Bridgeport Road (Regional Road 9) and Peppler Street intersection to a new location approximately 105 metres to the east at the Laurel Creek Trail crossing of Bridgeport Road, as outlined in Report TES-TRP-18-07.1 dated November 6, 2018 and report TES-TRP18-07 dated June 19, 2018.

Should you require an alternative format please contact the Regional Clerk at Tel.: 519-575-4400, TTY: 519-575-4605, or regionalclerk@regionofwaterloo.ca
3.2 Dr. Melissa Mayer re: **TES-DCS-18-20**, Church Street Improvements, 120m East of Spruce Lane to West of Arthur Street, Township of Woolwich – Approval of Project

**Recommendation:**
That the Regional Municipality of Waterloo:

a) approve the proposed improvements on Church Street (Regional Road 86), from 120m east of Spruce Lane to west of Arthur Street, Township of Woolwich as outlined in Report TES-DCS-18-20; and

b) amend Traffic and Parking By Law 16-023 to remove the on-street parking on Church Street west of Arthur Street, Elmira, Township of Woolwich as outlined in Report TES-DCS-18-20, upon completion of construction as follows:

1. Remove from Schedule 1, No Parking Anytime on Church Street (Regional Road 86), North Side between Snyder Avenue and 70 m West of Arthur Street (Regional Road 21);

2. Remove from Schedule 1, No Parking Anytime on Church Street (Regional Road 86), South Side between Walker Street and 48 m West of Arthur Street (Regional Road 21);

3. Remove from Schedule 1, No Parking Anytime on Church Street (Regional Road 86), North Side between 24 m West of Arthur Street (Regional Road 21) and Arthur Street (Regional Road 21);

4. Remove from Schedule 1, No Parking Anytime on Church Street (Regional Road 86), South Side between 22 m West of Arthur Street (Regional Road 21) and Arthur Street (Regional Road 21);

5. Remove from Schedule 2, Limited Parking 9:00 am to 6:00 pm on Monday, Tuesday, Wednesday, Saturday and 9:00 am to 9:00 pm Thursday and Friday on Church Street (Regional Road 86), North Side, between 70 m West of Arthur Street (Regional Road 21) and 24 m West of Arthur Street (Regional Road 21);

6. Remove from Schedule 2, Limited Parking 9:00 am to 6:00 pm on Monday, Tuesday, Wednesday, Saturday and 9:00 am to 9:00 pm Thursday and Friday on Church Street (Regional Road 86), South Side, 48 m West of Arthur Street (Regional Road 21) and 22 m West of Arthur Street (Regional Road 21);

7. Add to Schedule 1, No Parking Anytime on Church Street (Regional Road 86), North Side between Snyder Avenue and Arthur Street (Regional Road 21);
8. Add to Schedule 1, No Parking Anytime on Church Street (Regional Road 86), South Side between Walker Street and Arthur Street (Regional Road 21).

3.3 **TES-TRP-18-16**, Fischer-Hallman Road (Regional Road #58) Traffic Operations at Proposed Development, 1250, 1270 and 1314 Fischer Hallman Road, City of Kitchener (Information)

   i. Greg Priamo and Matt Campbell, Zelinka Priamo, Jim Gough and Brett Sears, WSP, Stefan Savelli and Jeff Marshall, ONE Properties

### 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.

4. **Request to Remove Items from Consent Agenda**

5. **Motion to Approve Items or Receive for Information**

5.1 **PDL-CPL-18-42**, Amendment to the Regional Municipality of Waterloo Controlled Access By-law #58-87 for Access to Regional Road 54 (Lackner Boulevard), City of Kitchener

   **Recommendation:**

   That the Regional Municipality of Waterloo approve an amendment to Controlled Access By-law #58-87 for a permanent full movement access on the east side of Regional Road 54 (Lackner Boulevard), approximately 140 meters south of Regional Road 4 (Ottawa Street South) in the City of Kitchener, as described in Report PDL-CPL-18-42, dated November 6, 2018.

5.2 **PDL-LEG-18-71**, Approval to Expropriate Lands (2nd Report) for River Road Extension (Phase 1) from Manitou Drive to Wabanaki Drive, Kitchener-River Road Extension (Project No. 07087)

   **Recommendation:** See pages 72 to 75
5.3 **PDL-LEG-18-81**, Surplus Declaration of Vacant Regional Lands, Part of Lot 46, German Company Tract, Township of Woolwich, East Side of Arthur Street South, Highway 86, Elmira

**Recommendation:**

That the Regional Municipality of Waterloo declare vacant lands described as Part of Lot 46, German Company Tract, Woolwich being Part 1, 58R1939, PIN 22239-0059(LT), in the Township of Woolwich, Regional Municipality of Waterloo, as surplus to the needs of the Region, as detailed in Report No. PDL-LEG-18-81 dated November 6th, 2018, and approve a sale process utilizing the local multiple listing service by listing the property with real estate broker(s) pursuant to the Region’s property disposition by-law and the satisfaction of the Regional Solicitor; and

That the net proceeds from the disposition of the surplus properties be transferred to the Water Capital Reserve Fund, as outlined in Report No. PDL-LEG-18-81 dated November 6th, 2018.

5.4 **PDL-LEG-18-84**, Surplus Declaration of Regional Lands; Transfer of Fee Simple Partial Interest to the City of Waterloo -300 Northfield Drive East, Waterloo

**Recommendation:**

That the Regional Municipality of Waterloo:

a) Declare a Fee Simple interest in the lands described as Part of Lot 63, German Company Tract being Part 1 on Reference Plan 58R-20134, part of PIN 22282-0171 (LT), in the City of Waterloo, forming part of lands municipally known as 300 Northfield Drive East surplus to the needs of the Region, as detailed in Report No. PDL-LEG-18-84 dated November 6, 2018, pursuant to the Region’s property disposition by-law and the satisfaction of the Regional Solicitor; and

b) Approve, enter into an Agreement for, and execute all documentation related to transfer of Fee Simple interest to The Corporation of the City of Waterloo for the sum of $2.00, for the installation and maintenance of a Multi-Use Trail, of lands described as Part of Lot 36, German Company Tract being Part 1 on Reference Plan 58R-20134, part of PIN 22282-0171 (LT), in the City of Waterloo, as detailed in Report No. PDL-LEG-18-84 dated November 6, 2018 pursuant to the Region’s property disposition by-law and the satisfaction of the Regional Solicitor, with all registration fees and associated costs to be paid by the Region of Waterloo.
5.5  **TES-DCS-18-16**, University Avenue Reconstruction and Widening, Westmount Road to Erb Street, City of Waterloo, Amendment to Traffic and Parking By-law 06-072

**Recommendation:**

That the Regional Municipality of Waterloo amend Traffic and Parking By-Law 06-072, as amended, following the completion of the resurfacing, reconstruction and widening of University Avenue from Westmount Road to Erb Street as follows:

- Add to Schedule 22, Reserved Lanes for Bicycles on both sides of University Avenue (Regional Road 57) from Westmount Road (Regional Road 50) to Erb Street (Regional Road 9).

5.6  **TES-DCS-18-19**, Fall 2018 Construction Update (Information)

5.7  **TES-TRS-18-19**, Grand River Transit Preliminary 2019 Transit Network – Cambridge Public Consultation Centres (Information)

5.8  **TES-WAS-18-19**, Update on Drinking Water Treatment Improvements (Information)

---

**Regular Agenda Resumes**

6.  Reports – Corporate Services

6.1  **COR-FFM-18-17/COR-TRY-18-93**, King-Victoria Transit Hub RFP Termination

**Recommendation:**

That The Regional Municipality of Waterloo terminate the Request for Proposal for the King-Victoria Transit Hub; and

That staff be directed to evaluate alternative procurement approaches and bring forward to Council a recommendation to move the project ahead in early 2019, all as described in report COR-FFM-18-17/COR-TRY-18-93, dated November 6, 2018.
Recommendation:

That the Regional Municipality of Waterloo approve the following actions regarding the Brownfields Tax Increment Grant for the property known as 19 Guelph Avenue, Cambridge (Parcel A) and 49 Queen Street East, Cambridge (Parcel B) as described in Report PDL-CPL-18-43/COR-TRY-18-94:

a) Assign the Brownfield Parcel A (Condo) Tax Increment Grant and Redevelopment Agreement dated February 5, 2018 between Riverbank Lofts GP Inc., The Corporation of the City of Cambridge and The Regional Municipality of Waterloo to Riverbank Lofts Limited, the new owners of the subject lands;

b) Assign the Brownfield Parcel B (Apartment) Tax Increment Grant and Redevelopment Agreement dated February 5, 2018 between Riverbank Lofts GP Inc., The Corporation of the City of Cambridge and The Regional Municipality of Waterloo to D.D. 49 Queen Ltd., the new owners of the subject lands;

c) Amend the TIG Agreements for Parcel A and Parcel B to provide for: (1) any revisions as are necessary and satisfactory to the Region’s Commissioner of Planning, Development and Legislative Services and the Region’s Chief Financial Officer, and (2) payment of the approved joint Tax Increment Grant to the previously approved maximum for all parcels totalling $2,496,764. Region portion only, after allowing for other future financial assistance subject to reasonable conditions, upon completion of remediation and redevelopment of the property, and upon final confirmation of any additional brownfield related financial assistance provided under the Region’s Brownfield Financial Incentive Program or through the City of Cambridge; and

d) Authorize the Region’s Commissioner, Planning, Development and Legislative Services and Chief Financial Officer to execute Assignment and Amending Agreements with The Corporation of the City of Cambridge and the following new owner(s): Riverbank Lofts Limited for 19 Guelph Avenue (Parcel A TIG Agreement); 2) D.D. 49 Queen Ltd. for 49 Queen Street East (Parcel B TIG Agreement), with such agreements to be satisfactory to the Regional Solicitor.
Reports – Transportation and Environmental Services

6.3 **TES-DCS-18-18**, Fischer-Hallman Road Improvements Bleams Road to Plains Road, City of Kitchener Project Update and Amendment to Consulting Services Agreement

Recommendation:

That the Regional Municipality of Waterloo amend the Consulting Services Agreement with Associated Engineering (Ont.) Ltd to add additional fees in the amount of $370,000 plus applicable taxes for a revised total upset fee of $983,396 for design services as described in report TES-DCS-18-18, dated November 6, 2018


6.5 **TES-WAS-18-20**, Implications of New System Certificate (Information)

7. Information/Correspondence

7.1 Council Enquiries and Requests for Information Tracking List – No Items Pending

8. Other Business

9. Next Meeting - December 11, 2018

10. Adjourn
List of Upcoming Public Consultation Centres

Transportation and Environmental Services – Transit Services

Grand River Transit Preliminary 2019 Transit Network – Public Consultation Centres

**November 20, 2018** – 4:00-8:00 p.m. Cambridge City Hall, Bowman Room, 50 Dickson Street, Cambridge

**November 21, 2018** – 4:00-8:00 p.m. King Street Baptist Church, Upper Auditorium, 361 King Street East, Cambridge

**November 22, 2018** – 4:00 -8:00 p.m. Cambridge Centre, Court in front of former Sear’s store entrance, 355 Hespeler Road, Cambridge
Region of Waterloo
Transportation and Environmental Services
Transportation

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: November 6, 2018

File Code: T01-20/9 Waterloo

Subject: Proposed Relocation of Intersection Pedestrian Signal (IPS) – Bridgeport Road (Regional Road 9), in the City of Waterloo

Recommendation:

That the Regional Municipality of Waterloo approve the removal and relocation of the existing intersection pedestrian signal from its current location at the Bridgeport Road (Regional Road 9) and Peppler Street intersection to a new location approximately 105 metres to the east at the Laurel Creek Trail crossing of Bridgeport Road, as outlined in Report TES-TRP-18-07.1 dated November 6, 2018 and report TES-TRP18-07 dated June 19, 2018.

Summary:

City of Waterloo staff requested Region staff to consider the relocation of the existing Intersection Pedestrian Signal (IPS) from its current location at the Bridgeport Road and Peppler Street intersection to a new location approximately 105 metres to the east where the Laurel Creek Trail crosses Bridgeport Road. City staff requested this relocation to address the greater demand for pedestrian and cyclist crossings at the Laurel Creek Trail crossing location.

Regional staff undertook an investigation to consider the relocation of the IPS, including an engineering review, an origin-destination study and public consultation. The origin-destination study concluded that 61% of the crossings in the vicinity are occurring at the Laurel Creek Trail location as opposed to 38% at the existing Peppler Street IPS. Public consultation results indicated that 73 of 109 respondents (67%) were in favour of relocating the IPS while 7 respondents (6%) requested an IPS at both locations. Based on the engineering study, origin-destination study and public consultation, Region staff
recommended to Regional Council the relocation of the existing IPS to the Laurel Creek Trail crossing location, as per Planning and Works Committee Report TES-TRP-18-07 tabled on June 19, 2018 (attached).

Report TES-TRP-18-07 also included a discussion of the feasibility of having an IPS at both locations instead of just one at the Laurel Creek Trail crossing. Staff concluded at the time that having the two traffic signals in place was not recommended as having two signals in such close proximity is likely to result in operational and safety problems. Regional Planning and Works Committee endorsed staff’s recommendation on June 19, 2018 and forwarded the Report TES-TRP-18-07 to Regional Council on June 27, 2018.

Prior to the June 27, 2018 Regional Council meeting a number of residents, who did not have the opportunity to attend the June 19, 2018 Planning and Works Committee meeting, raised concerns through email correspondence to staff and Regional Councillors. The resident concerns included a request to maintain the existing IPS at Peppler Street in addition to a new IPS at the Laurel Creek Trail Crossing to address the demand for crossing Bridgeport Road by students and local residents. Various other concerns were also raised with Regional Councillors via email correspondence prior to the Regional Council meeting on June 27, 2018.

Regional Council at its June 27, 2018 meeting deferred Report TES-TRP-18-07 (Proposed Relocation of Intersection Pedestrian Signals) to a future meeting of Council to enable more public consultation and to enable staff to provide additional information. Regional Council requested additional information at the June 27 meeting regarding several issues, including:

- Closely-Spaced Traffic Signals and Red-Light Cameras in Operation;
- Sight Distance;
- School Crossing Locations;
- Separated Bike Lane Network Pilot Project;
- Financial Costs – one signal vs. two signals;
- Enhanced Pavement Marking for Cycling Facilities; and
- Consultation.

Staff has addressed the above issues in Report TES-TRP-18-07.1. Based on staff’s review, additional public consultation, further investigation and discussion with the Student Travel Planner, it is recommended that the Region remove and relocate the existing intersection pedestrian signal from its current location at the Bridgeport Road and Peppler Street intersection to a new location approximately 105 metres to the east at the Laurel Creek Trail crossing on Bridgeport Road.

Relocation of the pedestrian signal is expected to yield the following positive results:
• Accommodate more users versus the present IPS location with a safer crossing location for pedestrians given that there will be no conflicts with turning traffic;
• A combined crossing for Peppler Street and Laurel Trail pedestrians and cyclists currently crossing at two locations; and
• A more direct pathway to Elizabeth Ziegler School.

This relocation of the IPS is supported by staff from the City of Waterloo. The relocation of intersection pedestrian signals located at Bridgeport Road and Peppler Street would create a public transportation network that is integrated and accessible by pedestrians and cyclists.

Report:

1.0 Background

City of Waterloo staff requested Region staff to consider the relocation of the existing Intersection Pedestrian Signal (IPS) from its current location at the Bridgeport Road and Peppler Street intersection to a new location approximately 105 metres to the east where the Laurel Creek Trail crosses Bridgeport Road. City staff requested this relocation to address the greater demand for pedestrian and cyclist crossings at the Laurel Creek Trail crossing location.

Regional staff undertook an investigation to consider the relocation of the IPS, including an engineering review, an origin-destination study and public consultation. The origin-destination study concluded that 61% of the crossings in the vicinity are occurring at the Laurel Creek Trail location as opposed to 38% at the existing Peppler Street IPS. Public consultation results indicated that 73 of 109 respondents (67%) were in favour of relocating the IPS while only 7 respondents (6%) requested an IPS at both locations.

Based on the engineering study, origin-destination study and public consultation, Region staff recommended to Regional Council the relocation of the existing IPS to the Laurel Creek Trail crossing location, as per Planning and Works Committee Report TES-TRP-18-07 tabled on June 19, 2018 (attached).

Report TES-TRP-18-07 also included a discussion of the feasibility of having an IPS at both locations instead of just one at the Laurel Creek Trail crossing. Staff concluded at the time that having the two traffic signals in place was not recommended as having two signals in such close proximity is likely to result in operational and safety problems. Regional Planning and Works Committee endorsed staff’s recommendation on June 19, 2018 and forwarded the Report TES-TRP-18-07 to Regional Council on June 27, 2018.

Prior to the June 27, 2018 Regional Council meeting a number of residents, who did not have the opportunity to attend the June 19, 2018 Planning and Works Committee meeting, raised concerns through email correspondence to staff and Regional
Councillors. The resident concerns included a request to maintain the existing IPS at Peppler Street in addition to a new IPS at the Laurel Creek Trail Crossing to address the demand for crossing Bridgeport Road by students and local residents. Various other concerns were also raised with Regional Councillors via email correspondence prior to the Regional Council meeting on June 27, 2018.

Regional Council at its June 27, 2018 meeting deferred Report TES-TRP-18-07 (Proposed Relocation of Intersection Pedestrian Signals) to a future meeting of Council to enable more public consultation and to enable staff to provide additional information. Regional Council requested additional information regarding several issues, including:

- Closely-Spaced Traffic Signals and Red-Light Cameras in Operation;
- Sight Distance;
- School Crossing Locations;
- Separated Bike Lane Network Pilot Project;
- Financial Costs – one signal vs. two signals;
- Enhanced Pavement Marking for Cycling Facilities; and
- Consultation.

This Report TES-TRP-18-07.1 serves to address the concerns and requests for additional information and to supplement the initial Report TES-TRP-18-07 (attached for reference).

2.0 Additional Information Requested

2.1 Closely-Spaced Traffic Signals and Red-Light Cameras in Operation

At the June 27, 2018 Council meeting, staff was asked to investigate the potential for two crossings in close proximity, one at the Bridgeport Road/Peppler Street intersection and the second located approximately 105 metres east at the Laurel Creek Trail crossing. A question was also asked whether closely spaced signals could cause a “red-light running” problem.

Traffic control signals spaced close together may result in drivers misinterpreting one set of traffic signals for another. Drivers may observe and react to a downstream traffic signal while failing to observe the indications of a traffic signal first encountered. Similarly, drivers may see the indications of a traffic signal first encountered and fail to observe or expect a downstream traffic signal soon afterwards. This condition can contribute to “red-light running” and angle collisions as a result of “red-light running”.

The Region has obtained “red-light running” data from its inventory of 16 red-light cameras. This data includes the frequency of “red light” violations and includes information regarding how long a motorist enters an intersection after the onset of a red-signal indication (intrusion time). A longer intrusion time is a key indicator of drivers failing to observe a red signal indication.
Three of the top four intersections with the highest average intrusion times following a red signal indication are intersections situated on one-way streets. Of the three intersections situated on one-way streets, Erb Street at Regina Street has the highest average intrusion time of 9.2 seconds after the onset of a red signal. Regional staff believe that there are two primary contributing factors causing drivers to not observe the red traffic signal indication at this location. The contributing factors suspected include:

- The road being a one-way street; and
- Regina Street being situated only 80 metres east of King Street.

Based on the Region’s experience and supporting data, it is anticipated that the Region would create a condition very similar to Erb Street between King Street and Regina, (which has a demonstrated “red-light running” problem) if the signal at Bridgeport Road and Peppler is not removed and a second traffic signal is installed 105 metres east at the Laurel Creek Trail.

2.2 **Sight Distance**

Staff was requested to ensure that the sight distance to see crossing pedestrians was adequate at the Laurel Creek Trail crossing. A stopping sight distance study was conducted on Bridgeport Road at the Laurel Creek Trail crossing on Friday, July 13, 2018.

Stopping sight distance is one of several types of sight distances used in road design. It is the distance a motorist needs to be able to see in order have room to stop before colliding with something in the roadway, such as a pedestrian in a crosswalk, a stopped vehicle, or road debris.

Transportation Association of Canada (TAC) guidelines recommend that a roadway with a posted speed limit of 50 km/h (design speed of 60 km/h) have a stopping sight distance of 75 to 85 metres. The existing westbound stopping sight distance on Bridgeport Road approaching the Laurel Creek Trail is approximately 144 metres. Therefore, this distance meets or exceeds recommended distances approaching the proposed location for the relocated pedestrian signal.

2.3 **School Crossing Locations**

At the June 27, 2018 Council meeting, it was noted that there may be a safety concern for school children as they must now cross Bridgeport Road since the closure of Brighton school.

Many students who previously attended Brighton School (now Emmanuel Brighton Child Care) are now attending Elizabeth Ziegler School which is located on Moore Avenue to the south and east of the Peppler Street IPS. Depending on where the area students
live, using the Laurel Creek Trail will be a more direct pathway to the south side of Bridgeport Road, continuing east to Moore Avenue.

Transportation staff contacted the School Travel Planner with Student Transportation Services of Waterloo Region for comments. The School Travel Planner believes that the Laurel Creek Trail crossing would better serve the desire paths of students travelling to Elizabeth Ziegler School, and would be an enhancement to the overall school travel plan.

Relocating the pedestrian signal to the new location at Laurel Creek Trail access would provide additional safety for pedestrians, cyclists and motorists as the number of conflict points between pedestrians and motorists would be reduced. Westbound motorists on Bridgeport Road making a right-turn onto Peppler Street would not be in conflict with pedestrians and cyclists crossing Bridgeport Road.

2.4 Separated Bike Lane Network Pilot Project

Through further consultation with area residents, some residents questioned how the future proposed separated lanes along Bridgeport Road would coordinate with the proposed pedestrian signals at the Laurel Creek Trail.

A separated bike lane network pilot project is currently being reviewed by Region staff. The concept for the separated bike lane network project is to reduce the number of lanes on Bridgeport Road to two lanes (currently three lanes) from King Street to Devitt Avenue. A bidirectional separated cycling facility would be implemented on the north side of Bridgeport Road. Travel lane widths are also proposed to be reduced.

It is expected that the cycling facility proposed for the north side of the road would improve pedestrian comfort when walking on the north side sidewalk, as separation from motor vehicle traffic would be significantly increased. Pedestrian safety would also be enhanced due to the reduction of lanes on Bridgeport Road from three lanes to two lanes. The placement of physical separators used to reduce the number of lanes and define the separated bike lanes would reduce pedestrian exposure to traffic.

This project has yet to be approved by Council and is still in the explorative phase of the concept. Staff is currently exploring an alternative concept that would see the separated bike lane run along Erb Street instead of Bridgeport Road to negate conflicts with concurrent King Street construction north of Bridgeport Road. Depending on the success of the pilot, Bridgeport Road could be considered a potential candidate for a separated bike lane at a later date following the completion of King Street construction. The design of the separated bike lanes would incorporate the relocated pedestrian crossing.

2.5 Financial Costs – One Signal vs. Two Signals Options

A question was raised at the June 27th Council meeting regarding the cost of two
signals versus operating only one signal.

The relocation of the pedestrian signal at Bridgeport Road and Peppler Street to the Laurel Creek Trail crossing on Bridgeport Road is anticipated to cost $60,000 with an annual maintenance cost of approximately $3,400 per year. The cost to construct a new traffic signal is anticipated to be $45,000 and additional $15,000 to remove the traffic signal infrastructure currently at the Bridgeport Road/Peppler Street intersection.

Retaining the pedestrian signal currently located at Bridgeport Road and Peppler Street as well as the installation of an additional pedestrian signal at the Laurel Trail crossing is anticipated to cost $45,000 plus annual maintenance cost of $3,400. An additional annual maintenance cost of $3,400 would also be required for the existing pedestrian signal at Peppler Street.

### 2.6 Enhanced Pavement Markings for Cycling Facilities

At the June 27, 2018 Council meeting, the City of Waterloo requested that all pedestrian and cyclist crossings be clearly marked with enhanced green paint.

Coloured pavement markings can increase the visibility of a cycling facility, identify potential areas of conflict, and reinforce cyclist priority in conflict areas. Coloured pavement markings can be utilized along the entire length of a bike lane or cycle track, or within isolated areas such as a bike-box, conflict area, or intersection crossing. Green pavement markings are typically only reserved for cycling facilities in Canada. Consistent application is important to promote positive guidance and common expectations for all road users.

In 2015 Regional Council approved the use of skid-resistant green pavement markings at bike-box locations. Green pavement markings for a single bike-box costs approximately $6,250. The Region approved installing green pavement markings at an estimated 200 bike-boxes on Regional roads at a total estimated cost of $1,250,000. The annual maintenance cost of bike-boxes following full deployment is estimated to be approximately $250,000 per year in perpetuity. Expanding the use of green or other colour pavement markings to other cycling or pedestrian facilities beyond bike-boxes could have a significant impact on staff and budget resources depending on the extent of use. Given the potential implications, Regional staff recommends tabling a report to Regional Planning and Works Committee in 2019 summarizing potential options for expanding the use of coloured pavement markings on Regional roads.

### 3.0 Consultation

Additional consultation was requested through Regional Council at the June 27th Council meeting.
Comments received from concerned residents noted the loss of a crossing location at Peppler Street and pedestrians crossing Bridgeport Road without a traffic signal. Staff met with several residents who expressed concerns and were planning to speak to the issue when it was originally presented to the Planning and Works Committee. Staff provided information and clarification regarding the background and reasoning for the proposal to relocate the pedestrian signals to the Laurel Trail crossing. Discussion included studies conducted, safety regarding pedestrian crossing and motorist expectations. The residents found the meeting informative and also found that it helped to answer questions they wanted addressed. In general, the concerned residents now support the removal and relocation of the signal, however one resident continues to request additional traffic calming measures such as a pedestrian refuge island. Regional staff reviewed the option of a pedestrian refuge island and are not able to recommend this option as Bridgeport Road is a one way street and installation of a pedestrian refuge island would require widening the road to provide room for the island itself. Additionally pedestrian refuge islands are intended to provide refuge for pedestrians between two opposing streams of traffic, whereas Bridgeport Road only has traffic travelling in one direction. Citizens who expressed concerns and who requested to be notified about this report have been advised accordingly.

4.0 Recommendations

Based on staff’s review, additional public consultation, further investigation and discussion with the Student Travel Planner, it is recommended that the Region remove and relocate the existing intersection pedestrian signal from its current location at the Bridgeport Road and Peppler Street intersection to a new location approximately 105 metres to the east at the Laurel Trail crossing on Bridgeport Road.

Relocation of the pedestrian signal is expected to yield the following positive results:

- Accommodate more users versus the present location with a safer crossing location for pedestrians given that there will be no conflicts with turning traffic;
- A combined crossing for Peppler Street and Laurel Trail pedestrians and cyclists currently crossing at two locations; and
- A more direct pathway to Elizabeth Ziegler School.

Corporate Strategic Plan:

This report addresses the Region’s Strategic Objectives:

Strategic Objective 5.1 - Enhance opportunities for public engagement, input and involvement in Regional decision making;

Strategic Objective 5.2 - Provide excellent citizen-centered services.
Financial Implications:

The estimated cost to relocate the pedestrian signal to the Laurel Trail crossing would be $60,000. The Transportation Capital Program includes sufficient funds proposed in 2019 for this project to be funded from the Development Charges Reserve Fund.

Other Department Consultations/Concurrence: Nil.

Attachments: Report TES-TRP-18-07

Prepared By: Valerie MacQueen-Pearcey, Engineering Technologist (Traffic)

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Region of Waterloo

Transportation and Environmental Services

Transportation

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: June 19, 2018

Subject: Proposed Relocation of Intersection Pedestrian Signal (IPS) – Bridgeport Road (Regional Road 9), in the City of Waterloo

Recommendation:

That the Regional Municipality of Waterloo relocate the existing intersection pedestrian signal from the current location at the Bridgeport Road (Regional Road 9) Pepper Street intersection to a new location approximately 130 metres to the east on Bridgeport Road at the Laurel Creek Trail crossing, as outlined in Report TES-TRP-18-07 dated June 19, 2018.

Summary:

City of Waterloo staff approached Regional staff requesting that the Region consider relocating the existing Intersection Pedestrian Signal (IPS) from the current location at the Bridgeport Road/Pepper Street intersection to a new location approximately 130 metres to the east where the Laurel Creek Trail crosses Bridgeport Road. Based on the Region’s analysis, public and area municipal consultation, Regional staff recommend that the IPS be relocated to the Laurel Creek Trail crossing.

Results from the Region’s origin-destination study indicate that 61% of pedestrians were crossing Bridgeport Road at the Laurel Creek Trail crossing, as opposed to 38% of pedestrians crossing Bridgeport Road at Pepper Street. North and southbound trail users crossed Bridgeport Road at the Laurel Creek Trail access. No trail users were observed travelling from the trail to the existing Intersection Pedestrian Signals at Bridgeport/Pepper intersection and back to the trail access.
In an effort to best utilize the intersection pedestrian signals based on origin-destination and traffic count data, City of Waterloo and Regional staff are recommending the relocation of the signals to a new location approximately 130 metres to the east where the Laurel Creek Trail crosses Bridgeport Road.

The relocation of intersection pedestrian signals located at Bridgeport Road and Peppler Street would create a public transportation network that is integrated and accessible by pedestrians and cyclists. The cost to relocate the traffic signal will be split equally between the Region and the City of Waterloo.

Report:

1.0 Background

Over the past 10 years the City of Waterloo has been developing a city wide active transportation network to provide opportunity for people to travel without a vehicle, and still access key destinations such as Uptown Waterloo, universities, schools, and places of employment. This network consists of trails, sidewalks and on-road facilities such as bike lanes, signed bike routes and road crossings.

The Laurel Creek Trail sees a high number of users and is an integral part of the high priority trail system, connecting people and neighbourhoods. Continuing to build on the City wide active network, City of Waterloo staff requested that the Region consider the relocation of the existing Intersection Pedestrian Signal from the current location at the intersection of Bridgeport Road and Peppler Street to a new location approximately 130 metres to the east where the Laurel Creek Trail crosses Bridgeport Road.

2.0 Existing Conditions

Bridgeport Road is a one-way road with three lanes in the westbound direction. The Average Annual Daily Traffic (AADT) on Bridgeport Road is 14,500 vehicles per day. There is an existing Intersection Pedestrian Signal (IPS) located at the intersection of Bridgeport Road and Peppler Street. The posted speed limit along this section of Bridgeport Road is 50km/h.

Approximately 130 metres to the east of the intersection of Bridgeport Road and Peppler Street is the Laurel Creek Trail crossing. The location of the crossing is not controlled and as such, pedestrians must wait for a gap in traffic before attempting to cross Bridgeport Road or walk 130m west to the signal, cross Bridgeport Road and walk back to the trail.

Figure 1 provides an overall view of the area showing the existing IPS at the intersection of Bridgeport Road and Peppler Street, and the Laurel Creek Trail crossing.
Figure 1 – Bridgeport Road, Peppler Street to Moore Avenue

2.1 Collision Review

During the previous five years (2012 to 2016), the Bridgeport Road/Peppler Street intersection experienced 29 collisions where 21 collisions were predicted. During this period there was one collision involving a pedestrian. The intersection ranks 2609 out of 3334 locations assessed.

The midblock section between Peppler Street and Moore Avenue experienced 7 collisions during the same five-year period. Of the total collisions there were zero collisions noted at the trail crossing. This section of Bridgeport Road ranks 2592 out of the 3334 locations assessed.

3.0 Origin-Destination Study

An origin-destination study was conducted on Bridgeport Road in the area between the intersection of Bridgeport Road and Peppler Street and the Laurel Creek Trail.

An origin-destination (OD) study is typically used to determine travel patterns of traffic during a typical day. However, staff applied the same methodology to determine travel patterns of pedestrians and cyclists in the area of Bridgeport Road/Peppler Street intersection and the Laurel Creek Trail. The survey shows a detailed trip pattern of pedestrians and cyclists utilizing the uncontrolled trail crossing and the controlled crossing (IPS) at the Bridgeport Road/Peppler Street intersection.
June 19, 2018

The OD study was conducted on a Thursday and a Saturday during the hours of 7:00 a.m. to 10:00 a.m., 12:00 p.m. to 2:00 p.m. and 3:00 p.m. to 6:00 p.m. for a total of 16 hours. Pedestrian travel patterns originating at the intersection of Bridgeport Road and Peppler Street as well as Bridgeport Road at the Laurel Creek Trail were monitored.

Appendix “A” summarizes the travel patterns captured through the origin-destination study. The survey showed that 38% of pedestrians crossed Bridgeport Road at Peppler Street, 61% crossed Bridgeport Road at the Laurel Creek Trail crossing, and that very few pedestrians and cyclists using the Laurel Trail went out of their way to use the signal.

4.0 Public and Area Municipality Consultation

The Region arranged an online survey between June 5th and June 23rd, 2017. Surveys were also mailed to property owners in the immediate area to obtain feedback regarding the proposed relocation of the IPS. Of 109 responses received, 73 were in favour, 20 were opposed and 7 requested the Region of Waterloo leave the IPS at the intersection of Bridgeport Road and Peppler Street and to add a second pedestrian signal at the Laurel Creek Trail crossing.

City of Waterloo staff support a controlled trail crossing of Bridgeport Road as it will provide a great benefit to the local and wider community, making this trail route a desirable choice for all ages and abilities.

5.0 Signal Warrant Analysis (Laurel Creek Trail)

In response to comments to consider maintaining the existing signal and adding a second pedestrian signal at the trail crossing, staff assessed the merits of a second pedestrian traffic control signal located at the Laurel Creek Trail crossing.

Current Regional practice is to follow provincial guidelines documented and shared through the Ministry of Transportation. Based on these guidelines, a second traffic control signal is not warranted based on the distance to a down stream traffic signal. The distance between the Bridgeport Road/Peppler Street intersection and the Laurel Creek Trail crossing is approximately 130 metres. Traffic control signals should only be considered if the distance between them is 200 metres or greater.

Traffic control signals located closer than 200 metres of one another can experience the following negative impacts:

- Poor progression between traffic signals;
- Potential for vehicles to queue up to and through the adjacent signal; and
- Motorists may recognize and react to the downstream traffic signal indication.

All of the above may lead to both safety and operational concerns as a result of having two traffic signals installed too close to one another.
6.0 Recommendations

Based on the Region's analysis and public and area municipal consultation, staff recommends that the pedestrian signal be relocated from the Bridgeport Road/Peppler Street intersection to a location 130 metres east where the Laurel Trail crosses Bridgeport Road.

Relocating the traffic signal will better serve both pedestrians and cyclists based on findings that indicated the majority (81%) of pedestrians cross at the Laurel Creek trail versus 38% crossing at the Bridgeport/Peppler Street intersection.

The design of the signal will be a bike friendly design with the inclusion of bike signals for those cyclists using the Laurel Creek Trail. If approved, staff anticipate that the pedestrian traffic control signal will be operational by the fall of 2018.

Figure 2 shows the proposed location for the pedestrian signal at Bridgeport Road and the Laurel Creek Trail crossing.

**Figure 2 – Proposed Pedestrian Signal on Bridgeport Road at the Laurel Creek Trail Crossing**
Corporate Strategic Plan:

This report addresses the Region’s Strategic Objectives:

**Strategic Objective 2.1** – Create a public transportation network that is integrated, accessible, affordable and sustainable;

**Strategic Objective 2.3** – Build infrastructure for, and increase participation in, active forms of transportation (cycling and walking); and

**Strategic Objective 4.4** – Promote and support healthy living and prevent disease and injury.

Financial Implications:

The estimated cost to relocate the IPS is approximately $45,000. This project will be cost-shared equally between the Region and the City of Waterloo. The Region’s 2018 Transportation Capital Program includes sufficient funds in the New Traffic Signal Installation budget.

Other Department Consultations/Concurrence:

Nil

Attachments:

Appendix A – Origin-Destination Survey Summary

**Prepared By:** Valerie MacQueen-Pearcey, Engineering Technologist (Traffic)

**Approved By:** Thomas Schmidt, Commissioner, Transportation and Environmental Services
Region of Waterloo
Transportation and Environmental Services
Design and Construction

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 6, 2018  File Code: 5417
Subject: Church Street Improvements, 120m East of Spruce Lane to West of Arthur Street, Township of Woolwich – Approval of Project

Recommendation:

That the Regional Municipality of Waterloo:

a) approve the proposed improvements on Church Street (Regional Road 86), from 120m east of Spruce Lane to west of Arthur Street, Township of Woolwich as outlined in Report TES-DCS-18-20; and

b) amend Traffic and Parking By Law 16-023 to remove the on-street parking on Church Street west of Arthur Street, Elmira, Township of Woolwich as outlined in Report TES-DCS-18-20, upon completion of construction as follows:

1. Remove from Schedule 1, No Parking Anytime on Church Street (Regional Road 86), North Side between Snyder Avenue and 70 m West of Arthur Street (Regional Road 21);

2. Remove from Schedule 1, No Parking Anytime on Church Street (Regional Road 86), South Side between Walker Street and 48 m West of Arthur Street (Regional Road 21);

3. Remove from Schedule 1, No Parking Anytime on Church Street (Regional Road 86), North Side between 24 m West of Arthur Street (Regional Road 21) and Arthur Street (Regional Road 21);

4. Remove from Schedule 1, No Parking Anytime on Church Street (Regional Road 86), South Side between 22 m West of Arthur Street (Regional Road 21) and Arthur Street (Regional Road 21);
5. Remove from Schedule 2, Limited Parking 9:00 am to 6:00 pm on Monday, Tuesday, Wednesday, Saturday and 9:00 am to 9:00 pm Thursday and Friday on Church Street (Regional Road 86), North Side, between 70 m West of Arthur Street (Regional Road 21) and 24 m West of Arthur Street (Regional Road 21);

6. Remove from Schedule 2, Limited Parking 9:00 am to 6:00 pm on Monday, Tuesday, Wednesday, Saturday and 9:00 am to 9:00 pm Thursday and Friday on Church Street (Regional Road 86), South Side, 48 m West of Arthur Street (Regional Road 21) and 22 m West of Arthur Street (Regional Road 21);

7. Add to Schedule 1, No Parking Anytime on Church Street (Regional Road 86), North Side between Snyder Avenue and Arthur Street (Regional Road 21);

8. Add to Schedule 1, No Parking Anytime on Church Street (Regional Road 86), South Side between Walker Street and Arthur Street (Regional Road 21).

Summary:

The Region of Waterloo is currently considering improvements on Church Street from 120m east of Spruce Lane to west of Arthur Street in the Township of Woolwich. (Please refer to Appendix ‘A’ for a Key Plan.) Improvements are required on this 940m section of Church Street to address the deteriorated roadway condition, add curb and gutter and storm sewers in the rural section from George Street easterly to the project limits, replace aging and add new underground infrastructure, and add active transportation facilities.

The project is being undertaken as a Schedule ‘A+’ project under the “Municipal Class Environmental Assessment Act”, and is being directed by a Project Team that includes staff from the Region of Waterloo, Township of Woolwich, and Township Councillor Patrick Merlihan.

A Public Consultation Centre (PCC) was held on November 10th, 2016 to present the Project Team’s proposed improvements on Church Street. Comments received from the public at this PCC generally supported the need for the proposed improvements. Some of the comments raised by the public included:

- Requests to add left turn lanes on Church Street east and west of the Arthur Street intersection to reduce the queues during rush hours on Church Street;
- Requests to add more trees on the Church Street corridor; and
- Requests to add dedicated on-road cycling lanes on the entire Church Street corridor.

The Project Team’s responses to the public comments received are provided in Section
4 of this report. In summary, the Project Team is recommending left turn lanes on Church Street, tree planting and dedicated on-road cycling lanes where space permits.

Based on a review of the technical information gathered for this project as well as a review of all public comments received, the Project Team is recommending that Regional Council approve the Recommended Design Concept for the improvements to Church Street, described as follows:

- Complete replacement of the deteriorated pavement structure;
- The addition of curb and gutter and storm sewers from George Street easterly to 120m east of Spruce Lane;
- Widening of the existing sidewalk to achieve the standards as recommended in the Accessibility for Ontarians with Disabilities Act (AODA);
- Upsizing of the existing watermain from 32mm to 150mm, and from 150mm to 300mm diameter for a total length of 550m, on behalf of the Township of Woolwich;
- Replacement of existing storm sewer infrastructure;
- Replacement of existing sanitary sewer infrastructure on behalf of the Township of Woolwich;
- Installation of a new 1.5m wide sidewalk on the north side of Church Street from George Street to the Elmira Union Cemetery driveway, approximately 340m to the east;
- Installation of detectable warning plates to facilitate barrier-free access at all sidewalk ramp and road crossing locations; and
- The construction of new left turn lanes on Church Street east and west of Arthur Street.

Please refer to Appendix ‘B’ for typical cross-sections of the Project Team’s Recommended Design Concept.

Construction on this project is currently scheduled to occur in 2020 in the Region’s approved 2018 Ten Year Transportation Capital Program (TCP).

The Region’s 2018 approved capital program includes funding of $1,580,000 for the Region’s share of project costs. The Township of Woolwich is funding its portion of sanitary sewer and watermain installations on this project. The current project cost estimate for the Region’s share of the road and storm sewer work is $2,850,000; the estimated costs have increased as a result of the scope being extended during the environmental assessment. This revised total will be reflected in the draft 2019 budget for Council consideration.
The widening of the road platform and sidewalks results in property acquisitions of small parcels from 14 properties for this project.

Letters notifying interested members of the public that Regional Planning and Works Committee will be considering approval of the Recommended Design Concept for this project at its November 6th, 2018 meeting were distributed during the week of October 15, 2018.

Report:

1.0 Introduction

The Region of Waterloo is currently considering improvements on Church Street from 120m East of Spruce Lane to west of Arthur Street in the Township of Woolwich (please refer to Appendix ‘A’ for a Key Plan). Improvements are required on this 940m section of Church Street to address the deteriorated roadway condition, add curb and gutter where none currently exists to provide an urban road cross-section with sidewalks, replace aging storm and sanitary sewer infrastructure, upsize existing watermain infrastructure, widen existing and add new sidewalk for pedestrian use, and add on-road cycling lanes for a portion of the corridor.

This project is classified as a Schedule “A+” undertaking in accordance with the Municipal Class Environmental Assessment planning process.

The planning of the roadway improvements is also being undertaken in accordance with the Regional Context Sensitive Corridor Design Guidelines, the Regional Transportation Master Plan and other relevant Regional policies and practices.

The Regional Context Sensitive Corridor Design Guidelines (CDG) is a planning policy document that guides the design of Regional Roads. The CDG identifies design parameters for necessary features within road allowances such as vehicular lanes, sidewalks, and boulevards.

The Regional Transportation Master Plan is a planning policy document that identifies required improvements to the Region’s walking and cycling network and guides the implementation of these facilities.

The Regional Official Plan gives direction to balance the design of reconstructed roads to meet the needs of all modes of transportation including walking, cycling, motorized vehicles and transit.

This project is being directed by a Project Team that includes staff from the Region of Waterloo, Township of Woolwich as well as Township Councilor Patrick Merlihan.

2.0 Existing Needs and Proposed Improvements

2.1 Deteriorated Road Condition
The pavement condition is fair to poor on most sections of Church Street. In general, the deterioration is due to the age of the asphalt combined with areas of poor roadway drainage. The roadways would be fully reconstructed as part of this project.

2.2 Roadway Drainage

Church Street currently includes a section of gravel shoulders and partially paved shoulders (George Street to east of Spruce Lane) where drainage is handled by a system of ditches. The remainder of the corridor includes an existing storm sewer system in the fully urbanized locations. It is proposed as part of this project that a new upgraded storm sewer system be installed on the north side from George Street easterly to the project limits east of Spruce Lane along with curbs and gutters on the edge of the roadway to collect and convey drainage to the new storm sewers.

2.3 Cycling Needs

Currently, there are no cycling lanes throughout the project limits. Church Street is identified as a designated cycling route in the Region’s Active Transportation Master Plan. As part of this project, on-road cycling lanes would be implemented from 120m east of Spruce lane to 50m east of Duke Street. The design team looked at various options of implementing on-road cycling lanes beyond Duke Street to Arthur Street. However, due to the close proximity of existing homes to the road, the corridor is too constrained to provide full-width on-road cycling lanes. Accordingly the Project Team is recommending that the travel lanes be shared with cyclists from Duke Street to Arthur Street by constructing wider shared lanes (3.95m minimum). In addition, signage will direct cyclists to adjacent local roads to provide an alternative cycling route to Arthur Street.

2.4 Pedestrian Needs

The Region of Waterloo and the Township of Woolwich both support the installation of sidewalks or trails within the public right-of-way, which encourage people to walk for travel, exercise and recreation. Church Street is identified as a “Neighborhood Connector – Main Street” in the Region of Waterloo Corridor Design Guidelines which indicates that sidewalks and/or multi-use trails are a necessary component of the right-of-way. There are currently existing sidewalks on Church Street from Arthur Street to George Street. These sidewalks are proposed to be widened to the current standard as recommended in the Accessibility for Ontarians with Disabilities Act (AODA). In addition, a new sidewalk is proposed on the north side of Church Street from George Street to the Elmira Union Cemetery driveway, approximately 300m to the east. As with existing sidewalks along Church Street, the Township would continue undertake summer and winter maintenance of the sidewalks.

2.5 Transit Needs

Currently, Grand River Transit (GRT) buses do not operate along the Church Street
East route. A new route is not proposed as part of this project.

2.6 Watermain Needs

The existing 32mm diameter ductile iron watermain between George Street and the Elmira Union Cemetery is currently undersized and would be upgraded to a 150mm diameter watermain. Additionally, the existing 150mm diameter ductile iron watermain between Memorial Avenue and Riverside Drive is currently undersized and would be upgraded to a 300mm diameter watermain. These costs would be borne by the Township.

2.7 Sanitary Servicing Needs

The existing 200mm diameter sanitary sewer between Memorial Avenue and Riverside Drive has reached the end of its service life and would be replaced with a new 200mm diameter sanitary sewer pipe. These costs would be borne by the Township.

3.0 Public Consultation

3.1 Public Consultation Centre (PCC) - November 10th, 2016

Based on the project needs, the Project Team developed a preferred design for the Church Street improvements which was presented to the public on November 10th, 2016 at a PCC held at the St. Paul’s Lutheran Church in Elmira. Notices were placed in the local newspaper 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. A plan showing the Preferred Design Concept was on display and Project Team representatives were present to answer questions and receive feedback.

Approximately thirty-six (36) members of the public attended the PCC. Seven (7) comment sheets/emails were received. Please refer to Appendix ‘C’ for a summary of the written comments received from the public at the PCC.

4.0 Issues Raised by the Public at the PCC

Some of the main issues and concerns raised by the public through the public participation process on this project are as follows (responses to other questions and concerns are provided in Appendix D:

a) At the Arthur Street intersection, add a dedicated left turn lane on Church Street to the east and west in order to minimize the queues during morning and afternoon peak times.

Two comment sheets and a number of attendees at the PCC noted that during the morning and afternoon peak times, the queues on Church Street east and west of
Arthur Street build up past the approaching side roads which block access for example into Memorial Avenue (50 metres east of Arthur Street) and the entrance to the Home Hardware plaza (62 metres west of Arthur Street). It is the opinion of the public that dedicated left turn lanes would reduce the queues.

**Project Team Response:**

The Project Team first looked into the option of simply altering the signalization at the Church Street/Arthur Street intersection to provide advance movements in just one direction at a time, i.e. split phasing. This process works well where traffic volume is much higher in one direction than the other, however, at the Church Street/Arthur Street intersection, forecast traffic volumes are the same in both the eastbound and westbound directions, hence there is no clear choice about which direction to prioritize. As a result, split phasing would have a negative impact on the intersection because the time savings in one direction can only be achieved at the expense of the other direction (i.e. if we advance the EB direction, WB operations will suffer, and vice-versa). In addition, operating split phases also increases delay and queuing on Arthur Street and it is less than ideal for pedestrians.

Subsequently, an intersection analysis was done to examine the benefits of providing left turn lanes as suggested by the public. Three options were analyzed using traffic volumes projected to 2029 to reflect conditions a decade in the future.

**Option 1:** Do nothing

**Option 2:** EB/WB Left-Turn Lanes (LTLs)

**Option 3:** WB Left-Turn Lane (LTL) Only

The analysis of the three options is summarized in Appendix E.

**Removal of on-road parking on Church Street**

Option 2 would result in the removal of all 7 of the on-road parking spots on the north and all 4 spots on the south side of Church Street, west of Arthur Street. Option 3 would result in all of the on-road parking spots being removed on the south side but only 4 out of 7 spots being removed on the north side.

**Township of Woolwich Council Meeting**

With the potential impact on parking for local businesses and as a result of significant interest from the local Business Improvement Association on behalf of its members, the Township of Woolwich opted to host its own public meeting with Regional staff participating, proposing the implementation of the left turn lanes and the removal of on-road parking on Church Street west of Arthur Street. A number
of the business owners/tenants from the south side of Church Street attended the Township meeting and were strongly opposed to the removal of the parking, stating that it's vital to their businesses.

After deliberation at the Township Council meeting held on October 2nd, 2018, the Council of the Township of Woolwich endorsed Option 2, as outlined in Township Council Report E51-2018 (Appended to this report as Appendix F), which includes the removal of all 7 of the on-road parking spots on the north and all 4 spots on the south side of Church Street west of Arthur Street, to a point 70 metres west of Arthur Street.

**Project Team Recommendation**

Currently, the intersection is functioning satisfactorily under the existing conditions and its improvement was not identified in the original project scope. However, with the implementation of Option 2 (LTLs east and west of Arthur Street), the intersection function improves substantially with minimal additional cost to the project although it requires the removal of 11 on-road parking spaces. Since the addition of LTLs would result in a reduction in queue lengths and delay for many motorists, the Project Team is recommending the implementation of Option 2 as part of this project, which was also endorsed by Township of Woolwich Council. It is noted that customers and delivery vehicles for each of the affected businesses fronting Church Street have alternative parking available in rear parking lots or on Arthur Street.

b) **Add more trees to the Church Street Corridor**

A number of residents advised that they would like to see more trees added along the Church Street corridor.

**Project Team Response:**

The urban part of the Church Street corridor has narrow boulevards and little or no room for tree planting. There are opportunities to plant some trees in the existing rural portion of the corridor (George Street to the east project limit, east of Spruce Lane) and the Project Team will be exploring tree planting options further during the detailed design phase of the project and trees would be planted within the road allowance where space permits.

c) **Add dedicated on-road cycling lanes to the Church Street Corridor**

A number of residents asked for on-road cycling lanes to be installed throughout the entire corridor.

**Project Team Response:**
As part of the proposed design, on-road bike lanes would be implemented from the project’s east limit (120m east of Spruce lane) to 50m east of Duke Street. (See Appendix B for recommended design cross-sections). From Duke Street westerly towards Arthur Street, the corridor narrows significantly and there is insufficient room to provide 1.5m wide on-road cycling lanes. Because of the proximity of the adjacent residences to Church Street (see photo below) entire properties would have to be purchased to include on-road cycling from Duke Street to Arthur Street. This would have significant financial and social impacts and this option was not supported by the Project Team.

The Project Team is instead recommending that the reconstructed Church Street include wider travel lanes (3.95m minimum in lieu of the 3.35m standard) from Duke Street to Arthur Street which can be accommodated without significant property purchase requirements and which would provide a wider shared-use lane for cyclists, buggies and vehicles.

It should be noted that the Project Team has met on site with Mr. Patrick Gleeson and Mr. Matt Cowan, who are avid cyclers living and riding in the area and who had several ideas about the inclusion of cycling lanes. The group discussed connections from the proposed Church Street East on-road cycling lanes to the existing Church Street West on-road cycling lanes, by rerouting a cyclist onto Duke Street and then via local roads to eventually connect to Herbert Street, where the existing Church Street West on-road cycling lanes begin. The group concluded that
these other alternatives would be evaluated further with the Township and any Arthur Street crossings from local streets could be accommodated as part of the Region’s Arthur Street Improvements project, currently planned for construction in 2021.

5.0 Recommended Design Alternative

Based on a review of the technical information gathered for this project as well as a review of all public comments received, the Project Team is recommending that Regional Council approve the Recommended Design Concept for the improvements to Church Street, described as follows:

- Complete replacement of the deteriorated pavement structure;
- The addition of curb and gutter and storm sewers from George Street easterly to 120m east of Spruce Lane;
- Widening of the existing sidewalk to achieve the standards as recommended in the Accessibility for Ontarians with Disabilities Act (AODA);
- Upsizing of the existing watermain from 32mm to 150mm, and from 150mm to 300mm diameter for a total length of 550m, on behalf of the Township of Woolwich;
- Replacement of existing storm sewer infrastructure;
- Replacement of existing sanitary sewer infrastructure on behalf of the Township of Woolwich;
- Installation of a new 1.5m wide sidewalk on the north side of Church Street from George Street to the Elmira Union Cemetery driveway, approximately 340m to the east;
- Installation of detectable warning plates to facilitate barrier-free access at all sidewalk ramp and road crossing locations; and
- The construction of new left turn lanes on Church Street east and west of Arthur Street.

Please refer to Appendix ‘B’ for typical cross-sections of the Project Team’s Recommended Design Concept.

A number of existing trees will require removal to accommodate grading for the new cross-section. As is customary on Region projects, any existing trees requiring removal would be replaced on a “2 for 1” basis wherever possible.

Letters notifying interested members of the public that Regional Planning and
Works Committee will be considering approval of the Recommended Design Concept for this project at its November 6th, 2018 meeting were distributed during the week of October 15th, 2018.

6.0 Project Cost

The current estimated cost of the project based on the Recommended Design Concept is broken down as follows:

Region of Waterloo
(Road improvements, new sidewalks, share of storm sewers) $2,850,000

Township of Woolwich
(Share of storm sewers, sanitary sewers and local watermains) $330,000

Total Estimated Project Cost $3,180,000

7.0 Next Steps

All members of the public who have expressed an interest in this project have been notified directly of the opportunity to comment before a final decision is made for this project. Subject to Regional Planning and Works Committee approval of the Recommended Design Alternative, the project will proceed to detailed design and construction.

8.0 Project Schedule and Traffic Impacts

Subject to project approval at the November 14th, 2018 Regional Council Meeting, design approvals and property acquisitions are planned for 2019 and construction is planned for 2020.

Construction staging and traffic management plans are being developed. It is anticipated that some full closures of Church Street would be required to complete the work, especially in the narrow constrained right-of-way locations between Duke Street and Arthur Street; access to properties will however be maintained to the greatest extent possible at all times. Advanced notification would be provided prior to any full closure and detours would be provided and be properly signed.

Corporate Strategic Plan:

This project is consistent with the development of Strategic Focus Area 2 (Sustainable Transportation). This project specifically addresses Strategic Objectives 2.1 and 2.2:

- Create a public transportation network that is integrated, accessible, affordable and sustainable; and
- Build infrastructure for, and increase participation in, active forms of transportation (cycling and walking).
Financial Implications:

The Region’s 2018 Transportation Capital Program provides funding of $1,580,000 for the Region’s share of project costs. The Transportation Capital Program costs are to be funded from Regional Development Charges ($50,000, 3.2%) and from property taxes through the Roads Rehabilitation Capital Reserve and/or from Federal Gas Tax transfers ($1,530,000, 96.8%). The current project cost estimate for the Region’s share of the road and watermain work is $2,850,000; the estimated costs have increased as a result of the project scope being extended during the environmental assessment. This revised total will be reflected in the draft 2019 budget for Council consideration.

Other Department Consultations/Concurrence:

Nil

Attachments

Appendix A Key Plan
Appendix B Recommended Design Cross-Sections
Appendix C Public Comments from Public Consultation Centre
Appendix D Responses to other commonly asked questions and concerns
Appendix E Analysis of Left Turn Lanes on Church Street East and West
Appendix F Township of Woolwich Council Church Street/Arthur Street Intersection Recommendation

Prepared By: Boris Latkovic, Senior Project Manager, Design and Construction
Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Appendix A

Key Plan

REGIONAL ROAD No. 86 (CHURCH STREET)
IMPROVEMENTS
120m EAST OF SPRUCE LANE TO WEST OF ARTHUR STREET
ELMIRA, TOWNSHIP OF WOOLWICH
Appendix B

Recommended Design Cross-Section

Approx. 120m East of Spruce Lane to Larry’s Lane (Section A-A)
Larry's Lane to George Street (Section B-B)

- TWO 3.35m LANES WITH 1.5m BUGGY / BIKE LANE, 1.5m SIDEWALK (NORTH SIDE), NEW STEEL BEAM GUARDRAIL (SOUTH SIDE)

REGIONAL ROAD No. 86 (CHURCH STREET EAST)
120m EAST OF SPRUCE LANE TO WEST OF ARTHUR STREET
ELMIRA, TOWNSHIP OF WOOLWICH
George Street to 50m East of Duke Street (Section C-C)

- CONSTRUCTION = 4 EXISTING ROAD
- RIGHT OF WAY WIDTH VARIES - 16.27m TO 54.86m

EXISTING 0.5m CURB AND GUTTER
5.45m (E/W & BUGGY/BIKE LANES)
4.05m (W/B & BUGGY/BIKE LANES)
ASPHALT PAVEMENT
ASPHALT PAVEMENT

PROPOSED PAVEMENT MARKINGS

GEORGE STREET TO 50m EAST OF DUKE STREET (SECTION C-C)
- TWO - 3.35m LANES WITH 1.5m (NORTH SIDE) AND 2.1m (SOUTH SIDE) BUGGY/BIKE LANES,
1.5m SIDEWALK ADJACENT TO 0.3m COLOURED IMPRESSED CONCRETE BOULEVARD (NORTH SIDE)

REGIONAL ROAD No. 86 (CHURCH STREET EAST)
120m EAST OF SPRUCE LANE TO WEST OF ARTHUR STREET
ELMIRA, TOWNSHIP OF WOOLWICH
50m East of Duke Street to Riverside Drive (Section D-D)

- Maintain two existing 4.2m lanes, 1.5m (varies) sidewalk adjacent to 0.3m coloured impressed concrete boulevard (both sides)

Regional Road No. 86 (Church Street East)
120m East of Spruce Lane to West of Arthur Street
Elmira, Township of Woolwich
Riverside Drive to Memorial Avenue (Section E-E)

RIVERSIDE DRIVE TO MEMORIAL AVENUE (SECTION E-E)

- Two 4.2m lanes, 1.5m (varies) sidewalk adjacent to 0.3m coloured impressed concrete boulevard (both sides), maintain existing hydro poles on south side, property acquisition required (north side)

REGIONAL ROAD No. 86 (CHURCH STREET EAST)
120m EAST OF SPRUCE LANE TO WEST OF ARTHUR STREET
ELMIRA, TOWNSHIP OF WOOLWICH
Memorial Avenue to 30m east of Arthur Street (Section F-F)

MEMORIAL AVENUE TO 30m EAST OF ARTHUR STREET (SECTION F-F)
- REMOVE AND REPLACE ASPHALT PAVEMENT, REMOVE AND REPLACE CURB & GUTTER AND SIDEWALK AS REQUIRED (SAME LOCATIONS)

REGIONAL ROAD No. 86 (CHURCH STREET EAST)
120m EAST OF SPRUCE LANE TO WEST OF ARTHUR STREET
ELMIRA, TOWNSHIP OF WOOLWICH
30m east of Arthur Street to Arthur Street (Section G-G)

30m EAST OF ARTHUR STREET TO ARTHUR STREET (SECTION G-G)

- Widen road, replace asphalt pavement, restore concrete island and restripe pavement markings to add left turn lane.

REGIONAL ROAD No. 86 (CHURCH STREET EAST)
120m EAST OF SPRUCE LANE TO WEST OF ARTHUR STREET
ELMIRA, TOWNSHIP OF WOOLWICH
Arthur Street to 70m west of Arthur Street (Section H-H)

ARThUR STREET TO 70m WEST OF ARThUR STREET (SECTION H-H)
- RESTRIPE PAVEMENT MARKINGS TO ADD LEFT TURN LANE

REgIONAL ROAD No. 86 (ChuRCH STREET EAST)
120m EAST OF SPRUCE LANE TO WEST OF ARTHUR STREET
ELMIRA, TOWNSHIP OF WOOLWICH
Appendix C
Public Comments PCC

Rick Frey
Please change the Arthur/Church intersection to include easier left/right turns. Please stop creating bottlenecks in our township. ie – Why not get rid of the island and put two lanes.

Dan Holt
Eliminate 4 curb parking spots on Church @ Kitchen Kuttings. Shoppers Mart – put in 2 lanes maybe take out some of the island & have 2 lanes. Put in left turn lanes & lights all 4 directions on Church/Arthur to eliminate all the danger & hassle at the intersection.

Jeff Cole
Sidewalks are good! Good for seniors, lots of seniors in the area. Curb on north sidewalk easterly from Riverside should be “soft” curbs to permit bikes & buggies to easily escape transport trucks. Truck-buggy conflict is more of an issue than buggy-pedestrian conflicts. Pedestrian crossing from Duke north-south is highly desirable – to permit/assist access to the park, etc.

Ken & Myrna Shantz
We will be happy to have sidewalk access into town. The bike lanes are also appreciated.

Viv Delaney
This appears to be not the most effective and financial use of taxpayers dollars (I have lived here since 2004 and very few people walk on the sidewalk beyond the washroom area due to the traffic, noise, odour and dangerous driving. The hills on both side are difficult for residents to use esp. in the winter (ice and snow creates problems).

Comments and concerns regarding this project.
Enhancing the entrance into Elmira is a wonderful project. The concept of this plan was communicated:
1 – improvement of the appearance of the entrance to the town for more of an urban environment appearance. I would like to know why? (Most of the residents of this area want to maintain the feeling of the warmth of a small town. This is why we do not live in larger centres.)
2 – Traffic slowing is another reason that has been stated. There appears to be many other methods that have not been implemented to slow or control the traffic. Signs, textured roads, more police presents etc.
Concerns:
- this is not a safe walking area for pedestrians.
- the noise, odours from the trucks are extremely unpleasant. (Animal excrement and other ???)
- safety for the horse and buggy traffic.
- manipulation of large transportation trucks, farm equipments
The environment structural changes by this plan does make one question the purpose. One must question the logic and reasons.

Question: Will the similar problems be created as on the westside of Arthur?

Should tax dollars be spent in this manner? Why not spend this money in other areas that need other infrastructural improvement.

Please comment and address these issues:

Property Impact visually
Heritage Homes structural damage and consequences?
Signage to the town, park, streets and nature trails
Mature trees and other vegetation in this area

Safety Impacts for:
- plans for improving Safety for pedestrians, cyclists, vehicles, buggies animals (horses, dogs) especially during the winter weather
- signage for hidden road at George St?

Access planning for Emergency:
- Health
- Chemical

Road Impact Plan concerns to be addressed:
- improving traffic flow
- limiting the truck traffic on Duke St. (alternative solutions?)
- improving the road so truck turning do not have to turn on the sidewalk or go to the wrong way on Riverside (one way street)
- how will the disabled manage with hills esp. in the winter

Tree assessment needs with consideration for:
- aesthetics
- improve air quality
- food and shelter for birds and other wildlife
- time of maturity
What impact will there be on the present trees?
What tree protection during construction is that in plan?

Snow Removal
- sidewalks/drive ways
- entrance to park
Who will be cleaning the snow off the sidewalks?

Noise Impact:
Suggestions foe reducing the noise levels on Street
- Signage to not use air-brakes
- careful placement of sewer grids
- enforce the 50/km/hr rule
Will there be public consultation with the Visual Conception Design?
Will I be able to request consultation of the effects on my property in order to be able to plan my garden in the future.
What impact will there be on property value?
Will there be information on how the park will be impacted?

**Pollution and odour concerns:**
- odour from trucks
- Pet Food Plant

**Park and Trail Access:**
- need signs and maps

**Landscape design:**
- concerns regarding blocking traffic view

**Bolender Park Hills:**
- Children to play on in the winter ie sledding will that be effected?
Will there be boulevards?
Plants/flowers/shrubs will we be able to select them?

**Migration Area for Birds**
- has that been taken into consideration around the bridge?

**Bridge**
-concerns of visibility to prevent vandalism/graffiti

**Lighting**
- Types of lights
Placement of lights so not to disturb residents in their homes at night

**Strategic Plan**
Please identify opportunities, challenges and external force that may affect this plan presented the residents of Elmira
How will this protect, enhance, direct growth, support the area over a long term

**Transportation effects:**
- Trucks
- Automobiles
- Cycling
- Horse and buggy
- Walking
- Disabled modes of transportation for the disabled.
Resident involvement will this be encouraged in this project?
How will the downtown business effected?
Will we be able to access our drive ways during this time of construction?
Will the residents in the area around George/High street be effected?
Will there be a plan for dust control?
The following comments were received prior to the PCC as the individuals were not able to attend.

Patrick Gleeson
I have concerns about the lack of cycling infrastructure from Arthur Street to 50 meters East of Duke Street.
1) Full Construction Project with 50-60 year life span: Now that this project is replacing all the underground, I believe this street will not be rebuilt for 50-60 years. In the last 25 years, Elmira has doubled in size. I believe your long term growth plans call for growth at this rate. Why are we not building continuous 1.5 meter cycling lanes for the present and future?

2) School Cycling Route: Children from the George/High Street area have no cycling lane to cycle to Riverside School.

3) Commuter/Tourist Cycling Route: As cycling holidays become more popular, there is a need for cycling infrastructure for long distance on road routes from Lake Huron to Guelph/Toronto area.

4) Healthy Communities: We want to encourage cycling as an active recreation. The recreational/family cyclist is looking for a continuous 1.5 meter lane on a new road build. This street has ever increasing large truck and agricultural traffic

5) Regional Cycling Lane Policy: What happened to the 1.5 meter cycling lane policy? There is nothing worse than having a cycling lane, and then it disappearing. This puts both the cyclist and vehicle drivers in an uncomfortable position.

6) Parking: Will there be any parking on either side of Church Street?

7) Buggy Traffic: Are we really supporting our unique Mennonite community by having the road reduced to 3.95 meters on the hill coming towards Arthur Street?

Joe Meissner

Dear Boris Latkovic, Woolwich Councillors and Mayor Sandy Shantz,

I have taken some time and reviewed the the information package on Church Street Road Improvements in Elmira. Improvements on this section of road are much needed so I was happy to hear that reconstruction will begin soon. I was also happy to see that cycling facilities would be added as well as this is the only road to cycle east of Elmira. However, when I read through the plan in its entirety I noticed that the cycling facilities were not included for the entire length of road reconstruction.

I found that bike lanes would only begin near Bolender park and head east out of town and there would be no cycling facilities to the west of Bolender Park. To me this seems incredibly backwards. Although at this time Bolender park may not be an overly popular destination for kids
but with the building of a brand new splash pad at this park I suspect it will become a very popular destination for kids and families. I think it is of utmost importance for kids to be able to ride their bikes safely to what will soon be a very popular park. I must also mention that kids living on the east side of Bolender park attend Riverside Public School and also have no access to cycling infrastructure to allow them to cycle to school safely.

With road work being a 50-60 year commitment I think it is very important to think about the future of this road. I am not entirely sure of the reason for stopping the bicycle lanes in the plans but there must be a way to include safe cycling infrastructure over the entire route. If bicycle lanes are not possible are the use of segregated multi-use paths a viable option?

I assume the reasons for this lack of cycling infrastructure would be discussed at the public consultation however I will not be able to attend in person to voice my concerns due obligations with work. I hope that this email will be sufficient to make you reconsider your plans.
Appendix D

Responses to other commonly asked questions and concerns

Q.1  “There appears to be many other methods that have not been implemented to slow or control the traffic. Signs, textured roads, more police presence etc.”

Response: The introduction of an urban cross-section (with a narrower paved width and curbs) from the east limits of the project down the hill to George Street will help encourage lower speeds on this currently rural section of Church Street.

Q.2  “Heritage Homes structural damage and consequences?”

Response: All homes will be inspected prior to construction using a home inspection service and a report will be prepared summarizing the existing conditions of the house. Construction vibration monitoring will be implemented to avoid damage to any homes.

Q.3  “What tree protection during construction is in plan?”

Response: There are no trees in close proximity to the construction that will require protection.

Q.4  “Who will be cleaning the snow off the sidewalks?”

Response: As in all other areas of Elmira, the Township of Woolwich will assume all snow removal duties on existing and new sidewalks.

Q.5  “Will I be able to request consultation of the effects on my property in order to be able to plan my garden in the future?”

Response: Regional staff including the Project Manager will be available for consultation at any time prior to and during construction.

Q.6  “Landscape design: concerns regarding blocking traffic view”

Response: Any new landscaping will be designed to ensure it does not block sightlines for motorists on Church Street or for those exiting driveways.

Q.7  “Lighting - Types of lights”

Response: New lighting is not included as part this project; the existing LED lighting will remain.

Q.8  “Resident involvement - will this be encouraged in this project?”
Response: Public consultation was included as an important part of this project and all adjacent residents and businesses have been advised, by way of direct mailings, of opportunities for input and comment. In addition, in advance of the PCC, the travelling public was invited to participate through on-site signage and newspaper advertisements. All members of the public who attended the PCC or who have expressed an interest in the project have been and will continue to be kept apprised of project status, and construction details and impacts on adjacent property owners will be provided in advance of the work. The Region’s Project Manager is available to address any specific issues at any time.

Q.9  “How will the downtown business be affected?”

Response: Downtown businesses will have accesses maintained to the greatest extent possible during construction. Short-term closures of individual driveways will be required for certain elements of the construction, including deep sewers, curb/sidewalk placement and final paving. Notification will be provided to all affected residents and businesses in advance of any access disruptions and alternate parking arrangements will also be made in advance.

Q.10  “Will we be able to access our driveways during this time of construction?”

Response: Similar to the comments above for commercial accesses, residential driveways will remain open and accessible to the greatest extent possible and notification will be provided in advance of any required access closures.

Q.11  “Will the residents in the area around George/High Street be affected?”

Response: Access will be maintained at all times to George Street for residents residing on George Street and High Street.

Q.12  “Will there be a plan for dust control?”

Response: As per standard practice on Regional construction projects, dust will be controlled by using contract items for the application of water and calcium chloride as required to control dust during the work.
Appendix E

Analysis of Left Turn Lanes on Church Street East and West

<table>
<thead>
<tr>
<th>2029 PM Peak Hour</th>
<th>Existing EB</th>
<th>Existing WB</th>
<th>EB/WB LTL EB</th>
<th>EB/WB LTL WB</th>
<th>WB LTL only EB</th>
<th>WB LTL only WB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume to Capacity (v/c) Ratio</td>
<td>0.91</td>
<td>0.77</td>
<td>0.63</td>
<td>0.62</td>
<td>0.84</td>
<td>0.60</td>
</tr>
<tr>
<td>Approach Delay (s)</td>
<td>47.5</td>
<td>30.3</td>
<td>22.6</td>
<td>23.9</td>
<td>37.2</td>
<td>22.9</td>
</tr>
<tr>
<td>Queue Length 50th %ile (m)</td>
<td>59.7</td>
<td>52.9</td>
<td>42.4</td>
<td>44.6</td>
<td>56.8</td>
<td>43.8</td>
</tr>
<tr>
<td>Queue Length 95th %ile (m)</td>
<td>118.6</td>
<td>98.9</td>
<td>72.3</td>
<td>73.8</td>
<td>111.9</td>
<td>72.5</td>
</tr>
</tbody>
</table>

Option 1 (Existing/Do Nothing)

- The v/c ratios indicate that volume does not exceed capacity under any scenario.
- For the 95th %ile analysis, the queue lengths are unpredictable, meaning 95% of the time the EB and WB queue lengths may be 118.6m and 98.9m long, respectively, but could be longer due to traffic volumes occasionally exceeding the capacity of the intersection.
- West of Arthur Street: the access to the rear laneway behind Kitchen Kuttings (SW corner of Church Street/Arthur Street intersection) is located about 45 metres west of Arthur Street, the access to the Home Hardware Plaza is about 62 metres west, and Maple Street is about 115 metres west measured from the EB stop bar. Under the existing cross-section, queues would on average block access to the laneway, and occasionally block access to the Home Hardware Plaza and Maple Street.
- East of Arthur Street: Memorial Avenue is about 50 metres from the WB stop bar and Cross Street is 90m from the WB stop bar. Under the existing cross-section, average queues will block access to Memorial Avenue and the worst case scenarios would block Memorial Avenue and Cross Street.

Option 2 (EB/WB LTLs)

- The addition of EB and WB LTLs reduces the EB approach delay by approximately 25 seconds and WB approach delays by approximately 6 seconds, compared to Option 1, meaning the vehicles won’t have to wait as long to reach the intersection.
- Average queues are reduced by 10-15 metres by adding LTLs.
- For the 95th %ile analysis (i.e. “worst case”), queues are affected by adding LTLs as follows:
  - WB: Queues are reduced by about 25 metres
  - EB: Queues are reduced by about 45
West of Arthur Street: Under Option 2, average queues would never block access to the Kitchen Kuttings laneway, the Home Hardware Plaza entrance or Maple Street.

East of Arthur Street: Under Option 2, average queues would never block access to Memorial Avenue and in the worst case scenarios would only occasionally block Memorial Avenue but would never block Cross Street.

Option 3 (WB LTL only)

- The addition of a WB LTL only reduces EB and WB approach delays by approximately 10 and 8 seconds, respectively.
- Compared to Option 1, average queues are only reduced by a few metres,
- Compared to Option 2, WB average queues are reduced by 1 metre, and EB average queues are increased by 14 metres
- West of Arthur Street: Under Option 3, queues would on average block access to the Kitchen Kuttings laneway, and would occasionally block access to the Home Hardware Plaza and Maple Street.
- East of Arthur Street: Under Option 3, average queues would never block access to Memorial Avenue and in the worst case scenario would occasionally block Memorial Avenue but would never block Cross Street.
Appendix F

Township of Woolwich Council Church Street/Arthur Street Intersection Recommendation

October 2, 2018

By Email

Boris Latkovic
Regional Municipality of Waterloo
150 Frederick Street, 6th Floor
Kitchener, Ontario N2G 4J3

Dear Mr. Latkovic,

RE: Resolution – Church Street and Arthur Street Intersection

This letter is to inform you that the Council of the Township of Woolwich ratified the following resolution at the Council meeting held on October 2nd, 2018:

That the Council of the Township of Woolwich endorses Option 2, which is the installation of 2 left turn lanes on Church Street (Regional Road 86) when the Regional Municipality of Waterloo undertakes the reconstruction of Church Street in 2020, and that this endorsement be forwarded to the Regional Municipality of Waterloo Staff and Council, as provided in Report E51-2018 respecting Church Street and Arthur Street Intersection Improvements.

Should you have any questions, please contact Sarah Goldrup, Council and Committee Coordinator, by email at sgoldrup@woolwich.ca or by phone at 519-669-6004.

Yours truly,

[Signature]

Val Hummel
Municipal Clerk
Township of Woolwich
519-669-6005

*Proudly remembering our past; Confidently embracing our future.*
Region of Waterloo
Transportation and Environmental Services
Transportation

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 6, 2018  File Code: C14-60/58 Kit, T01-20/58
Subject: Fischer-Hallman Road (Regional Road #58) Traffic Operations at Proposed Development, 1250, 1270 and 1314 Fischer Hallman Road, City of Kitchener

Recommendation:

For information.

Summary:

On October 2, 2018, representatives from ONE Properties appeared as delegates at the Planning and Works Committee meeting to request approval for a full-movement access controlled by traffic signals for a proposed development on the southeast corner of Fischer-Hallman Road (Regional Road #58) and Bleams Road (Regional Road #56). Regional staff from the Planning, Development and Legislative Services Department presented Report PDL-CPL-18-40 to Regional Planning and Works Committee on October 2, 2018 to inform Committee members of this issue. Report PDL-CPL-18-40 is attached as Appendix A for information. After hearing the delegations and some discussion, the Committee requested staff to provide a follow-up report on November 6, 2018 with a recommendation regarding the preferred traffic control at the proposed access at the southern limits of the development.

The proposal for the development includes three accesses: two on Fischer-Hallman Road and one on Bleams Road. The northerly access on Fischer-Hallman Road and the access on Bleams Road are proposed to be right-in/right-out and the southerly access on Fischer-Hallman Road is proposed to be a full-movement access controlled by traffic signals. The Developer submitted a Transportation Impact Study which included an assessment of the warrant for the proposed traffic signals. Both City and
Regional Staff agree that the traffic signal warrant methodology used by the Developer’s consultant was incorrect and that traffic signals are not warranted at this location. City and Regional staff also agree that right-in/right-out control for all three accesses would adequately provide for all movements to/from the site.

Regional and City staff met to discuss options to resolve the issue with the Developer’s request for a signalized full-movement access to the site. After reviewing various traffic control and access location options, both City and Regional staff agreed that should additional traffic control be warranted at a location on Fischer-Hallman Road, it would be beneficial to align the proposed access with another anticipated access to the property on the west side of Fischer-Hallman Road. As a result of these discussions, it was agreed that staff would assist ONE Properties in arranging a meeting between the two developers to examine the feasibility of aligning the two proposed accesses across from one another.

The installation of unwarranted traffic controls along Fischer-Hallman Road will result in an increase in collisions and a decrease in vehicular capacity. Staff are concerned that a ‘one-off’ decision at this location may compromise the Region’s options when responding to future access and traffic control requests along this corridor. Therefore, staff continue to assert that right-in/right-out control is the best option for the subject access.

Staff plan to report back to Regional Council once the meeting between the two developers and any additional analysis and review has been completed.

Report:

1.0 Background

On October 2, 2018, representatives from ONE Properties appeared as delegates at the Planning and Works Committee meeting to request approval for a full-movement access controlled by traffic signals for a proposed development on the southeast corner of Fischer-Hallman Road (Regional Road #58) and Bleams Road (Regional Road #56). Regional staff from the Planning, Development and Legislative Services Department presented Report PDL-CPL-18-40 to Regional Planning and Works Committee on October 2, 2018 to inform Committee members of this issue. Report PDL-CPL-18-40 is attached as Appendix A for information. After hearing the delegations and some discussion, the Committee requested staff to provide a follow-up report on November 6, 2018 with a recommendation regarding the preferred traffic control at the proposed access at the southern limits of the development.

1.1 Proposed Development

ONE Properties is proposing a mixed use development, referred to as the “WAM Development”, on the southeast corner of Fischer-Hallman Road (Regional Road #58) and Bleams Road (Regional Road #56) in the City of Kitchener. The site is ultimately

proposed to be developed with 571 residential units, 15,000 square feet of office space, and 78,000 square feet of retail space. The City of Kitchener has approved the required zoning by-law amendment to permit the development. This zoning by-law amendment has been appealed to the Ontario Local Planning Appeal Tribunal (LPAT). Resolution of this appeal may take several months.

As part of the development, the applicant has proposed access to the site at three locations, one right in/right out to Bleams Road, one right in/right out on Fischer-Hallman Road in the middle of the site, and one full movement access on Fischer-Hallman at the south end of the site.

ONE Properties submitted a Transportation Impact Study which proposed a full movements access controlled by a traffic control signal at the south end of the development. Regional staff reviewed this study and concluded that the proposed traffic control signal is not warranted and cannot be justified.

Regional staff has advised ONE Properties that the proposed access to 1250, 1270 and 1314 Fischer Hallman Road should operate with right-in, right-out only traffic movements to minimize collisions and to minimize delay along this corridor.

1.2 Fischer-Hallman Class Environmental Study

On February 23, 2016, Regional Planning and Works Committee approved the recommended design alternative for Fischer-Hallman Road from Bleams Road to Plains Road in the City of Kitchener. The approved design included the reconstruction and widening of Fischer-Hallman Road with a raised median island. The raised median was specifically included in this project to provide access control. Raised medians provide enhanced safety along arterial roads as they reduce or eliminate left turns to and from private accesses as these left turns are a major source of collisions. Raised islands provide a source of refuge for pedestrians making it easier to cross the road in two stages and are proven to enhance safety for pedestrians. This road configuration is similar to the improvement plan for Franklin Boulevard in Cambridge where Council approved a continuous raised median with U-turns at roundabouts to reduce collisions. In a similar fashion, the Fischer-Hallman Road improvements approved by Council includes roundabouts at all major intersections. To facilitate pedestrian connections across Fischer-Hallman Road, the project also includes Level 2 Pedestrian Crossovers at all planned roundabouts and, when warranted, the installation of two pedestrian/trail crossings; one located approximately 280 metres south of Bleams Road and the other 550 metres north of Seabrook Drive. Based on the planned pedestrian connections, along the entire project, the corridor is proposed to have a pedestrian crossing every 400-500 metres on average. The project design was also endorsed by the Region’s Active Transportation Advisory Committee.

Fischer-Hallman Road is planned to be a key connection to Provincial Highway 401 at Cedar Creek Road as per the Region’s Transportation Master Plan. This connection is
intended to facilitate large volumes of traffic and provide access to the Provincial highway network.

The Region’s approved design provides the required capacity, maximizes safety through access control, enhances traffic operations and provides pedestrian connectivity along and across Fischer-Hallman Road.

2.0 Regional and City Staff Meeting

On October 16, 2018, Regional staff met with Transportation Engineering and Community Planning staff from the City of Kitchener to discuss the traffic control for the proposed access. At this meeting, City and Regional staff agreed that the traffic signal warrant assessment methodology used by the Developer’s consultant was incorrect and the Developer should re-analyse all the relevant data to determine the most appropriate traffic control for the proposed southerly access. City and Regional staff also agreed that should additional traffic control on Fisher-Hallman Road be warranted, it is recommended that the type and location of traffic control be coordinated between the WAM Development and the adjacent property on the west side of Fischer-Hallman Road. Aligning opposite accesses to one location would help to minimize the number of conflict points along the corridor. Several access location options were discussed at this meeting, including:

- Location as proposed by ONE Developments;
- Optional locations north of proposed access location; and
- Locating the access location at the same point along Fischer-Hallman Road as another potential access on the opposite side of Fischer-Hallman Road that currently has site plan draft plan of subdivision approval.

In addition to discussing optional locations, Regional and City staff discussed optional traffic controls, including:

- Right-in/right-out control;
- Right-in/right-out/left-in control;
- 3 and 4-legged intersections with stop-control;
- 3 and 4-legged intersections with traffic signals; and
- 3 and 4-legged roundabouts.

Despite the discussions regarding options for traffic controls and access, Regional staff still prefer maintaining the intended function of Fischer-Hallman Road with right-in/right-out access control as per the Region’s Environmental Assessment report approved by Regional Council. Both City and Regional staff agree right-in/right-out accesses on both Fischer-Hallman Road and Bleams Road would provide for movements in all directions to/from the subject property.
Regional and City staff agreed to ask ONE Properties to explore the pros and cons of aligning the two proposed accesses as this may provide an acceptable access configuration for Fischer-Hallman Road and collectively for both property owners. Regional and City staff agreed to request both developers consider negotiating a common access location on Fischer-Hallman across from one another.

3.0 Staff Considerations

If traffic signals are installed at this location, the number of collisions are expected to increase. Regional staff examined collisions that occurred before and after the installation of traffic control signals in urban areas within the Region of Waterloo. Although traffic control signals are generally successful in reducing angle collisions, overall collisions increased by approximately 20% and injury collisions increased by 70% after the installation of traffic control signals. Regional staff were also able to identify that most vehicle/pedestrian collisions occur at signalized intersections. Therefore, Regional staff continues to recommend that unwarranted traffic control signals not be approved, regardless of the location.

Numerous additional traffic signals along an arterial corridor can stifle capacity causing undue delay which can result in drivers choosing other corridors for travel. The prime function of the Fischer-Hallman corridor is to move traffic, including pedestrians, cyclists and transit. While access to property is a function of most roads, property access is not the prime function of Fischer-Hallman Road. Given that both functions do exist along this corridor, staff make best efforts to strike a balance between facilitating accesses for new development and maximizing the safety and capacity along an arterial corridor such as Fischer-Hallman Road. That being said, for staff, the “balance” is weighted in favour of safety.

Staff are also aware of a number of other proposed developments along this portion of Fischer-Hallman Road that could possibly result in additional requests for signalized full-movement accesses. Staff are concerned that making a ‘one-off’ decision at this location may compromise the Region’s options when responding to future access and traffic control requests.

4.0 Next Steps

Regional and City staff will assist ONE Properties in arranging a meeting between the two developers to examine the pros and cons of aligning the proposed accesses across from one another. Should a common location be found feasible by all concerned, ONE Properties would be required to re-submit its Transportation Impact Study with required traffic control assessment analysis. Should a revised access location and/or traffic control scenario be approved that requires significant changes to the proposed design of Fischer-Hallman Road, including any changes to utility relocations or property acquisition, this change may result in a delay to the construction of phase 1 of the
Fischer-Hallman Road Improvements project. Staff plan to report back to Regional Council once the meeting between the two developers and any additional analysis and review has been completed.

**Corporate Strategic Plan:**

This report address the Region’s goal to optimize road capacity to safely manage traffic and congestion (Strategic Objective 2.4)

**Financial Implications:** Nil

**Other Department Consultations/Concurrence:**

Regional staff from the Planning, Development and Legislative Services Department has been consulted in the development of this report.

**Attachments:** Appendix A - Report PDL-CPL-18-40

**Prepared By:** Bob Henderson, Manager, Transportation Engineering

**Approved By:** Thomas Schmidt, Commissioner, Transportation and Environmental Services
Region of Waterloo
Planning, Development and Legislative Services
Community Planning

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: October 2, 2018
File Code: C14-60/58 Kit
Subject: Regional Road #58 (Fischer-Hallman Road) Traffic Operations at Proposed WAM Development, 1250, 1270 and 1314 Fischer Hallman Road, City of Kitchener

Recommendation:
For information.

Summary:
Nil.

Report:
ONE Properties is proposing a mixed use development on the southeast corner of Regional Road #58 (Fischer-Hallman Road) and Regional Road #56 (Bleams Road) in the City of Kitchener (Attachment 1). The site is ultimately proposed to be developed with 571 residential units, 15,000 square feet of office space, and 78,000 square feet of retail space (Attachment 2). The City of Kitchener has approved the required zoning by-law amendment to permit the development. As part of the development, the applicant has proposed access to the site at three locations, one right in/right out to Bleams Road, one right in/right out on Fischer-Hallman Road at the north end of the site, and one full movement access on Fischer-Hallman at the south end of the site. The concern is with the proposed full-movement access on Fischer-Hallman Road. Regional Staff are recommending that this access be right-in right out only. The applicant has indicated that they are planning to appear as a delegation at the October 2, 2018, Planning and Works Committee Meeting.

To support their request, ONE Properties submitted a Transportation Impact Study which proposed a full movements controlled by a traffic control signal. Regional staff
have completed their review of this study and have concluded that the proposed traffic control signal is not warranted. If traffic signals are installed at this location, the number of collisions are expected to increase. Regional staff examined collisions that occurred before and after the installation of traffic control signals in urban areas within the Region of Waterloo. Although traffic control signals are generally successful in reducing angle collisions, overall collisions increased by approximately 20% and injury collisions increased by 70% after the installation of traffic control signals. Regional staff were also able to identify that most vehicle/pedestrian collisions occur at signalized intersections. Therefore, Regional staff continues to recommend that unwarranted traffic control signals not be approved, regardless of the location.

Regional staff are recommending that the proposed access to 1250, 1270 and 1314 Fischer Hallman Road operate with right-in, right-out only traffic movements.

It should also be noted that Fischer-Hallman Road is a Controlled Access – Prohibited Road under Regional By-law 56-87, A By-law to Designate and Regulate Controlled – Access Roads. Regional Council approval will be required for any access on this road and will be the subject of a future staff report.

Alternative

Should Regional Council consider any access scenario other than the staff recommended right in/right out option, it is recommended that this matter be referred back to Regional staff for further review. The form of intersection control will need to be reviewed (i.e., roundabout versus traffic control signal) and an Intersection Control Study (ICS) will need to be completed by the applicant. In addition, the location of the access will need to be reviewed. The currently proposed access location would be appropriate for a right in right out access, however, a full movement access would need to be relocated to align with approved development across Fischer-Hallman Road.

It should also be noted that any changes to a full movement access will likely impact the design, approvals and timing of the Fischer- Hallman Road improvements as set out in the Fischer-Hallman Road Environmental Assessment.

Area Municipal Consultation/Coordination

City of Kitchener staff has been consulted throughout the review of this application.

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.

This report addresses the Region’s goal to optimize existing road capacity to safely manage traffic throughout Waterloo Region (Strategic Objective 3.3), and to implement
proven roadway safety strategies and education to enhance the safety of our roadways (Strategic Objective 3.3.2).

Financial Implications:
The construction of any access configuration for this development will be the responsibility of the developer.

Other Department Consultations/Concurrence:
Community Planning staff have consulted with Transportation and Environmental Services staff in the preparation of this report.

Attachments:
Attachment 1 – Key Plan
Attachment 2 – Master Site Plan

Prepared By: Richard Parent, Acting Manager, Corridor Planning
Approved By: Rod Regier, Commissioner, Planning, Development and Legislative Services
Attachment 1 – Key Plan

Subject Site

Region of Waterloo

KEY PLAN
Attachment 2 – Master Site Plan
Region of Waterloo

Planning, Development and Legislative Services

Community Planning

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: November 6, 2018

File Code: T15-40/54

Subject: Amendment to the Regional Municipality of Waterloo Controlled Access By-law #58-87 for Access to Regional Road 54 (Lackner Boulevard), City of Kitchener

Recommendation:

That the Regional Municipality of Waterloo approve an amendment to Controlled Access By-law #58-87 for a permanent full movement access on the east side of Regional Road 54 (Lackner Boulevard), approximately 140 meters south of Regional Road 4 (Ottawa Street South) in the City of Kitchener, as described in Report PDL-CPL-18-42, dated November 6, 2018.

Summary:

Nil.

Report:

A permanent access to a residential apartment development has been requested on Regional Road 54 (Lackner Boulevard), approximately 140 meters south of Ottawa Street South (Attachment 1). The subject property is municipally addressed as 1000 Lackner Boulevard, Kitchener. This section of Lackner Boulevard is a Controlled Access Prohibited Road according to the Region of Waterloo Controlled Access By-law #58-87.

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 are included in Schedule “A” (Controlled Access – Prohibited) include arterial roads and freeways where access...
to these roads must be restricted due to high speeds and volume of traffic. The main function of a Controlled Access – Prohibited Road is to move through traffic. All requests for changes to an existing access or for a new access on these roads require an amendment to the By-law. All remaining Regional Roads are included in Schedule “B” (Controlled Access – Regulated). The function of a Controlled Access – Regulated Road is to move through traffic and provide access to adjacent lands. Typically, these roads are front-lotted with access available only to the Regional Road or are comparatively lower volume roads.

The subject property is owned by Reid’s Heritage Homes and currently functions as a residential development sales trailer. The existing access to Lackner Boulevard was originally approved under a previous report to the Region of Waterloo Planning and Works Committee (P-13-093). The previous By-law amendment was temporary in nature and planned to be updated as a permanent full movement access upon the final re-development of the subject property. Reid’s Heritage Homes has submitted a Site Plan development application to the City of Kitchener to develop the subject property with six residential apartment buildings, totalling approximately 350 units. The development has been granted Approval In Principle by the City of Kitchener, and a Regional Road Access Permit is a requirement of final Site Plan approval. In association with the apartment building development, the existing access would be reconstructed in the existing location to Regional design standards.

As Lackner Boulevard is designated as Controlled Access – Prohibited from Regional Road 55 (Victoria Street North) to Regional Road 53 (Fairway Road South) under the Region’s Controlled Access By-law #58-87, an amendment to this By-law would be required to permit the proposed permanent full movement access prior to the issuance of a Regional Road Access Permit by staff.

Region of Waterloo staff support the proposed permanent full movement access to Lackner Boulevard and recommend approval of the proposed amendment to Controlled Access By-law #58-87.

**Corporate Strategic Plan:**

Managing access to the Regional Road system is integral to the development approval process and is represented in Focus Area 2: Sustainable Transportation: Optimize road capacity to safely manage traffic and congestion.

**Financial Implications:**

The private property owner would be responsible for all costs associated with the construction of the permanent access to Lackner Boulevard to Region of Waterloo standards.
Other Department Consultations/Concurrence:

Upon issuance of a Regional Road Access Permit, Transportation Engineering would issue a Regional Road Work Permit to allow works within the Lackner Boulevard right of way.

Area Municipal Consultation & Coordination:

The access design and location has been reviewed by City of Kitchener staff and they are in support of the proposed access to Lackner Boulevard.

Attachments

Attachment 1 – Key Plan showing location of the property

Attachment 2 – Location of the permanent access to Lackner Boulevard and proposed amendments to Controlled Access By-law #58-87

Prepared By: Jason Wigglesworth, Transportation Planner, Corridor Planning

Approved By: Rod Regier, Commissioner, Planning, Development and Legislative Services
Attachment 1

PROPOSED ACCESS LOCATION

SUBJECT PROPERTY
Report: PDL-LEG-18-71

Region of Waterloo
Planning Development and Legislative Services
Legal Services

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: November 6th, 2018  File Code: L07-90

Subject: Approval to Expropriate Lands (2nd Report) for River Road Extension (Phase 1) from Manitou Drive to Wabanaki Drive, Kitchener - River Road Extension (Project No. 07087)

Recommendation:

That Council of The Regional Municipality of Waterloo approve the expropriation of lands for the purpose of the construction of the extension of Phase 1 of River Road (Regional Road 56), in the City of Kitchener in the Regional Municipality of Waterloo as detailed in report PDL-LEG-18-71 dated November 6th, 2018, described as follows:

Fee Simple Partial Taking:

i. Part of Lot 1 Registrar’s Compiled Plan 1523, being Parts 7 to 10 on Reference Plan 58R-19749 (Part of PIN 22731-0373 (LT)) (Hidden Valley Road, City of Kitchener);

ii. Part of Lot 6 Registrar’s Compiled Plan 1524, being Parts 2-5 on Reference Plan 58R-20041 (Part of Pin 22731-0058 (LT)) (1 Chandaria Place, City of Kitchener);

iii. Part of Lot 3 Registrar’s Compiled Plan 1523 being Parts 20 and 21 on Reference Plan 58R-20041 (Part of PIN 22731-0370 (LT)) (Hidden Valley Road, City of Kitchener);

iv. Part of Lot 1 Registrar’s Compiled Plan 1523 being Parts 22 and 23 on Reference Plan 58R-20041 (Part of PIN 22731-0373 (LT)) (Hidden Valley Road, City of Kitchener);

v. Part of Lot 23 Registrar’s Compiled Plan 1525 being Parts 1-4 on Reference Plan 58R-20124 (Part of PIN 22594-0031 (LT)) (85 Webster Road, City of Kitchener);
vi. Part of Lot 23 Registrar’s Compiled Plan 1525 being Part 6 on Reference Plan 58R-20124 (formerly described as Part 6 on Reference Plan 58R-20049) (Part of PIN 22594-0039 (LT)) (Wilson Avenue, City of Kitchener);

vii. Part of Lot 23 Registrar’s Compiled Plan 1525 being Parts 8-10 and 14 on Reference Plan 58R-20124 (Part of PIN 22594-0030 (LT)) (55 Webster Road, City of Kitchener);

viii. Part of Lot 26 Registrar’s Compiled Plan 1525 being Parts 21, 23 and 24 on Reference Plan 58R-20124 (Part of PIN 22594-0026 (LT)) (771 Wilson Avenue, City of Kitchener);

ix. Part of Lot 7 Registrar’s Compiled Plan 1524 being Parts 26-28 on Reference Plan 58R-20124 (Part of PIN 22731-0869 (LT)) (698 Wilson Avenue, City of Kitchener);

x. Part of Lot 8 Registrar’s Compiled Plan 1524 being Parts 30-32 on Reference Plan 58R-20124 (Part of PIN 22731-0054 (LT)) (10 Goodrich Drive, City of Kitchener);

xi. Part of Lot 10 Registrar’s Compiled Plan 1524 being Parts 35 and 36 on Reference Plan 58R-20124 (Part of PIN 22731-0860 (LT)) (25 Goodrich Drive, City of Kitchener);

xii. Part of Lot 41 Registrar’s Compiled Plan 1525 being Parts 8-12 on Reference Plan 58R-20125 (Part of PIN 22594-0082 (LT)) (50 Manitou Drive, City of Kitchener);

Temporary Easement – Grading:

The right and easement, being a temporary easement in gross, for the free and unobstructed, right, interest and easement terminating on the 31st day of December, 2023, for itself, its successors and assigns, and anyone authorized by it, on, over, under and through the following properties for the purposes of excavation, construction, installation, replacement, alteration, grading, and landscaping as required in connection with the proposed Phase 1 construction of the extension of River Road (Regional Road 56), from Manitou Drive to Hidden Valley Road/Wabanaki Drive, and all related improvement works ancillary thereto and for such purposes, the free, unimpeded and unobstructed access to the lands at all times by employees, agents, contractors, workers and anyone authorized by it, and vehicles, supplies and equipment at all times and for all purposes and things necessary for or incidental to the exercise and enjoyment of the right and easement:

xiii. Part of Lot 6 Registrar’s Compiled Plan 1524, being Parts 6 and 7 on Reference Plan 58R-20041 (Part of PIN 22731-0058 (LT)) (1 Chandaria Place, City of Kitchener);

xiv. Part of Lot 23 Registrar’s Compiled Plan 1525 being Part 5 on Reference Plan 58R-20124 (Part of PIN 22594-0031 (LT)) (85 Webster Road, City of Kitchener);
xv. Part of Lot 23 Registrar’s Compiled Plan 1525 being Part 7 on Reference Plan 58R-20124 (Part of PIN 22594-0039 (LT)) (Wilson Avenue, City of Kitchener);

xvi. Part of Lot 23 Registrar’s Compiled Plan 1525 being Parts 11-13 and 15 on Reference Plan 58R-20124 (Part of PIN 22594-0030 (LT)) (55 Webster Road, City of Kitchener);

xvii. Part of Lot 26 Registrar’s Compiled Plan 1525 being Part 22 on Reference Plan 58R-20124 (Part of PIN 22594-0026 (LT)) (771 Wilson Avenue, City of Kitchener);

xviii. Part of Lot 8 Registrar’s Compiled Plan 1524 being Parts 29 and 33 on Reference Plan 58R-20124 (Part of PIN 22731-0054 (LT)) (10 Goodrich Drive, City of Kitchener);

xix. Part of Lot 10 Registrar’s Compiled Plan 1524 being Part 37 on Reference Plan 58R-20124 (Part of PIN 22731-0860 (LT)) (25 Goodrich Drive, City of Kitchener);

xx. Part of Lot 41 Registrar’s Compiled Plan 1525 being Part 13 on Reference Plan 58R-20125 (Part of PIN 22594-0082 (LT)) (50 Manitou Drive, City of Kitchener).

And that staff be instructed to register a Plan of Expropriation for the property within three months of the granting of the approval to expropriate the property, as required by the Expropriations Act;

And that the registered owners be served with a Notice of Expropriation and a Notice of Possession for the property after the registration of the Plan of Expropriation and the Regional Solicitor is authorized to take any and all actions required to enforce such Notices including but not limited to any application pursuant to Section 40 of the Expropriations Act;

And that the Regional Solicitor is authorized to enter into an agreement with the registered owners, or to make an application under Section 39 of the Expropriations Act, to adjust the date for possession specified in the Notice of Possession as may be required;

And that all above-referenced fee simple partial takings situated adjacent to an existing Regional public highway be acquired for road widening purposes and therefore be deemed to form part of the adjacent public highway in accordance with subsection 31(6) of the Municipal Act, 2001;

And that if no agreement as to compensation is made with an owner, the statutory Offer of Compensation and payment be served upon the registered owners of the property in the amount of the market value of the interests in the land as estimated by the Region’s
appraiser in accordance with the *Expropriations Act*;

And that the Regional Solicitor be authorized to execute any Indemnity agreement or other document related to payment of the statutory Offer of Compensation;

And further that the Regional Solicitor be authorized to discontinue expropriation proceedings or any part thereof, in respect of the above described lands, or any part thereof, upon the registration on title of the required documentation to complete the transaction or if determined by the Commissioner of Transportation and Environmental Services that such lands, or any part or interest thereof, are not required for the subject Project.

**Summary:**

NIL

**Report:**

Regional Council approved the Class Environmental Assessment for the River Road (Regional Road 56) Extension, King Street to Manitou Drive, in the City of Kitchener on March 4, 2014 as outlined in Report E-14-029.

The proposed construction for River Road Extension will include the following:

- 3.6 km, 4-lane road between King Street and Manitou Drive;
- Bridges across Schneider Creek and across MTO-owned Highway 8 with ramps to access Highway 8;
- Complete road construction including curb and gutter, and storm drainage infrastructure, etc.;
- Roundabouts at the intersections of River Road at Wabanaki Drive north of Goodrich Drive, Goodrich Drive at Wabanaki Drive and at Wilson Avenue;
- Signalized intersection improvements at the intersection of River Road at King Street and Stonegate Drive/ Highway 8 ramps;
- Unsignalized intersection of River Road at Hidden Valley Road;
- multi-use trails, sidewalks and associated connections; and
- Street lighting, landscaped boulevards and continuous centre medians.

The proposed construction of the extension of River Road (Regional Road 56), from King Street to Manitou Drive will be completed over two phases:

- Phase 1: Manitou Drive to Hidden Valley Road/Wabanaki Drive
- Phase 2: King Street to Hidden Valley Road/Wabanaki Drive

The Phase 1 construction is scheduled to commence in the Spring of 2020 with Phase 2 construction planned to commence in 2022.

The implementation of the Phase 1 improvements directly impacts 23 properties in total, 11 of which are owned by the City of Kitchener, and the remaining 12 properties are privately owned. Land acquisitions as outlined in the Recommendation, and as shown in Appendix “A”, are currently required from eleven (11) of the impacted properties in private ownership and they are for construction of the Phase 1 extension from Manitou Drive to Hidden Valley Road/Wabanaki Drive. All affected properties are subject to a fee simple partial taking and eight (8) properties are also subject to a temporary grading easement to tie in to the multi-use trail which is being installed along with the road works. To date, the Region has completed a negotiated agreement with the owner of the property municipally known as 731 Wilson Avenue, City of Kitchener. Therefore, expropriation proceedings have been discontinued by the Region with respect to this property. A hearing of necessity has been requested by the owners of the properties municipally known as 190 Goodrich Drive (PIN 22731-0060 (LT)), and 1 Chandaria Place (PIN 22731-0057 (LT)). Region staff are working with these owners to address their concerns so that the expropriation of the required lands or interests can proceed in the near future. If required, a further report regarding these proposed expropriations will follow upon receipt of the Inquiry Officer’s report of the hearing of necessity.

It is noted that the eleven (11) impacted properties owned by the City of Kitchener have not been included in the expropriation. Region staff have been in contact with City staff regarding the requirements for a partial taking and a negotiated agreement is expected.

Council approved the commencement of expropriation of the subject properties on June 6, 2018 as detailed in Report PDL-LEG-18-38. The appropriate forms under the Expropriations Act were served on or about August 9th, 2018 in order to initiate formal proceedings under the Act for these properties. All of the affected property owners were previously contacted by Legal Services staff and informed of the project as well as the Region’s intention to commence the expropriation process and the Region’s Expropriation Information Sheet was provided to each of them. The affected property owners have also been provided with offers to purchase. Legal Services staff contacted all property owners and informed them of the Region’s intention to continue with the expropriation process in order to ensure that the construction timeline is maintained, including this report being presented to Council, as detailed in the Region’s Expropriation Information Sheet.

Council approval of the expropriations is being sought at this time to ensure that the Region has possession of the required lands and interests in the Spring of 2019 so that the majority of advance utility relocation work can be completed before Summer, 2019 which will facilitate the overall construction time line for Phase 1 of River Road.
Legal Services staff has been negotiating property acquisitions over the past several months and intends to continue negotiations with property owners in an effort to achieve settlements of their claims under the Expropriations Act.

Upon Council approval of the expropriation of the properties, such approval will be endorsed upon on a certificate of approval on the Plan of Expropriation for those properties not acquired under agreement. The Plan will then be registered within three months of the approval. Ownership of the property vests with the Region upon the registration of the Plan. Notices of Expropriation and Notices of Possession are then served upon all registered owners, including tenants as shown on the assessment roll. The Region will take possession of the required lands at least 3 months after service of the Notice of Possession.

After the registration of the Plans of Expropriation and prior to the taking of possession of the property, the expropriating authority is required to serve the registered owners with an offer in full compensation for their interests in the land. The offer must be accompanied by the immediate payment of one hundred (100%) of the appraised market value of the land to the registered owners as estimated by the Region's appraiser. The registered owners are also to be served with a report appraising the market value of the property, which report formed the basis for the offer of compensation.

The expropriation of the lands is on an "as is" basis and upon closing; the Region assumes all responsibility for the lands.

The subject lands are shown attached as Appendix “A”. A list of the corporate owners of the fee simple interest in the subject lands is attached as Appendix “B”. Regional staff have conducted corporate profile searches of affected corporate property owners and the directors and officers are listed for each in Appendix “B”. This list does not include tenants, easement holders or holders of security interests in the subject lands.

**Corporate Strategic Plan:**

This project supports Strategic Objective 2.3 “Build infrastructure for, and increase participation in, active forms of transportation (cycling and walking) and Strategic Objective 2.4, “Optimize road capacity to safely manage traffic and congestion”.

**Financial Implications:**

The Region’s approved 2018-2027 Transportation Capital Program includes funding of $5,570,000 in 2018 and $62,920,000 in 2019-2023 for River Road Extension (Project 07087) to be funded from Transportation Development Charges funded Debentures (71%, $48,480,000) and the Transportation Development Charges Reserve Fund (29%, 2825180).
$20,010,000). Debt servicing costs to be funded from future Regional Development Charge collections are estimated to be $3,504,000 annually over a period of 20 years on an estimated cost of borrowing of 3.8%.

**Other Department Consultations/Concurrence:**

Transportation and Environmental Services and Financial Services staff have been consulted in the preparation of this Report.

**Attachments**

Appendix “A” – Sketch of Project Area and Subject Properties

Appendix “B” – Corporate Profiles

**Prepared By:**  Fiona McCrea, Solicitor, Property

**Approved By:**  Debra Arnold, Regional Solicitor, Director of Legal Services
Appendix “A”

Maps of the Subject Lands (Map 1)
Appendix “B” – Corporate Profiles

1. Hidden Valley Road, City of Kitchener
   Owner: Pearl Valley Development Corp.
   Annual Return: February 11\textsuperscript{th}, 2018
   Directors/Officers: Peter Brian Benninger

2. 1 Chandaria Place, City of Kitchener
   Owner: Star Legacy Inc.
   Annual Return: August 26\textsuperscript{th}, 2018
   Directors/Officers: Brian Calder, Fred Ratford

3. 85 Webster Road, City of Kitchener
   Owner: Magnacap Inc.
   Annual Return: September 9\textsuperscript{th}, 2018
   Directors/Officers: Jan Eberhardt, Angela Munch

4. 55 Webster Road, City of Kitchener
   Owner: Eberhardt Partnership
   Annual Return: July 2\textsuperscript{nd}, 2017
   Directors/Officers: Jan Eberhardt, Thies C. Eberhardt, Heimke C. Eberhardt

5. 771 Wilson Avenue, City of Kitchener
   Owner: Hager Hinge Canada Limited
   Annual Return: July 8\textsuperscript{th}, 2018
Directors/Officers: Ralph J Hager II, Archer L Hager II, August W. Hager III, Brian R. Kelly, Joseph J. Niemeyer

6. 698 Wilson Avenue, City of Kitchener

Owner: Cantrans Holdings Ltd.

Annual Return: July 22nd, 2018

Directors/Officers: Michael Gondosch

7. 10 Goodrich Drive, City of Kitchener

Owner: Wesco Distribution Canada Co.

Annual Return: January 30th, 2018

Directors/Officers: Mi Yin Yuan, Brian M. Begg, Roger James, Domenic A. Macioce III, Gary Habsburg, Samantha L. O'Donoghue, Nelson Squires, Christine Pound

8. Wilson Avenue, City of Kitchener

Owner: 1734646 Ontario Inc.

Annual Return: October 7th, 2018

Directors/Officers: John C. Hohmeier, Robert Kuntz JR, Mary E. Kuntz, Mary Kuntz, Michael Kuntz

9. 25 Goodrich Drive, City of Kitchener

Owner: Skyline Commercial Real Estate Holdings Inc.

Annual Return: June 10th, 2018

Directors/Officers: Roy Jason Ashdown, Mike Bonneveld, Wayne Brian Byrd, Martin Julian Castellan, Jason Scott Castellan
Region of Waterloo
Planning Development and Legislative Services
Legal Services

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 6, 2018
File Code: L07-90
Subject: Surplus Declaration of Vacant Regional Lands, Part of Lot 46, German Company Tract, Township of Woolwich, East Side of Arthur Street South, Highway 86, Elmira

Recommendation:

That the Regional Municipality of Waterloo declare vacant lands described as Part of Lot 46, German Company Tract, Woolwich being Part 1, 58R1939, PIN 22239-0059(LT), in the Township of Woolwich, Regional Municipality of Waterloo, as surplus to the needs of the Region, as detailed in Report No. PDL-LEG-18-81 dated November 6th, 2018, and approve a sale process utilizing the local multiple listing service by listing the property with real estate broker(s) pursuant to the Region’s property disposition by-law and the satisfaction of the Regional Solicitor; and

That the net proceeds from the disposition of the surplus properties be transferred to the Water Capital Reserve Fund, as outlined in Report No. PDL-LEG-18-81 dated November 6th, 2018.

Summary: Nil.

Report:

The subject property is a vacant lot having a total estimated area of 17,424 Square Feet (0.4 acre) and is located adjacent to an improved residential property at 705 Arthur Street South, Elmira. The Region obtained the site in 1977 for the purpose of installing a test well to investigate the potential for a supply well at this property. No buildings were
constructed on the site. The test well was decommissioned by the Region in 2011, and Water Services staff advised that the lands are no longer required. The subject lands are shown on the map attached as Appendix “A”.

Information regarding the subject lands has been circulated to staff with the response that the lands are not required for any municipal purpose. Woolwich Township staff were also notified of the possibility of the property being declared surplus, with no indication of interest received.

The Region’s real property disposition by-law requires advertising of any proposed conveyance of an interest in Regional land in a local newspaper. Region Real Estate staff have complied with this requirement to inform interested parties of the consideration of this matter at the Committee meeting on November 6th, 2018, and Council meeting on November 14th, 2018.

The lands are zoned Agricultural, and are designated as Prime Agricultural by the Region’s Official Plan. Given the permitted uses, and that the property is marketable for stand-alone development, Regional Real Estate staff are recommending that an independent real estate agent be selected based on competitive process to list and market the lands on MLS to maximize market exposure, with the goal of maximizing sale proceeds.

**Corporate Strategic Plan:**

As the proceeds from the sale of the subject property will go to the Water Capital Reserve, this report supports Strategic Objective 3.2, Protect the quality and quantity of our water resources.

**Financial Implications:**

Expenses for publication and real estate fees to be paid by the Region. Net proceeds from the disposition of the surplus properties will be transferred to the Water Capital Reserve.

**Other Department Consultations/Concurrence:**

Information regarding this property has been circulated to all Departments resulting in no expressions of interest by Regional Staff.

**Attachments:**

Appendix “A”- location map of lands

**Prepared By:** Charlotte Karger, Property Agent

**Approved By:** Debra Arnold, Regional Solicitor
Appendix “A”

PIN: 22239-0059
Region of Waterloo
Planning Development and Legislative Services
Legal Services

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: November 6, 2018  File Code: L07-90

Subject: Surplus Declaration of Regional Lands; Transfer of Fee Simple Partial Interest to the City of Waterloo- 300 Northfield Drive East, Waterloo

Recommendation:

That the Regional Municipality of Waterloo:

a) Declare a Fee Simple interest in the lands described as Part of Lot 63, German Company Tract being Part 1 on Reference Plan 58R-20134, part of PIN 22282-0171 (LT), in the City of Waterloo, forming part of lands municipally known as 300 Northfield Drive East surplus to the needs of the Region, as detailed in Report No. PDL-LEG-18-84 dated November 6, 2018, pursuant to the Region’s property disposition by-law and the satisfaction of the Regional Solicitor; and

b) Approve, enter into an Agreement for, and execute all documentation related to transfer of Fee Simple interest to The Corporation of the City of Waterloo for the sum of $2.00, for the installation and maintenance of a Multi-Use Trail, of lands described as Part of Lot 36, German Company Tract being Part 1 on Reference Plan 58R-20134, part of PIN 22282-0171 (LT), in the City of Waterloo, as detailed in Report No. PDL-LEG-18-84 dated November 6, 2018 pursuant to the Region’s property disposition by-law and the satisfaction of the Regional Solicitor, with all registration fees and associated costs to be paid by the Region of Waterloo.

Summary: Nil.

Report:

The City of Waterloo, as a condition of approval of Site Plan SP-17-23, which site plan is for the GRT’s proposed Northfield Bus Facility located at 300 Northfield Drive East, in
the City of Waterloo, requires the dedication of lands for use as multi-use trail adjacent to Country Squire Road. In August of 2018 Regional Council approved the transfer of a permanent easement in favour of the City of Waterloo; however, City of Waterloo staff have now identified the need for a fee simple partial taking road widening dedication which would replace the permanent easement. Although the fee simple dedication will still be used for the multi-use trail, it will be incorporated into, and form part of, the road right of way of Country Squire Road. The proposed subject dedication will have a total area of 1217 square meters and will be situated along the northerly boundary of the property as shown on the site map attached as Appendix “A”.

The partial taking dedication to be conveyed to the City of Waterloo will not affect the Region’s proposed use of the property.

The Region’s property disposition by-law requires advertising of any proposed conveyance of an interest in Regional land in a local newspaper. Upon completion of the requirements of the Region’s property disposition by-law, the Region shall transfer the subject lands to the City of Waterloo.

**Corporate Strategic Plan:**

The proposed fee simple transfer, by facilitating the approval and construction of the GRT facility and providing a multi-use trail for the public, will help achieve two areas of the Strategic Plan specifically:

2.1 Create a public transportation network that is integrated, accessible, affordable and sustainable.

2.3 Build infrastructure for, and increase participation in, active forms of transportation (cycling and walking).

**Financial Implications:**

Registration costs and expenses for publication are to be paid by the Region of Waterloo and the fee simple interest will be transferred for nominal consideration as it is a condition of site plan approval. The subject lands have negligible to no market value.

**Other Department Consultations/Concurrence:**

Transportation and Engineering Services, Corporate Services, Planning Development and Legislative Services, and Community Services staff were consulted via internal circulation memorandum.

**Attachments**

Appendix “A” – Location Map of Lands

**Prepared By:** Tom Penwarden – Manager of Real Estate

**Approved By:** Debra Arnold – Regional Solicitor, Director of Legal Services
Appendix “A”
Region of Waterloo
Transportation and Environmental Services
Design and Construction

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 6, 2018
File Code: C04-30, 07259
Subject: University Avenue Reconstruction and Widening, Westmount Road to Erb Street, City of Waterloo, Amendment to Traffic and Parking By-Law 06-072

Recommendation:

That the Regional Municipality of Waterloo amend Traffic and Parking By-Law 06-072, as amended, following the completion of the resurfacing, reconstruction and widening of University Avenue from Westmount Road to Erb Street as follows:

- Add to Schedule 22, Reserved Lanes for Bicycles on both sides of University Avenue (Regional Road 57) from Westmount Road (Regional Road 50) to Erb Street (Regional Road 9).

Summary: Nil.

Report:

The design for the resurfacing, reconstruction and widening of University Avenue from Westmount Road to Erb Street in the City of Waterloo was approved by Regional Council on March 2, 2016. The project is currently underway. The project limits are shown in Appendix A.

The work includes the construction of new separated cycling lanes on both sides of University Avenue from Keats Way to Erb Street. From Keats Way to Westmount Road, a new separated cycling lane on the western side of the road and an on-road cycling lane and multi-use trail on the eastern side of the road are being constructed. University Avenue is expected to be re-opened to traffic by the end of November 2018 and construction is expected to be completed in 2019.
The construction of the cycling lanes will require that an amendment be made to Traffic and Parking By-Law 06-072, as amended, to reserve the lanes for use by cyclists only. By-Law 06-072 currently includes a prohibition of on-street parking on University Avenue from Westmount Road to Erb Street.

**Corporate Strategic Plan:**

The construction of cycling lanes on University Avenue between Westmount Road and Erb Street support Focus Area #2 (Sustainable Transportation) by building infrastructure for active forms of transportation.

**Financial Implications:**

Nil

**Other Department Consultations/Concurrence:**

Transportation Engineering staff have provided input into the recommendations of this report.

**Attachments**

Appendix A – Project limits

**Prepared By:** Peter Linn, Senior Project Manager

**Approved By:** Thomas Schmidt, Commissioner, Transportation and Environmental Services
Appendix A – Project limits

City of Waterloo

REGIONAL ROAD No. 57
UNIVERSITY AVENUE
KEATS WAY TO ERB STREET
City of Waterloo
Region of Waterloo

Transportation and Environmental Services

Design and Construction

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: November 6, 2018

File Code: C04-30, 5555

Subject: Fall 2018 Construction Update

Recommendation:

For Information.

Summary:

This report provides a status update for the major transportation, water, wastewater and waste management construction contracts that were under construction in 2018.

Overall, work was underway on 43 major Region construction contracts in 2018 and work has been substantially performed or is proceeding on schedule for 39 of those contracts. Some work on three road projects and one wastewater project will not be completed in 2018 as originally planned. Three major road projects were planned to be constructed over two years in 2018 and 2019.

The most up-to-date information about active, ongoing construction contracts affecting Regional roads is available on the Region’s website and on the Ping Street mobile application (“app”).

Report:

Every year, the Region undertakes numerous construction contracts to rehabilitate, upgrade and expand its infrastructure, including roads, bridges, airport, water and wastewater treatment plants, watermains, and waste management facilities. This report provides a status update for the largest transportation, water, wastewater and waste management construction contracts that were under construction in 2018. Smaller projects, generally less than $1,000,000 in value, are also completed each year.
for asset maintenance, repairs or replacement and are not summarized in this report.

Many road and bridge contracts are planned to be completed during a single construction season, typically between May and November each year. Larger-scale road and bridge contracts may be planned for several consecutive construction seasons. Road contracts often include work for local municipalities (sewers and watermains) and require coordination of work with local utilities (electricity, gas, and communications). Many water and wastewater treatment contracts require multiple years of construction and work is often carried out in all seasons.

The Region balances a variety of interests and approaches for managing traffic disruption and expediting construction. Wherever possible, roads are kept open to through traffic during construction. Maintaining traffic through construction zones generally slows the progress of construction but reduces traffic disruptions. In some cases, particularly with deeper underground work (sewers and watermains) in narrower road corridors, it is not possible to maintain through traffic during construction. In these cases, local access only is maintained to locations within the construction zone while through traffic is detoured to other routes. Some work, such as surface asphalt paving and work in busy intersections is scheduled at night or on weekends to reduce traffic disruption; however, this nighttime and weekend work can cause disturbance to nearby residences.

For some road contracts, the Region completes the final layer of asphalt (surface asphalt) the year after construction. This is done, in part, because surface asphalt is one of the final tasks on projects that can extend into November. A better quality, longer lasting surface can be achieved when surface asphalt is placed during the warmer temperatures typical of spring and summer rather than the colder temperatures typical of late fall. This approach also allows for any deficiencies from the original construction to be identified and repaired before the surface asphalt is placed.

The Region also completes landscape plantings for some contracts under a separate landscape contract either in the fall of the construction year or the following year. This is done in an effort to achieve economies of scale for landscape planting, improve the chances for successful establishment of new plantings, and provide enhanced maintenance and care of new plantings.

Sometimes, construction contracts are not completed as quickly as planned. Reasons for delays can include: unplanned site conditions that require additional work; delays experienced by third-party utilities when completing preparatory or concurrent work to the Region’s contracts; or a failure by the construction contractor to meet schedule milestones specified in the contract. The Region employs a variety of tools to manage the costs associated with unplanned work or other delays to construction contracts, such as: including contingency allowances in the contract to address unplanned site conditions that require additional work; and specifying liquidated damages for
November 6, 2018  Report: TES-DCS-18-19

contractors that fail to meet specified milestones without valid reasons.

A key milestone date for construction contracts is “substantial performance”, which is defined in Ontario legislation (the Construction Act). A construction contract is “substantially performed” when the improvement to be made under that contract or a substantial part thereof is ready for use or is being used for the purposes intended and when the value of remaining work is less than the specified percentage (between one and three percent of the contract price). When a contract is “substantially performed”, there may still be work required for items like landscape restoration or deficiency repairs. A construction contract is deemed to be “completed” under the Construction Act when the price to complete all remaining work is less than $1,000.

The status of the major road construction contracts underway in 2018 is summarized in Appendix A. Appendix B summarizes the status of major non-road Region of Waterloo construction contracts that are underway in 2018. Overall, work was underway on 43 major Region construction contracts in 2018 as listed in the Appendices and work has been substantially performed or is proceeding on schedule for 39 of those contracts. Significant contracts that have been substantially performed to date in 2018 include:

1. Fairway Road Widening from Pebblecreek Drive to Lackner Boulevard, Kitchener;

2. King Street Streetscaping and Reconstruction from ION Tracks to Bridgeport Road, Waterloo;

3. Fountain Street Bridge Replacement and Reconstruction Grand River Bridge to Preston Parkway, Cambridge;

4. Franklin Boulevard Extension from Myers Road to South Boundary Road, Cambridge;

5. Franklin Boulevard Improvements from Champlain Road to Main Street, Cambridge;

6. King Street, Fountain Street and Shantz Hill Improvements, Cambridge;

7. South Boundary Road Bridge At Cheese Factory Road, Cambridge;

8. Ament Line and Hergott Road Roundabout, Township of Wellesley; and

9. Waterloo Landfill New Cell SE4B.

Three major road contracts were planned to be constructed over two years in 2018 and 2019:

1. Weber Street reconstruction from Borden Avenue to Queen Street in Kitchener;

2. Ottawa Street reconstruction from Fischer-Hallman Road to Trussler Road in Kitchener; and,
3. Northumberland Street, Stanley Street and Swan Street Reconstruction in Ayr, Township of North Dumfries.

Work on Ottawa Street from Fischer-Hallman Road to Trussler Road was planned to shut down for this winter and restart in spring 2019. Some work will now continue into the winter in order to maintain the overall project schedule.

Some work on three road projects and one wastewater project will not be completed in 2018 as originally planned, as follows.

1. King Street from Montgomery Road to Ottawa Street, Kitchener, surface asphalt will now be completed in 2019;

2. University Avenue from Westmount Road to Erb Street is expected to reopen to traffic by the end of November with some sidewalk work, asphalt resurfacing between Westmount Road and Keatsway Drive and surface asphalt to be completed in 2019;

3. St. Andrews Street Improvements from Grand Ridge Drive to the south limit will now be completed in 2019; and

4. Kitchener WWTP, Contract 3, New Headworks and Secondary Treatment, work is about 90 percent complete and the remaining work will now be completed in 2019.

Each year, staff reviews construction outcomes (for example schedules, costs, quality and communications) in an effort to continuously improve construction practices and procedures for the next year.

The most up-to-date information about active, ongoing construction contracts affecting Regional roads is available on the Region’s website and on the Ping Street mobile application (app), which is available for free. The Region’s website provides a map and an alphabetical listing of Regional roads that are subject to active lane closures or road closures, together with links to local municipal road information. The Ping Street mobile application illustrates similar information about Regional and local municipal lane and road closures on a map of the Region.

Corporate Strategic Plan:

The contracts described in this report meet one or more of the Strategic Objectives under the Region’s Corporate Strategic Plan Focus Areas “Thriving Economy”, “Sustainable Transportation” and “Environment and Sustainable Growth”.

Financial Implications:

Funding for the contracts listed in this report was included in the Region’s approved Ten
Year Capital Programs.

**Other Department Consultations/Concurrence**: Nil.

**Attachments**:

- Appendix A – Fall 2018 Major Regional Road Construction Project Status
- Appendix B – Fall 2018 Non-Road Major Construction Project Status

**Prepared By**: Phil Bauer, Director, Design and Construction

**Approved By**: Thomas Schmidt, Commissioner, Transportation and Environmental Services
### Appendix A-1, Fall 2018 Major Regional Road Construction Project Status – Kitchener

<table>
<thead>
<tr>
<th>Project</th>
<th>Managed By</th>
<th>Limits</th>
<th>Actual (Estimated) Substantial Performance</th>
<th>Approximate Contract Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victoria Street Reconstruction including Bridge Replacement over Highway 85</td>
<td>MTO</td>
<td>Edna Street to Bruce Street</td>
<td>Victoria Street re-opened to traffic October 28, 2018</td>
<td>$1,450,000</td>
</tr>
<tr>
<td>Fairway Road Widening</td>
<td>Region</td>
<td>Pebblecreek Drive to Lackner Boulevard</td>
<td>October 2018</td>
<td>$3,050,000</td>
</tr>
<tr>
<td>Fischer-Hallman Road Watermain</td>
<td>Region</td>
<td>Bleams Road to Plains Road</td>
<td>November 2018</td>
<td>$3,851,300</td>
</tr>
<tr>
<td>King Street Reconstruction</td>
<td>Region</td>
<td>Montgomery Road to Ottawa Street</td>
<td>November 2018 (Surface Asphalt 2019)</td>
<td>$3,700,000</td>
</tr>
<tr>
<td>New Dundee Road Sanitary Sewer</td>
<td>Region</td>
<td>Robert Ferrie Drive Westerly 100m</td>
<td>August 2018</td>
<td>n/a (Developer-Funded)</td>
</tr>
<tr>
<td>Ottawa Street Reconstruction</td>
<td>Region</td>
<td>Fischer-Hallman Road to Trussler Road</td>
<td>(Fall 2019)</td>
<td>$6,765,000</td>
</tr>
<tr>
<td>Weber Street Reconstruction</td>
<td>Region</td>
<td>Borden Avenue to Queen Street</td>
<td>(Fall 2019)</td>
<td>$8,585,000</td>
</tr>
</tbody>
</table>
## Appendix A-1, Fall 2018 Major Regional Road Construction Project Status – Kitchener

### Projects moved to 2019

<table>
<thead>
<tr>
<th>Project</th>
<th>Managed By</th>
<th>Limits</th>
<th>Actual (Estimated) Substantial Performance</th>
<th>Approximate Contract Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homer Watson Boulevard Bridge Rehabilitations, Resurfacing and Multi-Use Trail</td>
<td>Region</td>
<td>Conestoga College Boulevard to Manitou Drive</td>
<td>Moved to 2019</td>
<td>$7,400,000</td>
</tr>
<tr>
<td>Homer Watson Boulevard Multi-Use Trail</td>
<td>Region</td>
<td>Hanson Avenue to Beasley Drive</td>
<td>Moved to 2019</td>
<td>$1,500,000</td>
</tr>
<tr>
<td>Lackner Boulevard Sanitary Sewer</td>
<td>Region</td>
<td>Ottawa Street Southerly 140m</td>
<td>Moved to 2019</td>
<td>n/a (Developer-Funded)</td>
</tr>
</tbody>
</table>
# Appendix A-2, Fall 2018 Major Regional Road Construction Project Status – Waterloo

<table>
<thead>
<tr>
<th>Project</th>
<th>Managed By</th>
<th>Limits</th>
<th>Actual (Estimated) Substantial Performance</th>
<th>Approximate Contract Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erb Street Intersection Improvements</td>
<td>Region</td>
<td>Caroline Street to Menno Street</td>
<td>October 2018</td>
<td>$2,115,000</td>
</tr>
<tr>
<td>King Street Ramp and Signal Improvements at Highway 85</td>
<td>Region</td>
<td>at Highway 85</td>
<td>(November 2018)</td>
<td>$1,250,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Surface Asphalt 2019)</td>
<td></td>
</tr>
<tr>
<td>King Street Streetscaping and Reconstruction</td>
<td>Region</td>
<td>ION Tracks to Bridgeport Road</td>
<td>August 2018</td>
<td>$6,180,000</td>
</tr>
<tr>
<td>Northfield Drive Widening</td>
<td>Region</td>
<td>Davenport Road to Bridge Street</td>
<td>October 2018</td>
<td>$8,480,000</td>
</tr>
<tr>
<td>University Avenue Widening</td>
<td>Region</td>
<td>Westmount Road to Erb Street</td>
<td>(open to traffic end of November 2018)</td>
<td>$2,850,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Surface Asphalt 2019)</td>
<td></td>
</tr>
<tr>
<td>Weber Street Trunk Watermain</td>
<td>Region</td>
<td>Union Street to Erb Street</td>
<td>(November 2018)</td>
<td>$1,400,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Surface Asphalt 2019)</td>
<td></td>
</tr>
</tbody>
</table>
### Appendix A-3, Fall 2018 Major Regional Road Construction Project Status – Cambridge

<table>
<thead>
<tr>
<th>Project</th>
<th>Managed By</th>
<th>Limits</th>
<th>Actual (Estimated) Substantial Performance</th>
<th>Approximate Contract Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highway 401 Widening</td>
<td>MTO</td>
<td>Highway 8 to Highway 24</td>
<td>(Summer 2019)</td>
<td>n/a</td>
</tr>
<tr>
<td>Franklin Boulevard Bridge Replacement</td>
<td>MTO</td>
<td>At Highway 401</td>
<td>(Franklin to be re-opened to traffic by end of November 2018)</td>
<td>n/a</td>
</tr>
<tr>
<td>Fountain Street Bridge Replacement and Reconstruction</td>
<td>Region</td>
<td>Grand River Bridge to Preston Parkway</td>
<td>August 2018</td>
<td>$13,000,000</td>
</tr>
<tr>
<td>Franklin Boulevard Extension</td>
<td>Region</td>
<td>Myers Road to South Boundary Road</td>
<td>October 2018</td>
<td>$6,820,000</td>
</tr>
<tr>
<td>Franklin Boulevard Improvements</td>
<td>Region</td>
<td>Champlain Road to Main Street</td>
<td>October 2018</td>
<td>$9,100,000</td>
</tr>
<tr>
<td>King Street and Fountain Street Improvements</td>
<td>Region</td>
<td>King Street, Eagle to Fountain</td>
<td>August 2018</td>
<td>$18,660,000</td>
</tr>
<tr>
<td>South Boundary Road Bridge</td>
<td>Region</td>
<td>At Cheese Factory Road</td>
<td>October 2018</td>
<td>$4,540,000</td>
</tr>
<tr>
<td>St. Andrews Street Improvements</td>
<td>Region</td>
<td>Grand Avenue to Cambridge south city limit</td>
<td>(Spring 2019)</td>
<td>$6,050,000</td>
</tr>
</tbody>
</table>
### Appendix A-4, Fall 2018 Major Regional Road Construction Project Status – Townships

<table>
<thead>
<tr>
<th>Project</th>
<th>Managed By</th>
<th>Limits</th>
<th>Actual (Estimated) Substantial Performance</th>
<th>Approximate Contract Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ament Line and Hergott Road Roundabout, Township of Wellesley</td>
<td>Region</td>
<td>Ament Line / Hergott Road Intersection and approaches</td>
<td>August 2018</td>
<td>$1,400,000</td>
</tr>
<tr>
<td>Nafziger Road Resurfacing, Township of Wilmot</td>
<td>Region</td>
<td>Berlett's Road to Erbs Road</td>
<td>(November 2018)</td>
<td>$2,328,100</td>
</tr>
<tr>
<td>Northumberland Street Reconstruction, Ayr, Township of North Dumfries</td>
<td>Region</td>
<td>Stanley Street to Swan Street</td>
<td>(Fall 2019)</td>
<td>$8,930,000</td>
</tr>
</tbody>
</table>

### Projects moved to 2019

<table>
<thead>
<tr>
<th>Project</th>
<th>Managed By</th>
<th>Limits</th>
<th>Actual (Estimated) Substantial Performance</th>
<th>Approximate Contract Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sawmill Road Reconstruction, Bloomingdale, Township of Woolwich</td>
<td>Region</td>
<td>River Street to Snyder's Flats Road</td>
<td>Moved to 2019</td>
<td>$2,085,000</td>
</tr>
</tbody>
</table>
### Appendix A-5, Fall 2018 Major Regional Road Construction Project Status – Other

<table>
<thead>
<tr>
<th>Project</th>
<th>Managed By</th>
<th>Limits</th>
<th>Actual (Estimated) Substantial Performance</th>
<th>Approximate Contract Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus Pads and Shelters at Various Locations</td>
<td>Region</td>
<td>(November 2018)</td>
<td>$699,758</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous Road Works at Various Locations</td>
<td>Region</td>
<td>(November 2018)</td>
<td>$1,870,000</td>
<td></td>
</tr>
<tr>
<td>Multi-Use Trails in Kitchener, Waterloo and Wellesley</td>
<td>Region</td>
<td>Erbsville Road from Keats Way 200m southerly Lackner Blvd, Zeller Drive to Ottawa Street Phillip Street to the “Research and Technology” ION station</td>
<td>(November 2018)</td>
<td>$673,500</td>
</tr>
</tbody>
</table>
## Appendix B - Fall 2018 Non-Road Major Construction Project Status

<table>
<thead>
<tr>
<th>Project</th>
<th>Actual (Estimated) Substantial Performance</th>
<th>Approximate Contract Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water and Wastewater</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conestoga Plains to West Montrose Watermain</td>
<td>August 2018</td>
<td>$3,387,698</td>
</tr>
<tr>
<td>Elmira WWTP SCADA Upgrades</td>
<td>(December 2018)</td>
<td>$2,730,000</td>
</tr>
<tr>
<td>Foxboro WWTP Upgrades</td>
<td>October 2018</td>
<td>$2,693,161</td>
</tr>
<tr>
<td>Galt WWTP Centrate Holding Tank and Plant A Diffuser Replacement</td>
<td>October 2018</td>
<td>$2,444,983</td>
</tr>
<tr>
<td>Hespeler WWTP Headworks Upgrade Phase 1</td>
<td>(November 2018)</td>
<td>$3,522,800</td>
</tr>
<tr>
<td>Kitchener WWTP, Contract 3, New Headworks and Secondary Treatment</td>
<td>(November 2019)</td>
<td>$105,900,000</td>
</tr>
<tr>
<td>Kitchener WWTP Influent System Improvement</td>
<td>(July 2019)</td>
<td>$4,010,686</td>
</tr>
<tr>
<td>Kitchener Zone 2/4 Trunk Main (Elmbank Trail/Robert Ferrie to Groh)</td>
<td>(May 2019)</td>
<td>$2,202,150</td>
</tr>
<tr>
<td>Laurel Tank Overcoat and Repairs</td>
<td>October 2018</td>
<td>$591,500</td>
</tr>
<tr>
<td>Mannheim WTP Reservoir By-pass repair</td>
<td>(November 2018)</td>
<td>$5,370,000</td>
</tr>
<tr>
<td>New Hamburg WWTP Upgrades</td>
<td>(October 2020)</td>
<td>$8,919,900</td>
</tr>
<tr>
<td>Preston WWTP Upgrades Headworks, Blowers and Electrical Upgrades</td>
<td>October 2018</td>
<td>$1,870,900</td>
</tr>
<tr>
<td>Southern Ayr Wastewater Pumping Station</td>
<td>March 2018</td>
<td>$3,368,000</td>
</tr>
<tr>
<td>Waterloo WWTP Contract 4 Completion</td>
<td>(November 2018)</td>
<td>$6,770,000</td>
</tr>
<tr>
<td>Project</td>
<td>Actual (Estimated) Substantial Performance</td>
<td>Approximate Contract Value</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Zone 4 Trunk WM Upgrade (Ottawa to Bleams ) Contract 1B</td>
<td>October 2018</td>
<td>$5,066,440</td>
</tr>
<tr>
<td><strong>Waste Management</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterloo Landfill 1600 cfm Flare Replacement</td>
<td>August 2018</td>
<td>$715,000</td>
</tr>
<tr>
<td>Waterloo LF New Cell SE4B</td>
<td>(November 2018)</td>
<td>$5,640,530</td>
</tr>
<tr>
<td>Waterloo LF Pumping Station 4 Upgrades</td>
<td>(December 2018)</td>
<td>$1,264,400</td>
</tr>
<tr>
<td>Waterloo LF South Expansion Area Stormwater Management Pond 5</td>
<td>October 2018</td>
<td>$555,160</td>
</tr>
</tbody>
</table>
Region of Waterloo
Transportation and Environmental Services
Transit Services

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 6, 2018  File Code: D28-50
Subject: Grand River Transit Preliminary 2019 Transit Network – Cambridge Public Consultation Centres

Recommendation:
For information.

Summary: Nil.

Report:
The approved GRT Business Plan 2017-2021 (TES-TRS-17-15) outlines the planned improvements to the regional transit network and service levels over the next five years to achieve ridership of 28 million by 2023.

GRT’s redesign of the transit network would continue into Cambridge starting in 2019. Key priorities include completing the iXpress network with the introduction of 206 Coronation iXpress. Local routes in Preston and West Galt would be restructured to connect to the new iXpress route. Improved hours of operation and increased frequency of service would be provided on selected routes in the Region.

A series of public consultation centres (PCCs) are planned to be held in November, as detailed below. Feedback gathered from the PCCs and from on-line comment forms will be considered in finalizing the network redesign and associated service levels that would be implemented starting in fall 2019, subject to Council approval of the 2019 Regional Budget.
Public Consultation Centres

The dates and locations of the planned public consultation centres are noted below. Information packages with detailed descriptions of the proposed route changes and service improvements, including comment forms, will be distributed at the PCCs:

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Time of PIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, November 20, 2018</td>
<td>Cambridge City Hall</td>
<td>4:00 p.m. - 8:00 p.m.</td>
</tr>
<tr>
<td></td>
<td>Bowman Room</td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 Dickson St.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cambridge ON</td>
<td></td>
</tr>
<tr>
<td>Wednesday, November 21, 2018</td>
<td>King Street Baptist Church</td>
<td>4:00 p.m. - 8:00 p.m.</td>
</tr>
<tr>
<td></td>
<td>Upper Auditorium</td>
<td></td>
</tr>
<tr>
<td></td>
<td>361 King St. E.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cambridge ON</td>
<td></td>
</tr>
<tr>
<td>Thursday, November 22, 2018</td>
<td>Cambridge Centre</td>
<td>4:00 p.m. - 8:00 p.m.</td>
</tr>
<tr>
<td></td>
<td>Court in front of former Sear's store entrance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>355 Hespeler Rd.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cambridge, ON</td>
<td></td>
</tr>
</tbody>
</table>

In addition to the PCCs noted above, display boards, information packages, and comment forms will be setup at Cambridge Centre Terminal and Ainslie Street Terminal, for riders to review the plans and provide comments should they not be able to attend one of the PCCs.

Public Notification and Advertising

In advance of the Public Consultation Centres, notification will be sent out via various means, including:

- Roadside signs erected at major intersections in the study areas;
- Notices posted in the local newspapers;
- Posters informing transit riders of proposed changes and PCC dates, posted at terminals and on buses;
- Notices of proposed service improvements and changes posted on the GRT website: grt.ca/newdirections;
- Mass emailing sent to those who subscribe to our rider e-alerts; and,
- Social media, including Twitter.

At all times when internet-based comments are invited, provision will also be made for comments to be submitted by telephone, fax or conventional mail.
Proposed 2019 Transit Network

Service changes in 2019 would focus on completing the iXpress network, by first introducing the 206 Coronation iXpress. Local routes in West Galt and Preston would be restructured to connect to the new iXpress route, provide more of a grid network, reduce duplication and increase hours of operation.

The potential route changes and service level improvements that will be presented at the PCCs are illustrated in Appendix A and described below. Service implementation is planned for September 2019.

206 iXpress – Coronation - provides a frequent, direct link between West Galt, Preston, Sportsworld Station and Fairway Station. The route would also provide a direct non-transfer ride to ION light rail for some of the densely developed, transit-supportive areas of Cambridge.

Route 52 Coronation - revised to travel between South Cambridge Shopping Centre to Cambridge Centre Station via Dundas Street and Coronation Boulevard. The route would serve Cambridge Memorial Hospital and provide customers a one-seat ride to Cambridge Centre Mall. Renamed 52 Dundas.

Route 55 St. Andrews - revised to connect to 206 iXpress – Coronation while providing service coverage to neighborhoods in West Galt. Renamed 55 Cedar.

Route 57 Blair - combined with Route 111 College Express to provide all-day, direct service between Ainslie Street Terminal to Conestoga College Cambridge Campus and Doon Campus.

Route 61 Fountain - revised to travel on Preston Parkway and replace current service provided by Route 52.

Route 62 Woodside – revised to connect to 206 iXpress – Coronation while providing service coverage to neighborhoods in West Galt. Renamed 62 Grand Ridge.

Route 72 Cherry Blossom - is under review by staff to better serve employees in Cambridge Business Park.

New local route serving Cambridge Business Park would replace current Route 52 service on Cherry Blossom Road. The route would connect Cambridge Business Park to Cambridge Centre Station.

Future GRT Business Plan Service Improvements (2020 - 2021)

A preliminary network concept for 2021 would be presented at the PCCs. The network concept includes service improvements to other areas of Cambridge, including East Galt, Shades Mills, Northview, L.G. Lovell Industrial Park and Preston. Highlights include:
- Extension of ION Bus to South Cambridge Shopping Centre to connect East Galt directly to Hespeler Road. The extended route would provide a one-seat ride directly to ION light rail at Fairway Station.
- Expanded evening and weekend service to local routes.
- Streamlining local routes to connect to ION Bus stations and to provide more direct service.
- Additional services to new growth areas and Townships.

Staff would review feedback from the public and continue to refine the network concept for future service improvements.

**Next Steps**

Public feedback at the PCCs will be taken into consideration as staff finalizes the preferred 2019 Transit Network. Further feedback opportunities would then be available at Public Information Centres held prior to the final recommendations for approval by the Regional Planning and Works Committee in early 2019. Subject to Regional Council approval, the 2019 service improvements would be implemented in September 2019.

Implementing the service changes would require adjustments to bus stop locations, development of iXpress stations, scheduling of routes, hiring of additional operators, changing bus stop poles, among other tasks.

**Corporate Strategic Plan:**

The 2018 network changes would support the implementation of Council’s Strategic Focus Area Objective 2.1: Create a public transportation network that is integrated, accessible, affordable and sustainable.

**Financial Implications:**

Costs of planning and operating public consultation for transit service improvements are included in the 2018 GRT operating budget, approved by Regional Council. Implementation of Future service requirements require approval of the necessary budget by Region Council.

**Other Department Consultations/Concurrence:** Nil

**Attachments**

Appendix A: Map of Potential 2019 Transit Service Improvements

**Prepared By:** Blair Allen, Supervisor, Transit Development

**Approved By:** Thomas Schmidt, Commissioner, Transportation and Environmental Services
Appendix A: Map of Potential 2019 Transit Service Improvements

- **206 iXpress - Coronation**: Provides a frequent, direct link between West Galt, Preston, Sportsworld Station and Fairway Station.
- **72 Boxwood busPLUS**: Revised to travel between Sportsworld Station and Cambridge Business Park, with future extension to River Mill subdivision.
- **66 Cherry Blossom**: Connects Sportsworld Station to Cambridge Centre Station, replacing Route 52 service on Cherry Blossom Rd.
- **61 Fountain**: Revised to travel on Preston Pkwy to replace service provided by Route 52.
- **57 Blair**: Combined with Route 111 College Express to provide all-day, direct service between Ainslie Terminal and Conestoga College (Cambridge Campus and Doon Campus).
- **55 Grand Ridge**: Combined with Route 62 Woodside to provide service coverage to neighbourhoods in West Galt.
- **52 Dundas**: Revised to travel between Cambridge Centre Station and GreenGate Village via Coronation Blvd and Dundas St.
Region of Waterloo
Transportation and Environmental Services
Water Services

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 6, 2018
File Code: E02-30/4160

Subject: Update on Drinking Water Treatment Improvements

Recommendation:
For information.

Summary:
This report is an update to the Region’s approach to treatment at four drinking water systems. The treatment is to address anticipated changes in the Province’s aesthetic objective in drinking water.

Aesthetic objectives are established by the Province for parameters that impart taste, smell or colour and may interfere with supply of good water.

The Region currently has treatment to meet the aesthetic objectives for iron and manganese at 15 of its 43 water treatment facilities.

Based on recent research, the Federal government has proposed to reduce the aesthetic objective level in drinking water in manganese. For drinking water with higher levels of manganese, a proposal is also made for a health based limit.

The Region discussed these potential changes in regulation with the Province, who indicated that it is likely the new Federal limits will also be adopted in Ontario in the future.

The Region has reviewed the proposal and has determined that its water systems are below the proposed regulated health based limit. However, four water systems in the Region would be affected by the new aesthetic objective.
The Region’s water supply system

The Region operates a drinking water supply system in which approximately 20% of the supply is from the Grand River and the remaining 80% is from groundwater.

Collectively, the Region’s assets for water supply consists of 120 groundwater wells, 1 surface water system, 43 groundwater treatment systems (including 15 iron and manganese treatment systems in operation and two under design), 16 reservoirs and 11 pumping stations.

The Region is required to meet stringent water quality standards as set by the Province of Ontario (Province). In addition, the Region proactively strives to meet aesthetic objectives (AO) and operational guidelines also set by the Province. AO’s are established for parameters that impart taste, smell or colour and may interfere with supply of good water.

Manganese essential for health in small amounts

Manganese is a naturally occurring metal that is commonly found in soil. In small amounts, it is considered important for human health, assisting with development and metabolism in the body.

The main source of exposure by humans to manganese is generally through food, for example nuts, grains, legumes, fruits, or through manganese-containing nutritional supplements.

Due to its ubiquity in the soil, manganese is routinely found in drinking water where groundwater is its source.

Manganese levels in the Region’s drinking water

The Province currently sets an AO for manganese of 0.05 mg/l (milligram per litre). The Province based this level to limit the potential impact on the aesthetics of drinking water, such as staining of laundry and fixtures, undesirable taste, and discoulouration.

The levels of manganese in Region drinking water have been relatively quite low. Historically, for sources above the AO, the Region has implemented treatment at its facilities in order to be below the AO level.

Federal government in drinking water and proposed changes

At the Federal level, Health Canada (HC), through the Federal-Provincial-Territorial Committee on Drinking Water, reviews the latest science on manganese and other substances in drinking water on an on-going basis. It has oversight to publish and update drinking water guidelines in Canada.
Manganese has long been considered to be an aesthetic concern, based on HC’s current guideline for manganese.

However in 2016, the Federal government issued a discussion paper for public review entitled “Manganese in Drinking Water” (discussion paper) in which they proposed changes to their current guidelines.

In this discussion paper, HC proposes a change to the AO level of manganese in drinking water from a concentration of 0.05 mg/l to 0.02 mg/l. The level was lowered to address availability of better treatment technology in the market, which would lead to fewer customer complaints.

The discussion paper also proposes a new health based standard for water with levels above 0.1 mg/l. This level is higher than the levels in drinking water provided by the Region’s treatment plants.

**Position of the Provincial government to proposed changes**

Each province and territory is tasked with establishing drinking water standards. They rely on documentation such as HC drinking water guidelines to help develop their regulations which outline standards and guidelines.

Any changes to standards and guidelines in drinking water are set in Ontario Regulation 160/03, Ontario Drinking Water Quality Standards set out by the Province.

The Region discussed these potential changes in regulation with the Province who explained that they are reviewing the HC discussion paper and indicated that it is likely the new Federal limits will also be adopted in Ontario in the future.

In the event the Province decides to adopt the guidelines and change their regulations, the steps they will take include drafting the proposed changes and publishing details on the Province’s Environmental Registry for public consultation. Subject to comments received, the Minister can then proceed with procedures to modify the regulations. This process typically can take two to five years.

**Actions by the Region**

Region staff has reviewed the HC discussion paper and carried out an assessment of the impacts to the Region.

There are four systems which would be affected by the proposed new AO: they are the Middleton Water Treatment Plant (Cambridge), Erb Street Water Supply System (Waterloo), Wilmot Centre (Wilmot) and New Dundee (Wilmot).

No sources in the Region would be affected by the proposed new health based standard.
Considering the lead time to fully implement a water supply treatment system for manganese (ie: assessment studies, designs, tendering, construction), the Region is proactively conducting the necessary preliminary studies in the event the recommendations are adopted.

Each treatment system will remove iron and manganese from drinking water and consists of tanks, filters, chemical supply, associated piping and instrumentation. The cost for the treatment ranges from $3 million to $17 million per facility.

Concurrently with these studies, the Region will continue to follow developments by the Province in regards to the proposed guidelines.

Budgetary cost estimates for the installation of manganese treatment for the four sites were included in the 2018 Ten Year Water Capital Forecast, with the bulk of the expenditures planned for 2022-2025. The environmental assessment studies for each of the sites will be initiated in 2018/19.

**Corporate Strategic Plan:**

The recommendations in this report support the 2015 – 2018 Corporate Strategic Focus Area 1: “Thriving Economy”, Strategic Objective 1.2 “Plan for and provide the infrastructure and services necessary to create the foundation for economic success.”

**Financial Implications:**

The Region’s approved 2018-2027 Water Capital Program includes a budget of $47.4 million for the manganese treatment installation at the four sites (project #04187) to be funded from non-growth debentures (65%; $30.6 million), growth-related debentures to be recovered from Regional Development Charges (25%; $11.6 million), the Water Capital Reserve (9%; $4.5 million) and the Development Charge Reserve Fund (1%; $0.7 million). The extent of potential development charge recovery will be reassessed as part of the upcoming Regional Development Charge Background Study. Staff will also seek federal/provincial funding if available to mitigate the Region’s cost.

**Other Department Consultations/Concurrence:**

Nil

**Attachments**

Nil

**Prepared By:** Kaoru Yajima, Senior Project Engineer

**Approved By:** Thomas Schmidt, Commissioner, Transportation and Environmental Services
Region of Waterloo
Corporate Services
Facilities & Fleet Management
Treasury Services

To: Chair Tom Galloway and Members of the Planning & Works Committee

Date: November 6, 2018 File Code: A19-01

Subject: King-Victoria Transit Hub RFP Termination

Recommendation:

That The Regional Municipality of Waterloo terminate the Request for Proposal for the King-Victoria Transit Hub; and

That staff be directed to evaluate alternative procurement approaches and bring forward to Council a recommendation to move the project ahead in early 2019, all as described in report COR-FFM-18-17/COR-TRY-18-93, dated November 6, 2018.

Summary:

A Request for Qualifications (RFQ) process for a master developer generated one qualified submission from King Victoria Transit Hub Partners Inc. (KVTH Partners Inc.). As directed in report COR-FFM-17-17/COR-TRY-17-87 dated October 3, 2017, KVTH Partners Inc. (the proponent) was invited on March 29, 2018 to respond to a Request for Proposal (RFP) for purchase by negotiation.

The RFP documentation included the design, commercial and financial requirements for the project. It also includes the procedural requirements for the proposal process, including the ability for either party to terminate the process. The proponent had a 5 month open period to prepare its proposal for evaluation by the Region and its external advisors.
Based on the Region’s RFP requirements, the parties discussed the proponent’s preliminary development vision in respect of timing, configuration, design and size of the development including the required on-site transit components, and business model for the overall development. As a result of these discussions, the Project Team is of the view that the proponent’s vision for the project does not align with the Region’s expectations as expressed in the RFP, including in respect of the integration of mixed uses in the overall design and the prevailing market conditions. In these circumstances, the KVTH Steering Committee has concluded that continuing the current procurement process will not result in a successful outcome. The KVTH Steering Committee is recommending that the current RFP process be terminated and that a range of alternative approaches be further evaluated to determine the best way to achieve the original project vision without jeopardizing the committed Provincial funding.

The Region remains strongly committed to the Transit Hub project and the project goals for an integrated mixed-use transit-oriented development. Staff will evaluate alternative approaches and make a recommendation to move the project forward in early 2019.

Report:

1) Background

The King Victoria Transit Hub (KVTH) site is planned to be a landmark development and train station connecting the Region to the Toronto-Waterloo Region Innovation Corridor. It will be a focal point for higher order transit service in Waterloo Region, connecting passengers seamlessly through the co-location of ION LRT, GO Transit (rail and bus service), VIA rail service, intercity bus and GRT. The Transit Hub is also expected to generate ION ridership as an anchor development along the Central Transit Corridor (CTC) with transit station functions integrated with a privately developed mixed-use destination.

The Region identified three primary goals for the Transit Hub:

1. Provide a centralized transportation facility with infrastructure that delivers seamless connections between walking, cycling, ION LRT, inter-city bus services, GO and VIA Rail service, as well as GRT buses;

2. Develop a high-density, transit-oriented development with residential, office and retail uses, fully integrated with the proposed transit-related infrastructure; and

3. Leverage the development of the entire Transit Hub site to reduce the Region’s overall infrastructure costs.
The proposed transaction structure for the project was the Direct Disposition (fee simple sale) of Transit Hub lands to a master developer, subject to specific design and construction obligations. The master developer would be responsible for the integrated design and delivery of the on-site transit infrastructure and mixed-use development.

The Province committed funding of $43 million for the transit-related components of the KVTH project as part of a broader transit announcement in June 2016. The Transfer Payment Agreement with the Province for this funding includes a wide range of project requirements, including scope and completion schedule, but does not require a particular transaction structure.

An RFQ process for a master developer generated one qualified submission from King Victoria Transit Hub Partners Inc. (KVTH Partners Inc.), which was a consortium of Ellis Don Capital, Kilmer Group and Perimeter Development Corp. As directed in report COR-FFM-17-17/COR-TRY-17-87 dated October 3, 2017, KVTH Partners Inc. (the proponent) was invited on March 29, 2018 to respond to a Request for Proposal (RFP) for purchase by negotiation. On April 23, 2018, the Region received formal notification that Perimeter Development Corporation had made a business decision to withdraw from KVTH Partners Inc. to focus on other business opportunities. This notice included a formal request from KVTH Partners Inc., pursuant to the RFP, to make changes to their team and key individuals. The Region accepted the requested change and continued the RFP process with the Kilmer & Ellis Don team.

The KVTH project is overseen by a Steering Committee which provides direction to staff at key decision points in the process. The current members of the KVTH Steering Committee are: Regional Chair Ken Seiling, Regional Councillors Tom Galloway, Geoff Lorentz, Sean Strickland, and Berry Vrbanovic; City of Kitchener Councillor Sarah Marsh; and Senior Regional staff.

2) Request for Proposal Status

The Region’s RFP document included the design, commercial and financial requirements for the project. It also included the procedural requirements for the proposal process, including the ability for either party to terminate the process. The proponent had a 5 month open period to prepare its proposal for evaluation by the Region and its external advisors. During that time commercially confidential meetings (CCM’s) were held with the proponent to discuss specific elements of the Region’s requirements and their proposed approach to addressing those. Throughout the process, the Region, with the assistance of its external advisors, reviewed all elements of the proposal against the stated requirements.
The design requirements identified in the RFP ranged from very specific requirements for the size, configuration and design of on-site transit components, which include a transit plaza, transit hall, ticket counters, passenger pick up and drop off areas as well as commuter parking and multi-use trail. The design requirements for the private development components were indicative rather than prescriptive and focused on ensuring the overall vision for a fully integrated and iconic mixed-use transit hub development are realized.

The commercial and financial requirements identified in the RFP were structured to ensure the long term success of the project by protecting the Region’s interests and demonstrating that the proponent has a viable business model behind their development proposal. Some of the key concepts covered include:

- Requirements for stratified ownership which allow the Region to retain long term control over the transit components while transferring development rights to the proponent for the airspace and remaining lands;
- Performance security measures to ensure the development is completed as proposed;
- Pricing structures to ensure that sufficient information is provided to allow a full evaluation of the financial model against a shadow bid; and
- Disclosure of the proponent’s financing plan to ensure the viability of the business model.

Based on the Region’s RFP requirements, the parties discussed the proponent’s preliminary development vision in respect of timing, configuration, design and size of the development including the required on-site transit components, and business model for the overall development. As a result of these discussions, the Project Team is of the view that the proponent’s vision for the project does not align with the Region’s expectations as expressed in the RFP, including in respect of the integration of mixed uses in the overall design and the prevailing market conditions. In these circumstances, the KVTH Steering Committee has concluded that continuing the current procurement process will not result in a successful outcome. The KVTH Steering Committee is recommending that the current RFP process be terminated and that a range of alternative approaches be further evaluated to determine the best way to achieve the original project vision without jeopardizing the committed provincial funding.
3) Next Steps for Project Completion

The Region remains strongly committed to the Transit Hub project and the project goals for an integrated mixed-use transit-oriented development. As described in PDL-LEG-17-67/COR-FFM-17-16 dated Sept 20, 2017, staff had previously identified a number of viable approaches to achieving the project objectives should the RFP be unsuccessful. These included restarting the procurement or breaking up the scope and procuring the Transit Hub through more conventional methods. Staff will evaluate alternative approaches and make a recommendation to move the project forward in early 2019.

Corporate Strategic Plan:

The implementation of the King-Victoria Transit Hub supports the Thriving Economy, Sustainable Transportation, and Environment and Sustainable Growth focus areas in the 2015-2018 Strategic Plan by attracting new employers and investments (Objective 1.1); planning for and providing the infrastructure and services necessary for economic success (Objective 1.2); enhancing arts and heritage opportunities for residents and visitors (Objective 1.3); creating an integrated, accessible, affordable and sustainable transportation network (Objective 2.1); improving inter-city rail transportation services (Objective 2.2); and improving environmental sustainability and livability in intensifying urban settlement areas (Objective 3.6).

Financial Implications:

Since the Provincial funding announcement in June 2016, a total of $2,940,650 has been spent on procurement activities, primarily through external advisors for design, procurement, legal and fairness. Much of the work completed to date will provide the basis for any future procurement and development activity for the site. It is estimated that $2,506,440 (85%) of these costs will be eligible for provincial funding with the remaining costs of $434,210 to be funded from Regional sources. As part of the 2016 amendments to the Region’s Development Charges by-law (COR-FSD-16-32 dated November 22, 2016), the growth-related land acquisition costs of the KVTH project were included in the amended by-law. Through the 2017 Budget process a reserve for the possible future retirement of KVTH related debentures was established (COR-FSD-16-36 dated December 14, 2016). There is sufficient funding in this reserve to fund the subsidy-ineligible costs incurred to date. As part of the year-end Periodic Financial Report, staff will seek authority to use this reserve as a source of funding for the ineligible costs incurred to date on the King-Victoria Transit Hub project.

Cost and ensuring the continued viability of provincial funding will be key factors in the evaluation and recommendation of any go-forward options in early 2019. Wherever possible, these approaches will build on the work completed to date to minimize the cost associated with the termination of the RFP.
Based on discussions with Ministry of Transportation staff, the termination of the RFP does not require changes to the Transfer Payment Agreement for $43 Million in provincial funding.

**Other Department Consultations/Concurrence:**

Staff from Transportation and Environmental Services, Corporate Services, and Planning, Development & Legislative Services are directly involved in the project and have been consulted in the preparation of this report.

**Attachments:** Nil

**Prepared By:** Ellen McGaghey, Director, Facilities & Fleet Management

Lisa Evans, Manager, Procurement/Chief Purchasing Officer

**Approved By:** Craig Dyer, Commissioner, Corporate Services/Chief Financial Officer
Region of Waterloo
Planning, Development and Legislative Services
Community Planning
Corporate Services
Treasury Services

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 6, 2018
File Code: F25-20
Subject: Brownfields Financial Incentives Program – Assignment and Amendment of Tax Increment Grant and Redevelopment Agreement to New Owners – 19 Guelph Avenue, Cambridge

Recommendation:

That the Regional Municipality of Waterloo approve the following actions regarding the Brownfields Tax Increment Grant for the property known as 19 Guelph Avenue, Cambridge (Parcel A) and 49 Queen Street East, Cambridge (Parcel B) as described in Report PDL-CPL-18-43/COR-TRY-18-94:

a) Assign the Brownfield Parcel A (Condo) Tax Increment Grant and Redevelopment Agreement dated February 5, 2018 between Riverbank Lofts GP Inc., The Corporation of the City of Cambridge and The Regional Municipality of Waterloo to Riverbank Lofts Limited, the new owners of the subject lands;

b) Assign the Brownfield Parcel B (Apartment) Tax Increment Grant and Redevelopment Agreement dated February 5, 2018 between Riverbank Lofts GP Inc., The Corporation of the City of Cambridge and The Regional Municipality of Waterloo to D.D. 49 Queen Ltd., the new owners of the subject lands;

c) Amend the TIG Agreements for Parcel A and Parcel B to provide for: (1) any revisions as are necessary and satisfactory to the Region’s Commissioner of Planning, Development and Legislative Services and the Region’s Chief Financial Officer, and (2) payment of the approved joint Tax Increment Grant to
the previously approved maximum for all parcels totalling $2,496,764, Region portion only, after allowing for other future financial assistance subject to reasonable conditions, upon completion of remediation and redevelopment of the property, and upon final confirmation of any additional brownfield related financial assistance provided under the Region’s Brownfield Financial Incentive Program or through the City of Cambridge; and

d) Authorize the Region’s Commissioner, Planning, Development and Legislative Services and Chief Financial Officer to execute Assignment and Amending Agreements with The Corporation of the City of Cambridge and the following new owner(s): Riverbank Lofts Limited for 19 Guelph Avenue (Parcel A TIG Agreement); 2) D.D. 49 Queen Ltd. for 49 Queen Street East (Parcel B TIG Agreement), with such agreements to be satisfactory to the Regional Solicitor.

Summary:

The former brownfield site at 19 Guelph Avenue, Cambridge has been sold to new owners. The Region and City have been requested to assign and amend the Tax Increment Grant (TIG) Agreement to the new owners. This report outlines the background to this request and recommends that Regional Council support the assignment and amendment of the previously executed Parcel A TIG and Parcel B TIG Agreements both dated February 5, 2018 to the new owners of the subject lands. The proposed assignment and amendment to the TIG agreement would not change the maximum approved TIG amount.

Report:

Initial Application

In 2009, the City of Cambridge and Region of Waterloo received a joint Tax Increment Grant (TIG) application from 2151073 Ontario Ltd. to remediate and redevelop the property municipally known as 19 Guelph Avenue, Cambridge, the former American Standard site.

On December 11, 2013 Regional Council approved a joint Tax Increment Grant for an amount not to exceed $2,496,764 to be financed from the incremental tax revenue for the property following remediation, redevelopment and reassessment (Report P-13-120/F-13-114).

On April 22, 2014, a Brownfield Remediation and Redevelopment Agreement was executed between the City of Cambridge, the Region of Waterloo, and 2151073 Ontario Ltd. (original owner/applicant).
In November 2015, ownership of the subject site changed and the new owners, Riverbank Lofts GP Inc. (HIP Developments) requested that the Brownfield Remediation and Redevelopment Agreement executed on April 22, 2014 by 2151073 Ontario Ltd. be assigned to them. Provisions in the TIG Agreement require the express written consent of the City and Region in order to assign the TIG from one owner to another. Riverbank Lofts GP Inc. proposed a new redevelopment plan, including construction of 195 residential units on the site (please see the site map in Attachment 1, an aerial overlay of the site from 2017 in Attachment 2 and a revised site plan in Attachment 3). The new redevelopment plan proposed construction in two phases given the adaptive reuse of the existing building on Parcel A (Condominium – 42 units) and the proposed construction of a new building on the south east part of the site (Parcel B – Apartments, 153 units). The revised site plan was approved by the City in 2016.

On March 8, 2016 and March 30, 2016, City of Cambridge Council and Region of Waterloo Council through report PDL-CPL-16-21/COR-TRY-16-22, respectively, approved a recommendation supporting the assignment and amendment of the TIG Agreement to the new owners. In addition, City and Regional Councils supported the previously approved remediation total amount of $4,161,274, cost shared between the City and Region, to remain the same. Hence, the maximum total approved TIG amount would stay the same at $2,496,764, Regional portion only.

**Phased TIG Agreements**

Based on these approvals and in consultation with City staff, Regional staff, and the new owners, phased TIG agreements were proposed. These phased TIG agreements would allow Parcel B (49 Queen Street East) to have a separate TIG payment schedule than Parcel A (19 Guelph Avenue), without affecting the previously approved TIG amount. On February 5, 2018, two separate Remediation and Redevelopment Agreements (the TIG Agreements) were executed between the City of Cambridge, the Region of Waterloo, and Riverbank Lofts GP Inc. It should be noted that Parcel C (5 Guelph Avenue) is a small non-habitable property with an existing shed building that shares the same owner as Parcel A, but does not have a separate TIG agreement.

**Request to Assign and Amend TIG Agreement**

On February 14, 2018, ownership of the subject lands changed again. Riverbank Lofts Limited purchased Parcel A and C (19 and 5 Guelph Avenue, respectively) from Riverbank Lofts GP Inc. On the same day, in a separate transaction, D.D. 49 Queen Ltd. purchased Parcel B (49 Queen Street East) from Riverbank Lofts GP Inc. According to provisions in the TIG Agreements, changes to site ownership require an assignment of the TIG Agreements with approval from the City and Region. Hence, following these ownership transactions, the new owners requested an assignment and amendment of the TIG Agreements as follows:
• Parcel A TIG for 19 Guelph Avenue be assigned by Riverbank Lofts GP Inc. to Riverbank Lofts Limited. Riverbank Lofts Limited is a related company to Riverbank Lofts GP Inc. given that both companies share the same controlling voting shareholders and management. If approved, staff would amend the Parcel A TIG Agreement as required as a result of the new ownership.

• Parcel B TIG for 49 Queen Street East be assigned by Riverbank Lofts GP Inc. to D.D. 49 Queen Ltd. D.D. 49 Queen Ltd. is an arm’s length third party to Riverbank Lofts GP Inc. If approved, staff would amend the Parcel B TIG Agreement as required as a result of the new ownership.

Environmental remediation costs will remain the same as previously approved and the approved TIG maximum amount will not change.

On November 6, 2018, City of Cambridge Council will be considering a City Staff report recommending Council support the assignment and amendment of the TIG Agreements to the new owners of Parcel A - 19 Guelph Avenue and Parcel B – 49 Queen Street East.

This report recommends that Regional Council support the assignment and amendment of the previously executed Parcel A TIG and Parcel B TIG Agreements both dated February 5, 2018 to the new owners of the subject lands as noted above. The Region has previously consented to a TIG Agreement assignment with respect to The Tannery site at 36 Francis Street South, Kitchener as well as to this site previously in 2016. In the case of 36 Francis Street South, the TIG agreement was assigned to a new owner after remediation and redevelopment was complete. In the case of the subject lands, remediation and redevelopment is complete on Parcel B (49 Queen Street East) and almost complete on Parcel A (19 Guelph Avenue). The owners are targeting September 2019 for occupancy of Parcel A.

Corporate Strategic Plan:

The TIG program aligns with the 2015-2018 Corporate Strategic Plan Objectives to:

1) Plan for and provide the infrastructure and services necessary to create the foundation for economic success under Focus Area 1 Thriving Economy; and

2) Work in partnership to manage growth and improve environmental sustainability and livability in intensifying urban and rural settlement areas under Focus Area 3 Environment and Sustainable Growth.

Financial Implications:

There are no new financial implications arising from the staff recommendation. Regional Council approved the Region’s share of the maximum potential TIG of $2,496,764 based on the estimated net eligible remediation costs in Report P-13-120/F-13-114 in 2846347
December 2013 and this amount is included in the approved 2018-2027 capital program. The Region’s actual share of the TIG will be confirmed once the actual remediation costs are reviewed, all other financial assistance is finalized and the property is reassessed by Municipal Property Assessment Corporation (MPAC) but will not exceed $2,496,764.

Under the funding model for joint tax increment grants adopted by Regional Council in 2013, the annual TIG payments would be funded from the increased tax revenue on the property occurring in the same year. Grant payments for Parcel B [49 Queen Street East] are expected to commence in 2019 as remedial costs have been reviewed and accepted by Regional and City staff and, as of 2018, the site has been paying property taxes at the newly reassessed rate by MPAC. Grant payments for Parcel A [19 Guelph Avenue] are expected to commence in 2021 once remedial costs have been reviewed and accepted and the site has been reassessed by MPAC.

Once the TIG is fully paid, the increased assessment resulting from the redevelopment would benefit the overall tax levy.

Other Department Consultations/Concurrence:

Regional Community Planning, Legal, and Finance staff were involved in the preparation of this report. Regional staff also consulted with staff from the City of Cambridge and they are also in support of the staff recommendations.

Attachments:

Attachment 1 – Site Map of 19 Guelph Avenue and 49 Queen Street East

Attachment 2 – Aerial Overlay of 19 Guelph Avenue [Parcel A], 49 Queen Street East [Parcel B], and 5 Guelph Avenue [Parcel C], City of Cambridge

Attachment 3 – Simplified Site Plan – Approved April 28, 2016

Prepared By: Peter Ellis, Principal Planner

Angela Hinchberger, Director of Treasury Service /Deputy Treasurer

Approved By: Rod Regier, Commissioner, Planning Development and Legislative Services

Craig Dyer, Commissioner, Corporate Services/Chief Financial Officer
Attachment 1 – Site Map of 19 Guelph Avenue and 49 Queen Street East, City of Cambridge
Attachment 2 – Aerial Overlay of 19 Guelph Avenue [Parcel A], 49 Queen Street East [Parcel B], and 5 Guelph Avenue [Parcel C], City of Cambridge from 2017
Attachment 3 – Simplified Site Plan – Approved April 28, 2016
Region of Waterloo
Transportation & Environmental Services
Design & Construction

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 6, 2018
File Code: 7122H/7145H
Subject: Fischer-Hallman Road Improvements Bleams Road to Plains Road, City of Kitchener Project Update and Amendment to Consulting Services Agreement

Recommendation:

That the Regional Municipality of Waterloo amend the Consulting Services Agreement with Associated Engineering (Ont.) Ltd to add additional fees in the amount of $370,000 plus applicable taxes for a revised total upset fee of $983,396 for design services as described in report TES-DCS-18-18, dated November 6, 2018.

Summary:

The proposed Fischer-Hallman Road improvements include the reconstruction and widening of the existing roadway and installation of sewers and watermains to service adjacent developments.

This report provides an overview of the proposed road improvements and project schedule update.

The roadway design is currently at an advanced state of completion. Staff anticipates that major construction will commence in 2020 subject to receipt of all approvals, land dedications and utility relocations and will proceed in three major phases, with final completion tentatively planned in 2025.

Region staff will look at opportunities to provide an interim pedestrian / cyclist facility from Seabrook Drive to Bleams Road as pedestrians and cyclists are currently using the gravel shoulder. This would most likely be a temporary asphalt shoulder with some manner of separation from the roadway. It may be possible to construct the permanent...
multi-use trail near Bleams Road and near Seabrook Drive. This work could be designed this fall for construction in 2019 and will require a recommendation to advance funds from 2020 into 2019 that could be included during the 2019 budget deliberations or in the tender award report to Regional Council.

Additional design work will be required to complete the design and tendering for this project to address changes and additions to the project scope, including road design and construction staging revisions, additional property acquisition, coordination with nearby developments and design of interim pedestrian/cycling facilities. Therefore, staff recommends that the existing Consulting Services Agreement with Associated Engineering (Ont.) Ltd be amended to include additional fees in the amount of $370,000 plus applicable taxes.

Report:

1. Background

1.1 Project Area

The Fischer-Hallman Road Improvements Project (“the Project”) includes reconstruction and widening of Fischer-Hallman Road from Bleams Road to Plains Road in the City of Kitchener. Also included is the construction of a new roundabout at Bleams Road, future Rosenberg Way and future Wallacetton Way. Please refer to Appendix A for a Key Plan showing the project limits.

1.2 Project Phases

Three overall construction Phases have been identified and are noted below for various sections of this report:

- Phase 1: Roundabout at Bleams Road and Fischer-Hallman Road including road widening from Rockwood Road to a point approximately 500 metres south of Bleams Road including the Strasburg Creek twin box culverts.
- Phase 2: From the end point of Stage 1 approximately 500 metres south of Bleams Road to the north side of Seabrook Drive.
- Phase 3: From north side of Seabrook Drive to Plains Road.

The limits of Phase 2 and Phase 3 may be adjusted depending upon the acquisition of certain parcels of property, archaeological studies and completed utility relocations.

Please refer to Appendix B for a figure showing the anticipated construction phases. Refer to Section 6.3 for a discussion of timing of these stages.

1.3 Existing and Future Conditions

Cross Section: The existing roadway has a two-lane rural cross section. The
The reconstructed roadway will have a four-lane urban cross section with raised centre medians and boulevard multi-use trails.

**Utilities:** The existing roadway allowance contains a number of utilities, including overhead hydro, natural gas, telephone and cable television. These will be preserved and/or relocated in conjunction with the project.

**Development Servicing:** The existing project area was primarily rural in nature; however, mixed-use commercial and residential development is ongoing and planned on both sides of the roadway for the entire length of the project. These developments include a number of accesses and servicing needs that the Region is working to incorporate into the road design as the development plans continue to evolve.

**Strasburg Creek Crossing:** Strasburg Creek currently crosses under Fischer-Hallman Road through a 900 mm diameter culvert pipe. This culvert must be replaced with a much larger twin concrete box culvert.

**Sanitary Trunk Development:** All development in the area is contingent on the construction of the City of Kitchener’s Middle Strasburg Trunk Sanitary Sewer ("MSTSS"). City of Kitchener staff has advised that the earliest year the City is planning to commence construction of the MSTSS from its current endpoint on the Activa Development lands to the southeast at Fischer-Hallman Road is 2020. Draft plan conditions on developments west of Fischer-Hallman Road require that the MSTSS and the Strasburg Creek twin box culverts under Fischer-Hallman Road must both be operational before developments may seek full approval.

**Archaeology:** Archaeological Studies are required at various locations along Fischer-Hallman Road in accordance with the requirements of the Ministry of Culture. These studies must be completed to the satisfaction of the Ministry prior to commencement of certain works such as utility relocations.

Refer to **Appendix B** for a figure showing the existing and future conditions.

1.4 **Project Chronology to Date**

The Class EA Study for the Bleams Road roundabout was completed and approved in February 2013. The Class EA Study for the remainder of the project was approved in April 2017. A more detailed project chronology is summarized in **Appendix C**.

2. **Environmental Permitting Requirements and Resulting Constraints and Implications for Construction Timeline**

A list of environmental permits required for this project is provided in **Appendix D**.

3. **Property Acquisitions**
Required property acquisitions are summarized in Appendix E.

4. **Utility Relocations**

Required utility relocations are summarized in Appendix F.

5. **Status of Area Developments and Refinements to Roadway Design and Project Schedule**

Region staff has worked with the City of Kitchener and area developers to refine the road design in accordance with the evolving access and servicing requests and requirements for these developments.

A summary of adjacent developments, including servicing, access and approval status, is provided in Appendix G.

6. **Road Design Status and Tentative Construction Schedule**

6.1 **Roadway Design**

The general roadway design is now at an approximate 85% level of completion; however, the design cannot be finalized at this time until the Region obtains certainty with regard to a number of outstanding issues. The Region will continue to work cooperatively with various stakeholders to attain the required certainty in a timely manner.

6.2 **Culvert and Sanitary Sewer Construction Engineering**

The timing and physical constraints imposed on the construction of the Strasburg Creek culvert and the sewers and watermain within the Strasburg Creek zone will make construction complex.

The Region will be working with AE and specialist construction engineers to develop a comprehensive staged construction plan to permit this complex work to be completed in the short 78 calendar day window available. It is currently anticipated that 24-hours per day, 7 days per week construction may be required to accomplish this task. Accordingly, the Region will seek a noise by-law exemption from the City of Kitchener to permit “24/7” construction during this 78 day window.

6.3 **Tentative Construction Schedule**

Pending relocation of utilities, resolution of outstanding uncertainties, acquisition of necessary properties, finalization of engineering design and development of a staged construction plan for the Strasburg Creek area work, road widening and Bleams Road roundabout, it is currently anticipated that construction of Phase 1 could commence in Spring 2020 with substantial completion in Fall 2021 and final works (surface asphalt, landscaping, etc.) in 2022. A full closure of Fischer-Hallman Road for approximately five (5) months will be required.
Construction of Phase 2 could commence in Spring 2022 with substantial completion in Fall 2022 and final works (surface asphalt, landscaping, etc.) in 2023.

Construction of Stage 3 could commence in Spring 2024 with substantial completion in Fall 2024 and final works (surface asphalt, landscaping, etc.) in 2025.

7. **Options for Interim Temporary Pedestrian / Cycling Facility**

Region staff will look at opportunities to provide an interim pedestrian / cyclist facility from Seabrook Drive to Bleams Road as pedestrians and cyclists are currently using the gravel shoulder. The majority of this interim pedestrian facility will most likely be a temporary asphalt shoulder with some manner of separation from the roadway. In some locations, it may be possible to construct the permanent multi-use trail near Bleams Road and near Seabrook Drive. The design work could commence this fall for construction in 2019. This will require additional consulting services from Associated Engineering to prepare the plans, tender and provide contract administration and inspection services.

The draft 2019 Transportation Capital Program budget does not include funds for the construction of an interim pedestrian facility in 2019. However, a cost estimate will be prepared when the design is completed and a recommendation to advance funds from 2020 into 2019 can be included during the 2019 budget deliberations or in the tender award report to Regional Council, if necessary.

8. **Consultant Effort and Additional Scope of Services**

Regional Council approved Report E-14-050 dated April 29, 2014 recommending that the Regional Municipality of Waterloo enter into a Consultant Services Agreement with Associated Engineering Limited to provide consulting engineering services for a Class Environmental Assessment, detailed design, contract administration and construction inspection for improvements to Fischer-Hallman Road from Bleams Road to Plains Road in the City of Kitchener at an upset fee of $613,396.00 plus applicable taxes for the Class Environmental Assessment and detailed design phases, with contract administration and construction inspection services to be paid on a time basis.

The work required to amend the design to accommodate the requirements imposed by the MOECC, and to refine and adjust the road design and construction staging to meet the needs of the City of Kitchener and area development efforts was not envisioned in the original Consulting Services Agreement. The additional efforts required of Associated Engineering include, but are not limited to the following:

- Revisions to roadway design (plan, profile, drainage, etc.).
- Revisions to construction staging related to MOECC directives.
- Additional property acquisition requirements.
- Additional coordination with City of Kitchener.
- Additional coordination with developers.
- Design of interim pedestrian / cycling facilities.

Associated Engineering has provided an estimate of additional fees required in the amount of $370,000 plus applicable taxes. Staff have reviewed this fee estimate and determined that it is reasonable and fair while noting development servicing reviews and property acquisition support requirements will continue and may require effort beyond the estimate provided.

**Corporate Strategic Plan:**

The project aligns with the Region’s 2015 – 2018 Corporate Strategic Plan Focus Area 2.3 to build infrastructure for, and increase participation in, active forms of transportation (cycling and walking), and Focus Area 2.4 to optimize road capacity to safely manage traffic and congestion.

**Financial Implications:**

The Region’s approved 2018 Ten Year Transportation Capital Program includes $18,930,000 in Project 07122 Fischer-Hallman Road from Plains to approximately 500 metres south of Bleams Road and $13,610,000 in Project 07145 Fischer-Hallman Road from Bleams Road to approximately 500 metres south of Bleams Road (100% Development Charges Reserve Fund) for design and construction of the improvements to Fischer-Hallman Road from Bleams Road to Plains Road including property acquisitions, utilities, road construction, storm sewer, twin box culverts and engineering all to be funded from the Development Charges Reserve Fund. The City of Kitchener will be responsible for the costs of new trunk sanitary sewer and local sanitary sewers including private sanitary sewer connections and any requested landscape features beyond that provided by the Region’s Policy for landscaping. City of Kitchener staff confirmed that the City will take responsibility for maintenance and replacement of the boulevard multi-use trails.

The draft 2019 Transportation Capital Program budget does not include funds for the construction of an interim pedestrian facility in 2019. However, a cost estimate will be prepared when the design is completed and a recommendation to advance funds from 2020 into 2019 can be included during the 2019 budget deliberations or in the tender award report to Regional Council, if necessary.

Associated Engineering’s consultant services agreement currently provides approved funds of $613,396 plus applicable taxes. The additional fees as estimated by Associated Engineering in the amount of $370,000 plus applicable taxes will extend the existing upset fee limit to $983,396 if approved by Regional Council. These additional fees do not include any additional effort required to modify the access to any properties along Fischer-Hallman Road. Sufficient funds are available in the approved 2018
Transportation Capital Program to fund these fees.

City of Kitchener staff has confirmed that the costs for the sanitary sewers (engineering, construction, contract administration, inspection services and project management) will be paid to the Region. City of Kitchener staff will manage all private funding for the sanitary services.

**Other Department Consultations/Concurrence:**

Planning, Development and Legislative Services was consulted in the development of this Report TES-DCS-18-18.

**Attachments**

Appendix A  Key Plan
Appendix B  Construction Phases, and Existing & Future Conditions
Appendix C  Project Chronology
Appendix D  Environmental Approvals
Appendix E  Property Acquisitions
Appendix F  Utility Relocations
Appendix G  Developments

**Prepared By:** Delton Zehr, Project Manager

**Approved By:** Thomas Schmidt, Commissioner, Transportation and Environmental Services
Appendix A – Key Plan

FISCHER HALLMAN ROAD
(REGIONAL ROAD 58)
BLEAMS ROAD TO PLAINS ROAD
CITY OF KITCHENER
Appendix B – Construction Phases and Existing & Future Conditions
### Appendix C – Project Chronology

<table>
<thead>
<tr>
<th>Date</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>Region commences Class Environmental Assessment (“Class EA”) for the Project.</td>
</tr>
<tr>
<td>2014</td>
<td>Region retains Associated Engineering (“AE”) to lead the Class EA and prepared the detailed engineering design.</td>
</tr>
<tr>
<td>Winter 2016</td>
<td>Region completes Class EA (as described in Report TES-DCS-16-05) and produces the Environmental Study Report (“ESR”) to document the decision making process. A tentative year of 2018 is established for the start of construction. Council directs staff to file the ESR for public comment. The ESR is completed and filed. Ministry of Environment and Climate Change (“MOECC”) notifies Region that a Part II Order Request has been filed with respect to the Class EA.</td>
</tr>
<tr>
<td>April 2017</td>
<td>MOECC notifies Region that Part II Order Request has been denied; however, MOECC imposes conditions that require that the entire road reconstruction and widening project that impact Strasburg Creek including underground works must be completed under a single contract. Construction start is tentatively moved to 2019 to allow for conditions introduced by MOECC to be incorporated into project staging plans and work toward applying for the Ministry of Natural Resources and Forestry permit for the overall project.</td>
</tr>
</tbody>
</table>
| April 2017 to  | Detailed engineering design continues in accordance with the conditions imposed by MOECC.
<p>| Present        | Region and AE continue liaison with City of Kitchener and adjacent landowners to resolve uncertainties and to obtain commercial servicing requirements.                                                           |
| Fall 2017      | City of Kitchener convenes a working group of adjacent landowners/developers and retains Stantec to prepare the Middle Strasburg Trunk Sanitary Sewer design.                                           |
| Summer 2017    | AE completes overland flow analysis, road profile design changes and storm sewer design changes including consultation with GRCA to address changes in storm water management criteria for adjacent development properties in Northeast corner of Fischer-Hallman Road Bleams Road. |
| to Summer 2018 |                                                                                                                                                                                                           |
| March 2018     | Region completes acquisition of Phase 1 construction limits property acquisitions while Big Spring Farms property required for Phase 1 construction to be acquired through dedication per approved draft plan conditions. |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2018</td>
<td>Region commences certain Archaeological Studies on acquired lands at Bleams Road as weather and ground conditions permit. Region commences small portion of Bell telephone civil works for Bell relocations with remaining section south Bleams Road pending archaeological studies and concrete box culvert installation.</td>
</tr>
<tr>
<td>July 2018</td>
<td>Stantec completes trunk sanitary sewer design for the City of Kitchener. Review of feasibility of construction within the MOECC conditions including additional geotechnical and hydrogeological investigations and installation of the trunk sanitary sewer under the existing Strasburg Creek culvert are ongoing. Need to complete Stage 2 Archaeological Assessment in west ditch line of Fischer-Hallman Road added to project scope.</td>
</tr>
<tr>
<td>Fall 2018</td>
<td>Region commences construction of the 750mm diameter trunk watermain along Fischer-Hallman Road.</td>
</tr>
<tr>
<td>Fall 2018</td>
<td>Development application process for adjacent lands continues, including various applications for new and/or modified entrances and/or intersections. Region staff continues to review and adjust the road design accordingly.</td>
</tr>
</tbody>
</table>
The following environmental permits are required in order to proceed with construction:

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Natural Resources and Forestry</td>
<td>Mitigation of species-at-risk issues. (Region) Application submitted February 2018. Permit will likely impose a constraint requiring all work within the area of Strasburg Creek to be completed within a 78 calendar day window from July 15 to September 30 in the year of construction. Status: Permit Issuance remains pending. A separate approval may be required related to fisheries depending upon the trunk sanitary sewer construction method and subsequent creek flow mitigation requirements during construction.</td>
</tr>
<tr>
<td>Ministry of the Environment, Conservation</td>
<td>Permit To Take Water (PTTW). (Region) required for dewatering excavations required to install culverts, sanitary sewers and other utilities. Storm sewer permit to be applied for pending application to GRCA. Storm Water Quality treatment structures for storm sewer may also be required by separate permit applications to MECP pending the MNRF and GRCA requirements. Status: Permit applications pending receipt of MNRF permit and application submission to GRCA.</td>
</tr>
<tr>
<td>and Parks (“MECP”) (formerly MOECC)</td>
<td></td>
</tr>
<tr>
<td>Grand River Conservation Authority (“GRCA”)</td>
<td>Permit for Development, Interference With Wetlands and Alterations to Shorelines and Watercourses. (Region) Status: Permit applications pending review of constructability requirements for Kitchener trunk sanitary sewer and subsequent design to handle stream flows during construction.</td>
</tr>
</tbody>
</table>
--- | ---
Ministry of Culture | Archaeology Approvals

Phase 1 – The west ditch line of Fischer-Hallman Road south of Bleams to approximately Williamsburg Cemetery currently has an ongoing Stage 2 study that will require additional study based on an indigenous artifact found in September 2018. This requires a Stage 3 or possibly Stage 4 Archaeological Assessment including First Nations involvement. This additional work cannot be completed until the Stage 2 report has been accepted by the Ministry of Culture anticipated by early December. This work may not proceed until Spring 2019 as it is dependent on weather.

Phase 1 - Additional archaeological observation is required during construction. More specifically, the removal of the asphalt and the existing granular road base as previously identified by an earlier Archaeological study accepted by the Ministry of Culture.

Other Phase 1 construction limits properties at the intersection of Bleams Road and Fischer-Hallman Road have all been cleared for construction.

Phase 2 and 3 construction limits property parcels require Archaeological Assessments once they have been acquired in the future.
## Appendix E – Property Acquisitions

<table>
<thead>
<tr>
<th>Property / Details</th>
<th>Requirements / Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1375 Bleams Road</td>
<td>Parcels acquired for Phase 1 construction</td>
</tr>
<tr>
<td>1201 – 1205 Fischer-Hallman Road</td>
<td>Parcels acquired for Phase 1 construction</td>
</tr>
<tr>
<td>1198 Fischer-Hallman Road</td>
<td>Parcels acquired for Phase 1 construction</td>
</tr>
<tr>
<td>Nimer Property - Northeast Corner at Bleams Road and Fischer-Hallman Road</td>
<td>Parcels acquired for Phase 1 construction</td>
</tr>
<tr>
<td>Activa Developments - Northeast Corner at Bleams Road and Fischer-Hallman Road</td>
<td>Parcels acquired for Phase 1 construction</td>
</tr>
<tr>
<td>One Properties (WAM), 1250, 1270 &amp; 1314 Fischer-Hallman Road</td>
<td>Parcels acquired for Phase 1 construction</td>
</tr>
<tr>
<td>Activa Developments - 1340 Fischer-Hallman Road Property adjacent to south of 1340 Fischer-Hallman Road</td>
<td>A small portion of the overall property required has been acquired to complete the Phase 1 construction. The remaining parcels of property are currently in the acquisition process for Phase 2 construction</td>
</tr>
<tr>
<td>1255 &amp; 1295 Fischer-Hallman Road Schlegel Urban Developments</td>
<td>Parcels of property are still required from developer by dedication from the Big Spring Farms Development for the Phase 1 construction to proceed</td>
</tr>
<tr>
<td>Activa Developments – Northeast property at Seabrook Drive and Fischer-Hallman Road</td>
<td>Property acquisitions commenced for Phase 2 construction</td>
</tr>
<tr>
<td>Portuguese Club – 1548 Fischer-Hallman Road</td>
<td>Property acquisitions commenced for Phase 2 construction</td>
</tr>
<tr>
<td>945 Huron Road – Private Residence</td>
<td>Property acquisitions commenced for Phase 3 construction</td>
</tr>
<tr>
<td>Becker Estates Subdivision – Schlegel Urban Developments</td>
<td>Property Acquisition pending development dedication for Phase 3 construction</td>
</tr>
<tr>
<td>1384 Huron Road, Cober Property, Schlegel Urban Developments</td>
<td>Property acquisitions commenced for Phase 3 construction</td>
</tr>
<tr>
<td>City of Kitchener Park Land – 1955 Fischer-Hallman Road</td>
<td>Property Acquisition pending development dedication for Phase 3 construction</td>
</tr>
<tr>
<td>Waterloo Region District School Board</td>
<td>Property acquisitions commenced for Phase 3 construction</td>
</tr>
<tr>
<td>Property / Details</td>
<td>Requirements / Status</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>------------------------------------------------------------</td>
</tr>
<tr>
<td>Yog Fellowship Property – 380/388 Plains Road</td>
<td>Property acquisitions commenced for Phase 3 construction. AE to provide additional services to review potential to reduce or eliminate property requirements due to significant impacts to shrubs and trees.</td>
</tr>
<tr>
<td>1970 Fischer-Hallman Road – Private Residence</td>
<td>Property acquired August 2018</td>
</tr>
</tbody>
</table>
## Appendix F – Utility Relocations

<table>
<thead>
<tr>
<th>Utility</th>
<th>Work Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bell Canada</td>
<td>Phase 1 relocations. Completion October 2018.</td>
</tr>
<tr>
<td>Kitchener Utilities - Gas</td>
<td>Gas valve relocation and lowering. Lower section of 300mm diameter gasmain after temporary Bell pole relocation completed. Anticipated completion December 2018 or Spring 2019</td>
</tr>
<tr>
<td>KW Hydro</td>
<td>General pole relocations. Planned for 2019. West side pole relocation. Cannot commence until archaeological work along west ditch is completed and accepted by Ministry of Culture.</td>
</tr>
<tr>
<td>Rogers Cable</td>
<td>Relocations in conjunction with KW hydro poles. Rogers will undertake relocations after KW Hydro completes pole relocations. Tentative completion for Spring 2020.</td>
</tr>
</tbody>
</table>
### Appendix G – Developments

#### One Properties (WAM)

<table>
<thead>
<tr>
<th>Current Use</th>
<th>Agricultural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Use</td>
<td>Commercial and residential development, including a major grocery store</td>
</tr>
<tr>
<td>Development</td>
<td>The City of Kitchener has approved Zoning By-Law Amendment ZC17/003/F/AP. This approval is now under appeal with the Ontario Local Planning Appeal Tribunal (LPAT).</td>
</tr>
<tr>
<td>Application Status</td>
<td></td>
</tr>
<tr>
<td>Access Requirements</td>
<td>Per Report PDL-CPL-15-30.1 (October 10, 2018), a full-movement access has been requested on Fischer-Hallman Road approximately 280 metres south of Bleams Road. This request is currently under review by Region staff. Typical access configurations (uncontrolled, stop controlled or signal controlled) should not require additional property or significant utility adjustments; however, minor road design changes will be required. If a roundabout is identified as the preferred option, there will be significant changes to property acquisition, utilities, storm water management and permitting. A delay of at least two years will be required to incorporate the changes. In all cases, the specific location of the access could impact the access to the Schlegel development on the west side of Fischer-Hallman Road.</td>
</tr>
<tr>
<td>Servicing Requirements</td>
<td>Local sanitary sewer services to be provided as part of the MSTSS, local sanitary sewer and road widening. Interim sanitary sewer outlet is planned via a temporary private pumping station and forcemain to the Washburn Drive sanitary sewer for the first stage of the development.</td>
</tr>
<tr>
<td>Status</td>
<td>Under review.</td>
</tr>
</tbody>
</table>

#### Schlegel – Big Spring Farms

<table>
<thead>
<tr>
<th>Current Use</th>
<th>Agricultural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Use</td>
<td>Mixed use commercial residential</td>
</tr>
<tr>
<td>Development</td>
<td>Subdivision Draft Plan 30T-09201 Approved</td>
</tr>
<tr>
<td>Application Status</td>
<td></td>
</tr>
<tr>
<td>Access Requirements</td>
<td>The specific location of the One Properties (WAM) access could impact the access to the Schlegel development on the west side of Fischer-Hallman Road.</td>
</tr>
</tbody>
</table>
Status: Draft Plan Approved development includes one new street via new roundabout at Rosenberg Way and one street access with right-in right-out access. There is an additional right in/right out drive access into the high density residential block.

Condo development opposite WAM Under review.

**Servicing Requirements**
Twin Box Culvert and MSTSS must be fully installed and operational to apply for final development approvals

### Nimer Property Development

<table>
<thead>
<tr>
<th>Current Use</th>
<th>Agricultural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Use</td>
<td>Commercial</td>
</tr>
<tr>
<td>Development Application Status</td>
<td>None</td>
</tr>
<tr>
<td>Access Requirements</td>
<td>Status: planned right-in right-out from Fischer-Hallman Road</td>
</tr>
<tr>
<td>Servicing Requirements</td>
<td>Storm water over 5 year post development to flow to Bleams Road and Fischer-Hallman Road</td>
</tr>
<tr>
<td></td>
<td>Sanitary sewer service to connect to new City of Kitchener sanitary sewer and extension of the MSTSS to Fischer-Hallman Road.</td>
</tr>
<tr>
<td></td>
<td>Water service to come from internal adjacent lands future watermain.</td>
</tr>
<tr>
<td>Other</td>
<td>Portion of land requires a fill permit from GRCA</td>
</tr>
</tbody>
</table>

### Scherl Property

<table>
<thead>
<tr>
<th>Current Use</th>
<th>Residential and Agricultural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Use</td>
<td>Mixed use Commercial Residential</td>
</tr>
<tr>
<td>Development Application Status</td>
<td>No Plans by owner – future development land</td>
</tr>
<tr>
<td>Access Requirements</td>
<td>Status: Maintain existing two entrances off Fischer-Hallman Road ultimately to become right-in right-out</td>
</tr>
<tr>
<td>Servicing Requirements</td>
<td>Storm water over 5 year post development to flow to Bleams Road and Fischer-Hallman Road</td>
</tr>
<tr>
<td></td>
<td>Sanitary sewer service to connect to new City of Kitchener sanitary sewer.</td>
</tr>
</tbody>
</table>
New watermain as part of lands developing to connect to City of Kitchener watermain on Rockwood Road.

Other Portion of land requires a fill permit from GRCA

### Deerfield Homes (Activa) Property

<table>
<thead>
<tr>
<th>Current Use</th>
<th>Residential and Agricultural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Use</td>
<td>Residential</td>
</tr>
<tr>
<td>Development Application Status</td>
<td>No plans submitted</td>
</tr>
<tr>
<td>Access Requirements</td>
<td>Status: Provide access via Bleams Road</td>
</tr>
<tr>
<td>Servicing Requirements</td>
<td>Storm water over 5 year post development to flow to Bleams Road and Fischer-Hallman Road</td>
</tr>
<tr>
<td></td>
<td>Sanitary sewer service to connect to new City of Kitchener sanitary sewer upon completion of roundabout at Bleams Road.</td>
</tr>
<tr>
<td></td>
<td>New watermain as part of lands developing to connect to City of Kitchener watermain on Rockwood Road.</td>
</tr>
<tr>
<td>Other</td>
<td>Portion of land requires a fill permit from GRCA</td>
</tr>
</tbody>
</table>

### Activa Developments Property, 1340 Fischer-Hallman Road

<table>
<thead>
<tr>
<th>Current Use</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Use</td>
<td>Mixed Use Commercial Residential</td>
</tr>
<tr>
<td>Development Application Status</td>
<td>No plans submitted</td>
</tr>
<tr>
<td>Access Requirements</td>
<td>Status: Future roundabout on Fischer-Hallman Road at Rosenberg Way</td>
</tr>
<tr>
<td>Servicing Requirements</td>
<td>MSTSS must be extended from current approved Activa development through this Activa property by City of Kitchener or Activa Developments</td>
</tr>
<tr>
<td></td>
<td>Sanitary sewer service to connect to new MSTSS</td>
</tr>
<tr>
<td>Other</td>
<td>Acquisition or dedication of road widening lands including temporary easements for grading</td>
</tr>
</tbody>
</table>

### Activa Developments Property at Seabrook Drive

<table>
<thead>
<tr>
<th>Current Use</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Use</td>
<td>Planned Mixed use Residential/Commercial</td>
</tr>
</tbody>
</table>
### Development Application Status

<table>
<thead>
<tr>
<th>No formal plans submitted but being developed</th>
</tr>
</thead>
</table>

### Access Requirements

<table>
<thead>
<tr>
<th>Status: Planned Via Seabrook Drive</th>
</tr>
</thead>
</table>

### Servicing Requirements

<table>
<thead>
<tr>
<th>Via City of Kitchener servicing on Seabrook Drive</th>
</tr>
</thead>
</table>

### Other

<table>
<thead>
<tr>
<th>Acquisition or dedication of road widening lands including temporary easements for grading</th>
</tr>
</thead>
</table>

### City of Kitchener Park Development

<table>
<thead>
<tr>
<th>Current Use</th>
<th>Pre-grading ongoing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Use</td>
<td>City Parkland</td>
</tr>
<tr>
<td>Development Application Status</td>
<td>Phase 1 to be approved in near future</td>
</tr>
<tr>
<td>Access Requirements</td>
<td>Status: Future roundabout on Fischer-Hallman Road at Rosenberg Way</td>
</tr>
<tr>
<td>Servicing Requirements</td>
<td>Sanitary and water service extension from Becker Estates Subdivision completed Fall 2018</td>
</tr>
<tr>
<td>Other</td>
<td>Dedication of road widening lands including temporary easements for grading pending confirmation of transfer</td>
</tr>
</tbody>
</table>

### Schlegel – Becker Estates Subdivision

<table>
<thead>
<tr>
<th>Current Use</th>
<th>Agricultural – Pre-servicing and grading underway in 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Use</td>
<td>Mixed use commercial residential</td>
</tr>
<tr>
<td>Development Application Status</td>
<td>Subdivision approval expected Fall 2018</td>
</tr>
<tr>
<td>Access Requirements</td>
<td>Status: Accesses include future roundabout at Fischer-Hallman Road at Wallaceton Way and two right-in right-out accesses along Fischer-Hallman Road.</td>
</tr>
<tr>
<td>Servicing Requirements</td>
<td>Provide storm sewer outlet extension to drain a section of Fischer-Hallman Road in the future for the Fischer-Hallman Road widening.</td>
</tr>
<tr>
<td></td>
<td>750mm diameter trunk watermain currently under construction with anticipated completion in 2019.</td>
</tr>
<tr>
<td>Other</td>
<td>Permanent and temporary lands required by Region for construction Fischer-Hallman Road widening to be dedicated before registration of subdivision agreement in Fall 2018.</td>
</tr>
</tbody>
</table>
Region of Waterloo
Transportation and Environmental Services
Transportation

To: Chair Tom Galloway and Members of the Planning and Works Committee  
Date: November 6, 2018  
File Code: T11-30  
Subject: The Region of Waterloo 2017 Collision Report

Recommendation:  
For information.

Summary:  
The Region of Waterloo 2017 Collision Report summarizes factors associated with traffic collisions that occurred between 2013 and 2017. Each year staff assesses collisions to determine the highest ranked locations related to motor vehicle, cycling and pedestrian collisions. Through the assessment, staff rank the top 100 vehicle collision locations, top 20 pedestrian collision locations and the top 20 cycling collision locations.

The overall 10-year trend of annual collisions and fatalities per capita is continuing downward (including data from 2017) as illustrated in Figures 2.1 and 2.2). It is not considered unusual to see year over year variation in collision data as seen in 2017 and other past years. Regional staff has noted the increase in 2017 and expects that the Region’s road safety program will continue to contribute to the long term downward trend in collisions.
Table 1: 5-year Collision Observation and Comparison

<table>
<thead>
<tr>
<th>Collisions Type</th>
<th>5-year Average</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total reported collisions</td>
<td>6222</td>
<td>6263</td>
<td>5791</td>
<td>6319</td>
<td>6462</td>
<td>6275</td>
</tr>
<tr>
<td>Collisions involving cyclists</td>
<td>105</td>
<td>98</td>
<td>87</td>
<td>110</td>
<td>107</td>
<td>122</td>
</tr>
<tr>
<td>Total Number of Fatal injuries</td>
<td>9</td>
<td>9</td>
<td>6</td>
<td>9</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Total Injury collisions</td>
<td>1431</td>
<td>1424</td>
<td>1371</td>
<td>1486</td>
<td>1441</td>
<td>1433</td>
</tr>
<tr>
<td>Total Pedestrian collisions</td>
<td>126</td>
<td>139</td>
<td>120</td>
<td>150</td>
<td>113</td>
<td>109</td>
</tr>
</tbody>
</table>

Staff will review the top-ranked locations (worst for collisions) from the 2017 collision report, determine the causes of any over-represented collision types and assess the potential to reduce those collisions through the implementation of countermeasures.

Staff will follow up in 2019 with an additional report that includes recommended countermeasure to address the worst collision locations. For more information, please refer to Appendix A for an Executive Summary of the 2017 Collision Report.

Report:

1.0 Background

The Regional road network is screened annually based on motor vehicle, pedestrian and cycling collisions. The network screening is based on collisions occurring on roads under the jurisdiction of the Regional Municipality of Waterloo or occurring at signalized intersections (including pedestrian and midblock signals) under the jurisdiction of local municipalities and either investigated by Waterloo Region Police Services (WRPS) or reported to the Collision Reporting Centre.

Each year staff assesses collisions to determine the highest ranked locations related to motor vehicle collisions, pedestrian collisions and cycling collisions.

The Region ranks the top 100 vehicle collision locations, top 20 pedestrian collision locations and the top 20 cycling collision locations. The ranking is determined by examining the number and severity of collisions at a particular location and comparing that data to similar data from all other similar locations on the Region’s road network. The 2017 Collision Report also includes comparison factors for the years 2013 to 2017.

Each year, staff review the top 10 locations for motor vehicle collisions, top 10 locations for pedestrian collisions and top 10 locations for cycling collisions in greater detail to determine if there are collision patterns that could be addressed by potential countermeasures to improve roadway safety for all road users.

Countermeasures that have been implemented based on collision data from previous
years include, but are not limited to, protected left-turn phases at signalized intersections, centre medians, channelized right-turn lanes or "smart" channels, pedestrian countdown signals, ladder-style crosswalk pavement markings, offset crosswalks and roundabouts.

Appendix A to this report is a copy of the Executive Summary of the 2017 Region of Waterloo Collision Report. The full 2017 Collision Report is available in the Transportation Division of the Transportation and Environmental Services Department, 7th Floor, Administration Headquarters Building. Copies of the full 2017 Collision Report will be circulated to the 7 local municipalities, Regional Council Library and the Waterloo Regional Police Services for their information and use. The full 2017 Collision Report will also be made available on the Region’s website under Roads and Traffic/Annual Collision Report.

2.0 Collision History on Regional Roads

Table 2.1 and Figure 2.1 show the vehicle collision history on Regional roads. In summary based on 20 years of data, collisions per 1,000 population is trending lower. The overall 10-year trend of annual collisions and fatalities per capita is continuing downward (including data from 2017) as illustrated in Figures 2.1 and 2.2. It is not considered unusual to see year over year variation in collision data as seen in 2017 and other past years. Regional staff has noted the increase in 2017 and expects that the Region’s road safety program will continue to contribute to the long term downward trend in collisions. Of note, 2017 total collisions is comparable to the 5-year average and is lower than 3 of the 4 past years. The large fluctuations that can be seen between 1996 and 2003 were likely related to legislation that changed collision reporting procedures. As shown, the previous 10-year period (2008 to 2017) is also showing the same pattern of trending lower. However, this trend is shown to be much lower than the 20-year period and appears to be stabilizing. Notwithstanding this, 2017 total collisions on a per capita basis slightly increased from the previous year (2016) from 10 collisions to 10.5 collisions in 2017.

During the previous 10 years (2008 to 2017), fatal collisions on a per capita basis, are trending downward as shown in Figure 2.2. Regional staff review the details of all fatal collisions to determine factors that may have contributed to the collisions and whether countermeasures could mitigate future occurrences.

Cycling collisions between 2016 and 2017 increased by 13% (87 in 2016 to 98 in 2017); however, the 98 collisions that occurred in 2017 is lower than the 5-year average of 105. Despite a growing number of cyclists using Regional roads and a modest increase in cycling related collisions in 2017, cycling related collisions (over a ten-year period) are trending lower for total collisions involving cyclists.

Further comparison of the 2016 and 2017 collision data shows an increase of 14% in
pedestrian related collisions. Staff believe that the increase in these collisions may be related to the likelihood that the number of pedestrians using Regional roads is growing at a faster rate than motor vehicle traffic. Each year the Region installs infrastructure such as sidewalks and multi-use trails that results in more pedestrian traffic along Regional roads. Regional staff believe that the number of pedestrians walking on Regional roads is closely related to growth seen in transit ridership data which has demonstrated an average growth rate of 5.1% annually since January 2000 when GRT was established.

Table 2.1: Vehicle Collision History on Regional Roads

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Number of Collisions</th>
<th>Collisions Per 1,000 Population</th>
<th>Year</th>
<th>Total Number of Collisions</th>
<th>Collisions Per 1,000 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>5656</td>
<td>13.4</td>
<td>2007</td>
<td>5980</td>
<td>11.7</td>
</tr>
<tr>
<td>1997</td>
<td>4687</td>
<td>11</td>
<td>2008</td>
<td>5823</td>
<td>10.9</td>
</tr>
<tr>
<td>1998</td>
<td>4844</td>
<td>11.1</td>
<td>2009</td>
<td>5547</td>
<td>10.4</td>
</tr>
<tr>
<td>1999</td>
<td>5138</td>
<td>11.6</td>
<td>2010</td>
<td>5809</td>
<td>10.7</td>
</tr>
<tr>
<td>2000</td>
<td>6374</td>
<td>14.1</td>
<td>2011</td>
<td>6031</td>
<td>10.9</td>
</tr>
<tr>
<td>2001</td>
<td>6330</td>
<td>13.8</td>
<td>2012</td>
<td>5795</td>
<td>10.4</td>
</tr>
<tr>
<td>2002</td>
<td>6976</td>
<td>14.8</td>
<td>2013</td>
<td>6275</td>
<td>11.1</td>
</tr>
<tr>
<td>2003</td>
<td>6657</td>
<td>13.9</td>
<td>2014</td>
<td>6462</td>
<td>11.3</td>
</tr>
<tr>
<td>2004</td>
<td>6061</td>
<td>12.4</td>
<td>2015</td>
<td>6319</td>
<td>11</td>
</tr>
<tr>
<td>2005</td>
<td>5748</td>
<td>11.5</td>
<td>2016</td>
<td>5791</td>
<td>10</td>
</tr>
<tr>
<td>2006</td>
<td>5688</td>
<td>11.2</td>
<td>2017</td>
<td>6263</td>
<td>10.5</td>
</tr>
</tbody>
</table>

Figure 2.1: Total Collision History on Regional Roads
Figure 2.2: Fatal Collisions History

Figure 2.3 compares trends in motor vehicle collisions per 1,000 population between the Region of Waterloo and the Province of Ontario. In summary it appears that collisions on Regional roads occur less often on a per capita basis compared to other municipalities in Ontario.

Figure 2.3: Regional Collisions vs. Ontario Collisions

Note 1 – Ontario statistics gathered from the Ministry of Transportation Ontario Road Safety Annual Report and include all jurisdictions in the Province of Ontario.
Note 2 – Data beyond 2014 was not available from the Ministry of Transportation at the time of preparing this report.

3.0 Collision Ranking

3.1 Vehicle Collision Ranking

Collision ranking using excess social costs is used to identify those locations that are the highest priority for review and most likely to benefit from collision countermeasures. This methodology for collision ranking involves the consideration of the number and severity of collisions at a particular location and comparing that data to similar collision data from all other similar locations in the Regional road network. Please refer to Appendix E for a more detailed explanation of the Region’s network screening methodology. The collision ranking is not meant to imply that there is an “acceptable” number of collisions at any given location. A total of approximately 3325 locations that are ranked include:

- Intersections of Regional roads;
- Intersections of Regional roads with City/Township roads;
- All signalized intersections;
- Stop-controlled intersections on Regional roads;
- Roundabouts on Regional roads (locations with 5-years of data); and
- Midblock locations along Regional roads. Mid-block locations are the roadway sections between any two intersections, signalized or signalized.

Appendix B lists the top 100 collision locations identified in 2017. Staff will review five years of collision data for each location ranked from 1 to 10 to determine if there is a collision pattern that could be mitigated through countermeasures. Table 3.1 lists the first 10 ranked locations.
Table 3.1: First 10 Ranked Vehicle Collision Locations for 2017

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Homer Watson Blvd at Block Line</td>
<td>Kit</td>
<td>471</td>
<td>$242,251</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Ottawa St at Homer Watson Blvd</td>
<td>Kit</td>
<td>207</td>
<td>$205,514</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>Fairway Rd at Wilson Ave</td>
<td>Kit</td>
<td>148</td>
<td>$181,413</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>Franklin Blvd at Cam-Amera Pkwy</td>
<td>Cam</td>
<td>122</td>
<td>$111,082</td>
</tr>
<tr>
<td>5</td>
<td>33</td>
<td>Westmount Rd at Victoria St</td>
<td>Kit</td>
<td>109</td>
<td>$107,959</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>Victoria St between Bruce St and Edna St</td>
<td>Kit</td>
<td>92</td>
<td>$101,740</td>
</tr>
<tr>
<td>7</td>
<td>39</td>
<td>Hespeler Rd at Maple Grove Rd/Fischer Mills Rd</td>
<td>Cam</td>
<td>57</td>
<td>$97,410</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>Hespeler Rd at Bishop St</td>
<td>Cam</td>
<td>112</td>
<td>$88,858</td>
</tr>
<tr>
<td>9</td>
<td>14</td>
<td>King St at Fountain St</td>
<td>Cam</td>
<td>109</td>
<td>$85,440</td>
</tr>
<tr>
<td>10</td>
<td>13</td>
<td>Ottawa St at Westmount Rd</td>
<td>Kit</td>
<td>96</td>
<td>$84,547</td>
</tr>
</tbody>
</table>

See Appendix B for more detail regarding fatal/injury (FI) and property damage (PD) collisions for all top 100 locations.

3.2 Pedestrian and Cyclist Collision Ranking

Pedestrian and cyclist collision ranking is based on the difference between observed collisions and predicted collisions and resulting annual excess social collision cost estimated at each Regional intersection and midblock location. Appendix C and D list the first 20 ranked pedestrian and cyclist collision locations while Tables 3.2.1 and 3.2.2 list the first 10 ranked locations. Staff will review 5 years of collision data for each location ranked from 1 to 10 to determine if there is a collision pattern that could be mitigated through countermeasures.
Table 3.2.1 - First 10 Ranked Pedestrian Collision Locations for 2017

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>Westmount Rd at Victoria</td>
<td>KIT</td>
<td>10</td>
<td>$93,096</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>King St at Bishop St</td>
<td>CAM</td>
<td>8</td>
<td>$85,633</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>University Ave at Albert St</td>
<td>WAT</td>
<td>8</td>
<td>$77,285</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>Ainslie St at Main St</td>
<td>CAM</td>
<td>7</td>
<td>$75,369</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>Erb St at Erbsville Rd /IRA Needles Blvd</td>
<td>WAT</td>
<td>9</td>
<td>$68,963</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>River Rd at Holborn Dr /Access to Stanley Park Mall</td>
<td>KIT</td>
<td>6</td>
<td>$66,127</td>
</tr>
<tr>
<td>7</td>
<td>11</td>
<td>University Ave at Phillip St</td>
<td>WAT</td>
<td>5</td>
<td>$52,105</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>King St at University Ave</td>
<td>WAT</td>
<td>7</td>
<td>$48,628</td>
</tr>
<tr>
<td>9</td>
<td>22</td>
<td>Arthur St at Church St</td>
<td>WOO</td>
<td>4</td>
<td>$46,972</td>
</tr>
<tr>
<td>10</td>
<td>15</td>
<td>Hespeler Rd at Avenue Rd/Jaffray St</td>
<td>CAM</td>
<td>5</td>
<td>$45,557</td>
</tr>
</tbody>
</table>
Table 3.2.2 - First 10 Ranked Cyclist Collision Locations for 2017

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Hespeler Rd at Munch Ave/Isherwood Ave</td>
<td>CAM</td>
<td>6</td>
<td>$56,724</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>Courtland Ave at Siebert Ave</td>
<td>KIT</td>
<td>5</td>
<td>$56,490</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>Hespeler Rd at Bishop St</td>
<td>CAM</td>
<td>6</td>
<td>$49,337</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
<td>Water St btwn Ainsloe St and Simcoe St</td>
<td>CAM</td>
<td>4</td>
<td>$47,860</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>University Ave btwn Regina St and Weber St</td>
<td>WAT</td>
<td>4</td>
<td>$45,481</td>
</tr>
<tr>
<td>6</td>
<td>46</td>
<td>Hespeler Rd at Can-Amera Prky</td>
<td>CAM</td>
<td>5</td>
<td>$43,251</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td>King St at Stirling Ave</td>
<td>KIT</td>
<td>4</td>
<td>$42,518</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>King St at Cedar St</td>
<td>KIT</td>
<td>4</td>
<td>$42,489</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>Weber St at Water St</td>
<td>KIT</td>
<td>4</td>
<td>$42,403</td>
</tr>
<tr>
<td>10</td>
<td>15</td>
<td>King St btwn William St and Willis Way</td>
<td>WAT</td>
<td>3</td>
<td>$34,662</td>
</tr>
</tbody>
</table>

Staff will review 5 years of collision data for these locations along with the other locations in the top 10 list.

3.3 Roundabouts

In 2017, the Region had a total of 30 roundabouts on Regional Roads. Only 19 roundabouts have at least 5-years of collision data and are included in the overall ranking. Similar to intersections and midblocks, Transportation Engineering collaborated with Ryerson University to develop safety performance functions (SPF) for roundabouts. Starting in 2014, roundabouts were also screened using SPF prediction models to estimate expected annual collisions. This allowed 19 roundabouts to be ranked with all the other locations in the Region.

Roundabouts that have less than 5-years of data were not included in the overall ranking. Table 3.3.2 shows the list of 11 roundabout locations that have less than 5 years of data and shows the details of total number of collisions, pedestrian collisions and injury collisions. These locations will be added to the screening once 5-years of data is available. The Region’s roundabouts generally continue to perform with low amounts of serious injuries, pedestrian and cyclist collisions.
It should be noted that although the Homer Watson Boulevard at Ottawa Street and the Homer Watson Boulevard at Alpine Road intersections have been operating as a roundabout since October 2017, these locations have remained within the top vehicular ranking, based on the collision history when these locations were signalized intersections. Each of these two locations had collision data representing 95% of the 5-year period preceding October 2017.

Regional staff continue to monitor Homer Watson Boulevard and Block Line Road roundabout and have noted that collisions continue to trend downward at this location as noted in Table 3.3.1

Table 3.3.1: Collisions at Homer Watson Boulevard and Block Line Road

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Collisions</th>
<th>Injury Collisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>72</td>
<td>8</td>
</tr>
<tr>
<td>2014</td>
<td>107</td>
<td>13</td>
</tr>
<tr>
<td>2015</td>
<td>119</td>
<td>7</td>
</tr>
<tr>
<td>2016</td>
<td>88</td>
<td>11</td>
</tr>
<tr>
<td>2017</td>
<td>85</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>471</td>
<td>46</td>
</tr>
</tbody>
</table>
Table 3.3.2: Collisions at Roundabout Locations

<table>
<thead>
<tr>
<th>Location</th>
<th>Opened</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>I</td>
<td>P</td>
<td>T</td>
<td>I</td>
<td>P</td>
</tr>
<tr>
<td>Hespeler &amp; Beaverdale/Queen, Cambridge</td>
<td>Aug. 13</td>
<td>0*</td>
<td>0*</td>
<td>23*</td>
<td>6*</td>
<td>0*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7</td>
<td>0</td>
<td>53</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Westmount &amp; Laurelwood, Waterloo</td>
<td>Dec. 14</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>0*</td>
<td>0*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0*</td>
<td>0*</td>
<td>2*</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Franklin &amp; Savage, Cambridge</td>
<td>Dec. 15</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>0</td>
<td>16</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Franklin &amp; Sheldon, Cambridge</td>
<td>Dec. 15</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0*</td>
<td>0*</td>
<td>2*</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Franklin &amp; Bishop, Cambridge</td>
<td>Dec. 15</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>0</td>
<td>46</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>Bleams &amp; Manitou, Kitchener</td>
<td>Dec. 15</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Franklin &amp; Main, Cambridge</td>
<td>Sep. 16</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0*</td>
<td>0*</td>
<td>14*</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Franklin &amp; Pinebush</td>
<td>Sep. 16</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2*</td>
<td>0*</td>
<td>33*</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>Clyde &amp; Franklin, Cambridge</td>
<td>Sep. 16</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0*</td>
<td>0*</td>
<td>4*</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Erb &amp; Landfill Gate 1 /Waterloo West Centre</td>
<td>Nov. 16</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>(Costco)</td>
<td></td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Erb &amp; Landfill Gate 2 /Platinum</td>
<td>Nov. 16</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0*</td>
<td>0*</td>
<td>1*</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

* Note: denotes partial year
I = Injury Collision
P = Pedestrian Collision
T = Total Number of Collisions
4.0 Next Steps

Staff plan to present a report to Planning and Works Committee in December 2018 that includes an assessment of the top 10 vehicular collision locations, top 10 pedestrian collision locations and top 10 cycling collision locations in detail. The report will also include an assessment of potential countermeasures for these locations.

Corporate Strategic Plan:

This report addresses the Region’s goal to optimize road capacity to safely manage traffic and congestion. (Strategic Objective 2.4).

Financial Implications: Nil

Other Department Consultations/Concurrence: Nil

Attachments

Appendix A – Executive Summary of the 2017 Region of Waterloo Collision Report

Appendix B – 2017 Vehicular Collision Ranking

Appendix C – 2017 Pedestrian Collision Ranking

Appendix D – 2017 Cyclist Collision Ranking

Appendix E - Vehicle Collision Ranking Methodology

Prepared By: Mike Jones, Supervisor, Traffic Engineering

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Executive Summary 2017 Collision Report

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Collisions</td>
<td>6263</td>
<td>5791</td>
<td>6319</td>
<td>6462</td>
<td>6275</td>
</tr>
<tr>
<td>Number of Fatal Collisions</td>
<td>9</td>
<td>6</td>
<td>9</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Number of Inj ury Collisions</td>
<td>1424</td>
<td>1371</td>
<td>1486</td>
<td>1441</td>
<td>1433</td>
</tr>
<tr>
<td>Number of Collisions Involving Pedestrians</td>
<td>139</td>
<td>120</td>
<td>150</td>
<td>113</td>
<td>109</td>
</tr>
<tr>
<td>Number of Collisions Involving Cyclists</td>
<td>98</td>
<td>87</td>
<td>110</td>
<td>107</td>
<td>122</td>
</tr>
<tr>
<td>Number of Persons Injured in Collisions (includes drivers, passengers, cyclists and pedestrians)</td>
<td>1949</td>
<td>1851</td>
<td>2049</td>
<td>1974</td>
<td>1965</td>
</tr>
<tr>
<td>Number of Persons Sustaining Fatal Injuries in Collisions (includes drivers, passengers, cyclists and pedestrians)</td>
<td>9</td>
<td>6</td>
<td>11</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Percentage of Collisions Occurring at Intersections</td>
<td>66%</td>
<td>64%</td>
<td>66%</td>
<td>63%</td>
<td>64%</td>
</tr>
<tr>
<td>Day with Highest Number of Collisions</td>
<td>Friday</td>
<td>Thursday</td>
<td>Friday</td>
<td>Friday</td>
<td>Friday</td>
</tr>
<tr>
<td>Month with Highest Number of Collisions</td>
<td>November</td>
<td>December</td>
<td>February</td>
<td>January</td>
<td>October</td>
</tr>
<tr>
<td>Time of Day with Highest Number of Collisions</td>
<td>17:00</td>
<td>17:00</td>
<td>17:00</td>
<td>17:00</td>
<td>17:00</td>
</tr>
<tr>
<td>Most Common Collision Type</td>
<td>Rear End</td>
<td>Rear End</td>
<td>Rear End</td>
<td>Rear End</td>
<td>Rear End</td>
</tr>
<tr>
<td>Most Frequently Recorded Improper Driving Action</td>
<td>Following Too Close</td>
<td>Following Too Close</td>
<td>Following Too Close</td>
<td>Following Too Close</td>
<td>Following Too Close</td>
</tr>
<tr>
<td>Percentage of Alcohol-Related Collisions</td>
<td>1.7%</td>
<td>1.7%</td>
<td>1.3%</td>
<td>1.3%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Horse-Drawn Vehicle Collisions</td>
<td>3</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>11</td>
</tr>
</tbody>
</table>
## Top 100 Vehicle Collision Locations

<table>
<thead>
<tr>
<th>2017 Ranking</th>
<th>GEO_ID</th>
<th>STREET_1</th>
<th>LOCATE</th>
<th>STREET_2</th>
<th>MUN</th>
<th>FI Observed</th>
<th>FI Predicted</th>
<th>FI Expected</th>
<th>PD Observed</th>
<th>PD Predicted</th>
<th>PD Expected</th>
<th>Excess Social Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10941</td>
<td>HOMER WATSON BLV</td>
<td>AT Block Line Rd</td>
<td>KIT</td>
<td>9.2</td>
<td>4.4</td>
<td>5.7</td>
<td>85.0</td>
<td>39.2</td>
<td>74.8</td>
<td>$242,251</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>11768</td>
<td>OTTAWA ST</td>
<td>AT HOMER WATSON BLV</td>
<td>KIT</td>
<td>8.6</td>
<td>5.6</td>
<td>7.8</td>
<td>32.8</td>
<td>16.9</td>
<td>31.4</td>
<td>$205,514</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>10710</td>
<td>FAIRWAY RD</td>
<td>AT Wilson Ave</td>
<td>KIT</td>
<td>7.0</td>
<td>3.8</td>
<td>5.9</td>
<td>22.6</td>
<td>10.2</td>
<td>20.9</td>
<td>$181,413</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>27986</td>
<td>FRANKLIN BLVD</td>
<td>AT CAN-AMERA PKWY</td>
<td>CAM</td>
<td>6.2</td>
<td>4.2</td>
<td>5.6</td>
<td>18.2</td>
<td>11.6</td>
<td>17.4</td>
<td>$111,082</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>8511</td>
<td>WESTMOUNT RD</td>
<td>AT VICTORIA ST</td>
<td>KIT</td>
<td>6.4</td>
<td>4.2</td>
<td>5.7</td>
<td>15.4</td>
<td>11.5</td>
<td>14.9</td>
<td>$107,959</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>12688</td>
<td>VICTORIA ST N</td>
<td>BTWN BRUCE &amp; EDNA</td>
<td>KIT</td>
<td>4.6</td>
<td>1.6</td>
<td>2.7</td>
<td>13.8</td>
<td>4.5</td>
<td>11.6</td>
<td>$101,740</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>18701</td>
<td>HESPELER RD</td>
<td>AT MAPLE GROVE RD/Fisher Mills Rd</td>
<td>CAM</td>
<td>5.2</td>
<td>2.3</td>
<td>3.9</td>
<td>6.2</td>
<td>5.6</td>
<td>6.1</td>
<td>$97,410</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>20363</td>
<td>HESPELER RD</td>
<td>AT BISHOP ST</td>
<td>CAM</td>
<td>6.0</td>
<td>4.3</td>
<td>5.5</td>
<td>16.4</td>
<td>11.9</td>
<td>15.9</td>
<td>$88,858</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>17349</td>
<td>KING ST</td>
<td>AT FOUNTAIN ST (RR 8/17)</td>
<td>CAM</td>
<td>5.0</td>
<td>2.1</td>
<td>2.9</td>
<td>16.8</td>
<td>5.7</td>
<td>12.8</td>
<td>$85,440</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>6349</td>
<td>OTTAWA ST</td>
<td>AT WESTMOUNT RD</td>
<td>KIT</td>
<td>4.8</td>
<td>3.2</td>
<td>4.2</td>
<td>14.4</td>
<td>8.5</td>
<td>13.5</td>
<td>$84,547</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>19445</td>
<td>EAGLE ST N</td>
<td>BTWN HESPELER &amp; Industrial</td>
<td>CAM</td>
<td>3.8</td>
<td>1.0</td>
<td>1.9</td>
<td>11.6</td>
<td>3.1</td>
<td>9.0</td>
<td>$81,360</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>11629</td>
<td>OTTAWA ST</td>
<td>AT Alpine Rd/Hwy 7/8 EB On/Off Ramp</td>
<td>KIT</td>
<td>4.0</td>
<td>2.4</td>
<td>3.3</td>
<td>12.4</td>
<td>5.4</td>
<td>10.8</td>
<td>$81,329</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>20632</td>
<td>VICTORIA ST</td>
<td>AT FISCHER-HALLMAN RD</td>
<td>KIT</td>
<td>5.4</td>
<td>3.7</td>
<td>4.8</td>
<td>12.8</td>
<td>9.9</td>
<td>12.4</td>
<td>$79,296</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>10831</td>
<td>OTTAWA ST</td>
<td>AT Strasburg Rd</td>
<td>KIT</td>
<td>4.0</td>
<td>2.6</td>
<td>3.4</td>
<td>14.0</td>
<td>6.4</td>
<td>12.5</td>
<td>$77,696</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>17215</td>
<td>KING ST</td>
<td>AT BISHOP ST/Bishop St</td>
<td>CAM</td>
<td>4.6</td>
<td>2.0</td>
<td>3.3</td>
<td>3.4</td>
<td>4.3</td>
<td>3.7</td>
<td>$77,593</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>20086</td>
<td>HESPELER RD</td>
<td>AT Avenue Rd/Jaffray St</td>
<td>CAM</td>
<td>4.6</td>
<td>2.6</td>
<td>3.7</td>
<td>7.6</td>
<td>5.8</td>
<td>7.2</td>
<td>$77,019</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>28255</td>
<td>HESPELER RD</td>
<td>AT CAN-AMERA YMCA (250 Hespeler Rd)</td>
<td>CAM</td>
<td>5.2</td>
<td>3.5</td>
<td>4.6</td>
<td>11.0</td>
<td>8.6</td>
<td>10.6</td>
<td>$76,947</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>21818</td>
<td>HOMER WATSON BLY</td>
<td>AT MANITOU DR/Doon Village Rd</td>
<td>KIT</td>
<td>6.4</td>
<td>5.0</td>
<td>6.0</td>
<td>17.0</td>
<td>14.2</td>
<td>16.7</td>
<td>$73,800</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>7533</td>
<td>WEBER ST</td>
<td>AT UNIVERSITY AVE</td>
<td>WAT</td>
<td>4.4</td>
<td>3.7</td>
<td>4.1</td>
<td>19.8</td>
<td>10.1</td>
<td>18.5</td>
<td>$70,299</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>13830</td>
<td>FRANKLIN BLVD</td>
<td>BTWN CLYDE (SAMUELSON) &amp; Savage</td>
<td>CAM</td>
<td>4.2</td>
<td>1.7</td>
<td>2.7</td>
<td>8.2</td>
<td>4.7</td>
<td>7.4</td>
<td>$69,362</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>26749</td>
<td>WESTMOUNT RD/Max</td>
<td>AT FISCHER-HALLMAN RD</td>
<td>KIT</td>
<td>4.0</td>
<td>2.5</td>
<td>3.4</td>
<td>10.6</td>
<td>6.3</td>
<td>9.7</td>
<td>$67,804</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>14619</td>
<td>DUNDAS ST</td>
<td>AT Elgin St</td>
<td>CAM</td>
<td>3.6</td>
<td>1.4</td>
<td>2.3</td>
<td>6.0</td>
<td>2.7</td>
<td>4.7</td>
<td>$67,300</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>3884</td>
<td>WATERLOO ST/SNYD</td>
<td>AT NAFZIGER RD</td>
<td>WIL</td>
<td>3.4</td>
<td>0.6</td>
<td>1.7</td>
<td>0.2</td>
<td>2.0</td>
<td>1.4</td>
<td>$65,704</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>18248</td>
<td>DUNDAS ST</td>
<td>AT BEVERLY ST/Beverly St</td>
<td>CAM</td>
<td>4.2</td>
<td>2.8</td>
<td>3.6</td>
<td>10.6</td>
<td>7.0</td>
<td>9.9</td>
<td>$63,451</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>10410</td>
<td>VICTORIA ST N</td>
<td>AT Forfar &amp; Frederick</td>
<td>KIT</td>
<td>3.6</td>
<td>1.4</td>
<td>2.3</td>
<td>7.6</td>
<td>4.3</td>
<td>6.8</td>
<td>$63,114</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>22058</td>
<td>HOMER WATSON BLY</td>
<td>AT Pioneer Dr</td>
<td>KIT</td>
<td>3.8</td>
<td>3.0</td>
<td>3.5</td>
<td>15.2</td>
<td>7.2</td>
<td>13.7</td>
<td>$62,605</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>13957</td>
<td>DUNDAS ST</td>
<td>AT MAIN ST</td>
<td>CAM</td>
<td>3.8</td>
<td>2.7</td>
<td>3.3</td>
<td>12.6</td>
<td>6.9</td>
<td>11.5</td>
<td>$61,331</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>17750</td>
<td>WATER ST</td>
<td>AT Samuelson St/GCI driveway</td>
<td>CAM</td>
<td>3.8</td>
<td>2.1</td>
<td>2.9</td>
<td>6.0</td>
<td>4.1</td>
<td>5.5</td>
<td>$60,356</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>19083</td>
<td>FRANKLIN BLVD</td>
<td>AT Elgin St/Saginaw Pkwy</td>
<td>CAM</td>
<td>5.6</td>
<td>4.3</td>
<td>5.2</td>
<td>12.8</td>
<td>11.6</td>
<td>12.7</td>
<td>$59,767</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>22082</td>
<td>HOMER WATSON BLY</td>
<td>AT Doon South Dr (com'l driveway)</td>
<td>KIT</td>
<td>4.4</td>
<td>2.9</td>
<td>3.8</td>
<td>6.6</td>
<td>6.3</td>
<td>6.5</td>
<td>$57,183</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>18343</td>
<td>DUNDAS ST</td>
<td>AT Wellington St</td>
<td>CAM</td>
<td>3.6</td>
<td>0.3</td>
<td>1.0</td>
<td>7.4</td>
<td>0.8</td>
<td>3.7</td>
<td>$55,955</td>
<td></td>
</tr>
<tr>
<td>Property ID</td>
<td>Address</td>
<td>Between/Between</td>
<td>District</td>
<td>Assessment Year</td>
<td>Improvement Year</td>
<td>Land</td>
<td>Building</td>
<td>Exterior</td>
<td>Interior</td>
<td>Finishing</td>
<td>Total</td>
<td>Price</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>-----------------</td>
<td>----------</td>
<td>-----------------</td>
<td>------------------</td>
<td>------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>32</td>
<td>600734 IRA NEEDLES BLVD</td>
<td>BTWN HIGHLAND &amp; VICTORIA</td>
<td>KIT</td>
<td>2018</td>
<td>2018</td>
<td>3.0</td>
<td>0.9</td>
<td>1.7</td>
<td>6.0</td>
<td>3.9</td>
<td>5.5</td>
<td>$54,325</td>
</tr>
<tr>
<td>33</td>
<td>28246 FAIRWAY RD</td>
<td>AT Fairview Park Mall/Cinéplex (225 Fairway S)</td>
<td>KIT</td>
<td>2018</td>
<td>2018</td>
<td>3.6</td>
<td>2.6</td>
<td>3.2</td>
<td>10.2</td>
<td>5.9</td>
<td>9.3</td>
<td>$52,690</td>
</tr>
<tr>
<td>34</td>
<td>6110 HIGHLAND RD</td>
<td>AT FISCHER-HALLMAN RD</td>
<td>KIT</td>
<td>2018</td>
<td>2018</td>
<td>5.2</td>
<td>4.0</td>
<td>4.8</td>
<td>11.0</td>
<td>10.7</td>
<td>11.0</td>
<td>$51,971</td>
</tr>
<tr>
<td>35</td>
<td>20569 ERB ST</td>
<td>AT UNIVERSITY AVE</td>
<td>WAT</td>
<td>2018</td>
<td>2018</td>
<td>3.8</td>
<td>2.6</td>
<td>3.3</td>
<td>8.8</td>
<td>6.5</td>
<td>8.3</td>
<td>$50,713</td>
</tr>
<tr>
<td>36</td>
<td>21184 BLEAMS RD/OTTAWA</td>
<td>AT TRUSSLER RD</td>
<td>KIT</td>
<td>2018</td>
<td>2018</td>
<td>3.8</td>
<td>1.7</td>
<td>2.7</td>
<td>0.2</td>
<td>3.3</td>
<td>4.2</td>
<td>$50,417</td>
</tr>
<tr>
<td>37</td>
<td>8991 UNIVERSITY AVE E</td>
<td>BTWN Regina &amp; WEBER</td>
<td>WAT</td>
<td>2018</td>
<td>2018</td>
<td>2.6</td>
<td>0.7</td>
<td>1.0</td>
<td>11.4</td>
<td>2.1</td>
<td>7.7</td>
<td>$49,313</td>
</tr>
<tr>
<td>38</td>
<td>18120 HESPELER RD</td>
<td>AT Brooklyne Rd</td>
<td>CAM</td>
<td>2018</td>
<td>2018</td>
<td>2.6</td>
<td>0.5</td>
<td>1.2</td>
<td>4.8</td>
<td>1.2</td>
<td>3.2</td>
<td>$48,265</td>
</tr>
<tr>
<td>39</td>
<td>7290 UNIVERSITY AVE</td>
<td>AT Lester St</td>
<td>WAT</td>
<td>2018</td>
<td>2018</td>
<td>2.0</td>
<td>0.6</td>
<td>1.1</td>
<td>8.0</td>
<td>1.4</td>
<td>5.2</td>
<td>$48,210</td>
</tr>
<tr>
<td>40</td>
<td>270 UNIVERSITY AVE</td>
<td>AT Albert St</td>
<td>WAT</td>
<td>2018</td>
<td>2018</td>
<td>4.6</td>
<td>3.1</td>
<td>4.0</td>
<td>5.8</td>
<td>7.9</td>
<td>6.2</td>
<td>$47,167</td>
</tr>
<tr>
<td>41</td>
<td>8754 HIGHLAND RD</td>
<td>AT Belmont Ave</td>
<td>KIT</td>
<td>2018</td>
<td>2018</td>
<td>4.2</td>
<td>3.0</td>
<td>3.7</td>
<td>7.2</td>
<td>6.9</td>
<td>7.1</td>
<td>$45,983</td>
</tr>
<tr>
<td>42</td>
<td>20365 HESPELER RD</td>
<td>AT Dunbar Rd</td>
<td>CAM</td>
<td>2018</td>
<td>2018</td>
<td>4.6</td>
<td>3.6</td>
<td>4.3</td>
<td>10.8</td>
<td>9.4</td>
<td>10.6</td>
<td>$44,906</td>
</tr>
<tr>
<td>43</td>
<td>14593 DUNDAS ST</td>
<td>AT FRANKLIN BLVD</td>
<td>CAM</td>
<td>2018</td>
<td>2018</td>
<td>3.8</td>
<td>2.9</td>
<td>3.5</td>
<td>10.2</td>
<td>7.4</td>
<td>9.7</td>
<td>$43,292</td>
</tr>
<tr>
<td>44</td>
<td>21742 OTTAWA ST</td>
<td>AT International Pk/Wilderness Dr</td>
<td>KIT</td>
<td>2018</td>
<td>2018</td>
<td>2.8</td>
<td>1.2</td>
<td>1.8</td>
<td>3.4</td>
<td>2.4</td>
<td>3.0</td>
<td>$40,689</td>
</tr>
<tr>
<td>45</td>
<td>19604 Franklin Blvd</td>
<td>AT Holiday Inn Dr/Jamieson Pkwy</td>
<td>CAM</td>
<td>2018</td>
<td>2018</td>
<td>3.4</td>
<td>2.1</td>
<td>2.8</td>
<td>4.6</td>
<td>5.0</td>
<td>4.7</td>
<td>$38,897</td>
</tr>
<tr>
<td>46</td>
<td>20333 HESPELER RD</td>
<td>AT Langs Dr/Sheldon Dr</td>
<td>CAM</td>
<td>2018</td>
<td>2018</td>
<td>4.4</td>
<td>3.8</td>
<td>4.2</td>
<td>13.2</td>
<td>9.8</td>
<td>12.7</td>
<td>$38,504</td>
</tr>
<tr>
<td>47</td>
<td>374 UNIVERSITY AVE</td>
<td>AT Regina St</td>
<td>WAT</td>
<td>2018</td>
<td>2018</td>
<td>3.0</td>
<td>1.9</td>
<td>2.4</td>
<td>5.2</td>
<td>4.1</td>
<td>4.9</td>
<td>$37,587</td>
</tr>
<tr>
<td>48</td>
<td>13954 DUNDAS ST S</td>
<td>BTWN FRANKLIN &amp; MAIN</td>
<td>CAM</td>
<td>2018</td>
<td>2018</td>
<td>2.0</td>
<td>0.5</td>
<td>0.7</td>
<td>9.8</td>
<td>1.5</td>
<td>5.7</td>
<td>$37,296</td>
</tr>
<tr>
<td>49</td>
<td>2650 ARTHUR ST (RR21/85)</td>
<td>AT LISTOWEL RD/Union St</td>
<td>WOO</td>
<td>2018</td>
<td>2018</td>
<td>1.4</td>
<td>0.7</td>
<td>1.1</td>
<td>7.0</td>
<td>2.4</td>
<td>4.2</td>
<td>$36,898</td>
</tr>
<tr>
<td>50</td>
<td>11642 King St</td>
<td>AT Borden Ave</td>
<td>KIT</td>
<td>2018</td>
<td>2018</td>
<td>2.4</td>
<td>0.9</td>
<td>1.4</td>
<td>4.0</td>
<td>1.6</td>
<td>2.8</td>
<td>$36,580</td>
</tr>
<tr>
<td>51</td>
<td>10258 LACKNER BLVD/Bling</td>
<td>AT VICTORIA ST</td>
<td>KIT</td>
<td>2018</td>
<td>2018</td>
<td>4.8</td>
<td>4.1</td>
<td>4.6</td>
<td>12.2</td>
<td>10.9</td>
<td>12.0</td>
<td>$35,058</td>
</tr>
<tr>
<td>52</td>
<td>8672 VICTORIA ST</td>
<td>AT Margaret Ave</td>
<td>KIT</td>
<td>2018</td>
<td>2018</td>
<td>2.4</td>
<td>1.0</td>
<td>1.5</td>
<td>3.8</td>
<td>1.8</td>
<td>2.9</td>
<td>$34,648</td>
</tr>
<tr>
<td>53</td>
<td>14172 DUNDAS ST</td>
<td>AT Challmers St/Gore St</td>
<td>CAM</td>
<td>2018</td>
<td>2018</td>
<td>2.0</td>
<td>0.6</td>
<td>1.0</td>
<td>3.4</td>
<td>1.3</td>
<td>2.4</td>
<td>$34,648</td>
</tr>
<tr>
<td>54</td>
<td>21307 TRUSSLER RD</td>
<td>AT CEDAR CREEK RD</td>
<td>NDF</td>
<td>2018</td>
<td>2018</td>
<td>2.0</td>
<td>0.5</td>
<td>1.0</td>
<td>2.6</td>
<td>1.0</td>
<td>1.8</td>
<td>$34,643</td>
</tr>
<tr>
<td>55</td>
<td>10741 COURTLAND AVE</td>
<td>AT Siebert Ave (comt driveway)</td>
<td>KIT</td>
<td>2018</td>
<td>2018</td>
<td>2.0</td>
<td>0.7</td>
<td>1.2</td>
<td>3.4</td>
<td>1.9</td>
<td>2.9</td>
<td>$34,341</td>
</tr>
<tr>
<td>56</td>
<td>20352 HESPELER RD</td>
<td>BTWN Munch &amp; CAN-AMERICA/YMCA #250</td>
<td>CAM</td>
<td>2018</td>
<td>2018</td>
<td>2.8</td>
<td>0.8</td>
<td>1.2</td>
<td>5.6</td>
<td>2.7</td>
<td>4.2</td>
<td>$34,341</td>
</tr>
<tr>
<td>57</td>
<td>366 KING ST N</td>
<td>BTWN Hickory &amp; UNIVERSITY</td>
<td>WAT</td>
<td>2018</td>
<td>2018</td>
<td>2.4</td>
<td>0.5</td>
<td>0.8</td>
<td>8.2</td>
<td>1.7</td>
<td>5.3</td>
<td>$34,293</td>
</tr>
<tr>
<td>58</td>
<td>5888 VICTORIA ST</td>
<td>AT Duke St</td>
<td>KIT</td>
<td>2018</td>
<td>2018</td>
<td>2.8</td>
<td>2.0</td>
<td>2.4</td>
<td>6.6</td>
<td>4.2</td>
<td>5.9</td>
<td>$32,782</td>
</tr>
<tr>
<td>59</td>
<td>10714 FAIRWAY RD S</td>
<td>BTWN Wilson &amp; W to Signals (Fairway Best Plaza)</td>
<td>KIT</td>
<td>2018</td>
<td>2018</td>
<td>2.0</td>
<td>1.4</td>
<td>1.5</td>
<td>11.0</td>
<td>4.0</td>
<td>9.2</td>
<td>$32,220</td>
</tr>
<tr>
<td>60</td>
<td>30828 HIGHLAND RD</td>
<td>AT IRA NEEDLES BLVD</td>
<td>KIT</td>
<td>2018</td>
<td>2018</td>
<td>3.0</td>
<td>3.3</td>
<td>3.2</td>
<td>40.8</td>
<td>29.8</td>
<td>37.8</td>
<td>$31,602</td>
</tr>
<tr>
<td>61</td>
<td>8688 UNIVERSITY ST</td>
<td>AT Patricia Ave</td>
<td>KIT</td>
<td>2018</td>
<td>2018</td>
<td>1.8</td>
<td>0.6</td>
<td>1.0</td>
<td>3.4</td>
<td>1.3</td>
<td>2.5</td>
<td>$30,734</td>
</tr>
<tr>
<td>62</td>
<td>12372 EBYCREST RD/WooW</td>
<td>AT VICTORIA ST</td>
<td>WOO</td>
<td>2018</td>
<td>2018</td>
<td>1.0</td>
<td>0.9</td>
<td>1.2</td>
<td>8.2</td>
<td>3.3</td>
<td>5.7</td>
<td>$29,644</td>
</tr>
<tr>
<td>63</td>
<td>275 UNIVERSITY AVE</td>
<td>AT Phillip St (comt driveway)</td>
<td>WAT</td>
<td>2018</td>
<td>2018</td>
<td>2.2</td>
<td>1.5</td>
<td>1.8</td>
<td>6.4</td>
<td>3.2</td>
<td>5.3</td>
<td>$28,520</td>
</tr>
<tr>
<td>64</td>
<td>2483 ARTHUR ST</td>
<td>AT Oriole Pkwy</td>
<td>WAT</td>
<td>2018</td>
<td>2018</td>
<td>2.8</td>
<td>0.8</td>
<td>1.2</td>
<td>2.6</td>
<td>2.7</td>
<td>2.7</td>
<td>$28,390</td>
</tr>
<tr>
<td>65</td>
<td>20994 HIGHLAND RD W</td>
<td>BTWN Butler &amp; WESTMOUNT</td>
<td>KIT</td>
<td>2018</td>
<td>2018</td>
<td>1.4</td>
<td>0.6</td>
<td>0.7</td>
<td>9.8</td>
<td>2.0</td>
<td>6.6</td>
<td>$28,171</td>
</tr>
<tr>
<td>66</td>
<td>7544 ERB ST</td>
<td>AT Devitt Ave</td>
<td>WAT</td>
<td>2018</td>
<td>2018</td>
<td>1.8</td>
<td>0.6</td>
<td>1.0</td>
<td>2.4</td>
<td>1.2</td>
<td>1.9</td>
<td>$27,872</td>
</tr>
<tr>
<td>67</td>
<td>9851 WEBER ST</td>
<td>AT Stirling Ave</td>
<td>KIT</td>
<td>2018</td>
<td>2018</td>
<td>1.8</td>
<td>0.6</td>
<td>1.0</td>
<td>2.2</td>
<td>1.2</td>
<td>1.8</td>
<td>$27,298</td>
</tr>
<tr>
<td>No.</td>
<td>Address 1</td>
<td>Address 2</td>
<td>City/Region</td>
<td>Area (ft²)</td>
<td>Cost (CAD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>-----------</td>
<td>-----------</td>
<td>-------------</td>
<td>-----------</td>
<td>------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68</td>
<td>8538 VICTORIA ST</td>
<td>AT Strange St/West Ave</td>
<td>KIT</td>
<td>3.2</td>
<td>2.4</td>
<td>2.9</td>
<td>6.0</td>
<td>5.7</td>
<td>5.9</td>
<td>27,245</td>
<td></td>
<td></td>
</tr>
<tr>
<td>69</td>
<td>358 UNIVERSITY AVE</td>
<td>AT Hazel St/WLU mid campus (com’l driveway)</td>
<td>WAT</td>
<td>2.0</td>
<td>1.6</td>
<td>1.8</td>
<td>7.8</td>
<td>3.1</td>
<td>6.2</td>
<td>26,738</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>2269 ARTHUR ST</td>
<td>AT CHURCH ST</td>
<td>WOO</td>
<td>1.4</td>
<td>0.6</td>
<td>1.0</td>
<td>2.2</td>
<td>2.1</td>
<td>2.2</td>
<td>26,620</td>
<td></td>
<td></td>
</tr>
<tr>
<td>71</td>
<td>28655 CORONATION BLVD</td>
<td>AT Cam Mem Hosp (700 Coronation)</td>
<td>CAM</td>
<td>2.0</td>
<td>0.6</td>
<td>1.0</td>
<td>3.6</td>
<td>1.0</td>
<td>1.9</td>
<td>26,274</td>
<td></td>
<td></td>
</tr>
<tr>
<td>72</td>
<td>6480 WEBER ST</td>
<td>AT Young St</td>
<td>KIT</td>
<td>2.2</td>
<td>1.4</td>
<td>1.8</td>
<td>4.4</td>
<td>2.5</td>
<td>3.7</td>
<td>25,749</td>
<td></td>
<td></td>
</tr>
<tr>
<td>73</td>
<td>14477 AINSLIE ST</td>
<td>AT Main St</td>
<td>CAM</td>
<td>2.4</td>
<td>1.7</td>
<td>2.0</td>
<td>5.2</td>
<td>3.6</td>
<td>4.7</td>
<td>25,688</td>
<td></td>
<td></td>
</tr>
<tr>
<td>74</td>
<td>6658 VICTORIA ST</td>
<td>AT Ahrens St/Water St</td>
<td>KIT</td>
<td>1.6</td>
<td>0.6</td>
<td>0.9</td>
<td>3.0</td>
<td>1.3</td>
<td>2.2</td>
<td>25,538</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>20586 UNIVERSITY AVE</td>
<td>AT FISCHER-HALLMAN RD</td>
<td>WAT</td>
<td>3.6</td>
<td>3.2</td>
<td>3.4</td>
<td>10.6</td>
<td>8.3</td>
<td>10.2</td>
<td>25,344</td>
<td></td>
<td></td>
</tr>
<tr>
<td>76</td>
<td>600416 FAIRWAY RD S</td>
<td>BTWN Wilson &amp; E to Signals (Fairview Mall)</td>
<td>KIT</td>
<td>1.8</td>
<td>0.5</td>
<td>0.8</td>
<td>7.8</td>
<td>1.9</td>
<td>4.4</td>
<td>24,996</td>
<td></td>
<td></td>
</tr>
<tr>
<td>77</td>
<td>23064 FAIRWAY RD</td>
<td>AT Thaler Ave</td>
<td>KIT</td>
<td>1.6</td>
<td>0.5</td>
<td>0.9</td>
<td>2.8</td>
<td>1.2</td>
<td>2.0</td>
<td>24,980</td>
<td></td>
<td></td>
</tr>
<tr>
<td>78</td>
<td>29041 FAIRWAY RD</td>
<td>AT Wabanaki Dr (RT Only)</td>
<td>KIT</td>
<td>1.4</td>
<td>0.5</td>
<td>0.7</td>
<td>4.6</td>
<td>1.1</td>
<td>2.9</td>
<td>24,972</td>
<td></td>
<td></td>
</tr>
<tr>
<td>79</td>
<td>9540 WESTMOUNT RD</td>
<td>AT Block Line Rd</td>
<td>KIT</td>
<td>2.8</td>
<td>1.8</td>
<td>2.3</td>
<td>2.6</td>
<td>3.8</td>
<td>3.0</td>
<td>24,748</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80</td>
<td>10816 Block Line Rd</td>
<td>AT Strasburg Rd</td>
<td>KIT</td>
<td>2.6</td>
<td>1.8</td>
<td>2.2</td>
<td>4.2</td>
<td>4.0</td>
<td>4.2</td>
<td>24,107</td>
<td></td>
<td></td>
</tr>
<tr>
<td>81</td>
<td>6913 King St</td>
<td>AT Sterling Ave</td>
<td>KIT</td>
<td>2.0</td>
<td>1.4</td>
<td>1.6</td>
<td>5.2</td>
<td>2.7</td>
<td>4.3</td>
<td>23,833</td>
<td></td>
<td></td>
</tr>
<tr>
<td>82</td>
<td>23163 OTTAWA ST</td>
<td>AT LACKNER BLVD</td>
<td>WOO</td>
<td>3.4</td>
<td>1.1</td>
<td>1.3</td>
<td>7.0</td>
<td>3.3</td>
<td>5.3</td>
<td>23,691</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83</td>
<td>2695 ARTHUR ST S</td>
<td>BTWN Gerrat &amp; SAWMILL</td>
<td>WOO</td>
<td>3.4</td>
<td>1.1</td>
<td>1.3</td>
<td>7.0</td>
<td>3.3</td>
<td>5.3</td>
<td>23,691</td>
<td></td>
<td></td>
</tr>
<tr>
<td>84</td>
<td>32195 IRA NEEDLES BLVD</td>
<td>AT Lifestyle Way (N. Boardwalk Access-Empire Thtr)</td>
<td>WAT</td>
<td>2.0</td>
<td>0.2</td>
<td>0.5</td>
<td>5.2</td>
<td>0.5</td>
<td>2.1</td>
<td>23,460</td>
<td></td>
<td></td>
</tr>
<tr>
<td>85</td>
<td>30956 HESPELER RD</td>
<td>BTWN Dunbar &amp; CAN-AMER/A/YMCA #250</td>
<td>CAM</td>
<td>2.0</td>
<td>1.1</td>
<td>1.4</td>
<td>6.4</td>
<td>4.0</td>
<td>5.4</td>
<td>22,886</td>
<td></td>
<td></td>
</tr>
<tr>
<td>86</td>
<td>27142 Columbia St</td>
<td>AT Hagely Blvd/University of Waterloo Access (n.camp)</td>
<td>WAT</td>
<td>2.6</td>
<td>2.1</td>
<td>2.4</td>
<td>6.4</td>
<td>4.8</td>
<td>6.0</td>
<td>22,526</td>
<td></td>
<td></td>
</tr>
<tr>
<td>87</td>
<td>31390 WESTMOUNT RD</td>
<td>AT Union Blvd</td>
<td>KIT</td>
<td>1.4</td>
<td>0.3</td>
<td>0.5</td>
<td>4.8</td>
<td>0.8</td>
<td>2.5</td>
<td>22,177</td>
<td></td>
<td></td>
</tr>
<tr>
<td>88</td>
<td>20107 HESPELER RD</td>
<td>AT Munch Ave/Isheroood Ave</td>
<td>CAM</td>
<td>3.4</td>
<td>3.2</td>
<td>3.3</td>
<td>11.6</td>
<td>7.9</td>
<td>11.0</td>
<td>21,913</td>
<td></td>
<td></td>
</tr>
<tr>
<td>89</td>
<td>15591 FRANKLIN BLVD</td>
<td>BTWN Hwy 401 &amp; PINEBUSH</td>
<td>CAM</td>
<td>1.4</td>
<td>0.9</td>
<td>1.0</td>
<td>6.6</td>
<td>2.7</td>
<td>5.3</td>
<td>21,764</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>15990 FOUNTAIN ST S</td>
<td>BTWN Blair/Morningside &amp; Linden</td>
<td>CAM</td>
<td>1.8</td>
<td>0.7</td>
<td>1.0</td>
<td>4.0</td>
<td>2.2</td>
<td>3.3</td>
<td>21,645</td>
<td></td>
<td></td>
</tr>
<tr>
<td>91</td>
<td>8449 ERIE ST</td>
<td>AT FISCHER-HALLMAN RD</td>
<td>WAT</td>
<td>4.0</td>
<td>3.5</td>
<td>3.8</td>
<td>9.6</td>
<td>9.2</td>
<td>9.5</td>
<td>21,632</td>
<td></td>
<td></td>
</tr>
<tr>
<td>92</td>
<td>11503 River Rd</td>
<td>AT Holborn Dr/Access to Stanley Park Mall</td>
<td>KIT</td>
<td>2.2</td>
<td>1.2</td>
<td>1.6</td>
<td>1.8</td>
<td>2.4</td>
<td>2.0</td>
<td>21,392</td>
<td></td>
<td></td>
</tr>
<tr>
<td>93</td>
<td>21210 HIGHLAND RD</td>
<td>AT Westforest TriWestheights Dr</td>
<td>KIT</td>
<td>1.8</td>
<td>1.2</td>
<td>1.4</td>
<td>4.4</td>
<td>2.4</td>
<td>3.6</td>
<td>20,774</td>
<td></td>
<td></td>
</tr>
<tr>
<td>94</td>
<td>8308 OTTAWA ST</td>
<td>AT Valleyview Rd</td>
<td>KIT</td>
<td>1.8</td>
<td>0.3</td>
<td>0.6</td>
<td>2.0</td>
<td>0.7</td>
<td>1.3</td>
<td>20,736</td>
<td></td>
<td></td>
</tr>
<tr>
<td>95</td>
<td>20367 BLAIR RD</td>
<td>BTWN Crickiston Park Lane &amp; GEORGE/Blair</td>
<td>NDF</td>
<td>2.2</td>
<td>1.7</td>
<td>1.9</td>
<td>7.0</td>
<td>4.9</td>
<td>6.5</td>
<td>20,647</td>
<td></td>
<td></td>
</tr>
<tr>
<td>96</td>
<td>22350 WEBER ST E</td>
<td>BTWN Fergus &amp; Kinzie</td>
<td>KIT</td>
<td>0.8</td>
<td>0.4</td>
<td>0.5</td>
<td>7.0</td>
<td>1.6</td>
<td>4.6</td>
<td>19,940</td>
<td></td>
<td></td>
</tr>
<tr>
<td>97</td>
<td>14504 AINSLIE ST</td>
<td>AT PARK HILL RD/Park Hill Rd</td>
<td>CAM</td>
<td>2.6</td>
<td>2.6</td>
<td>2.7</td>
<td>9.0</td>
<td>6.1</td>
<td>8.4</td>
<td>19,186</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98</td>
<td>21985 HOMER WATSON BLVD</td>
<td>AT BLEAMS RD</td>
<td>KIT</td>
<td>4.2</td>
<td>3.8</td>
<td>4.0</td>
<td>10.4</td>
<td>10.0</td>
<td>10.4</td>
<td>18,936</td>
<td></td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>12550 SAWMILL RD</td>
<td>AT KATHERINE ST/Crowsfoot Rd</td>
<td>WOO</td>
<td>1.0</td>
<td>0.6</td>
<td>0.9</td>
<td>2.8</td>
<td>2.2</td>
<td>2.4</td>
<td>18,753</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>6767 WEBER ST</td>
<td>AT Queen St</td>
<td>KIT</td>
<td>2.2</td>
<td>2.0</td>
<td>2.1</td>
<td>7.4</td>
<td>4.2</td>
<td>6.5</td>
<td>18,595</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Top 20 Pedestrian Collision Locations

<table>
<thead>
<tr>
<th>2017 Ranking</th>
<th>GeoID</th>
<th>Street 1</th>
<th>Locate</th>
<th>Street 2</th>
<th>MUN</th>
<th>Avg /Yr over 5-year Observed Pedestrian Coll</th>
<th>Avg /Yr Total Predicted Pedestrian Collisions</th>
<th>Collision Difference (Observed - Predicted)</th>
<th>Excess Social Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8511</td>
<td>WESTMOUNT RD</td>
<td>AT</td>
<td>VICTORIA ST</td>
<td>KIT</td>
<td>2.0</td>
<td>0.5</td>
<td>1.5</td>
<td>$ 93,096</td>
</tr>
<tr>
<td>2</td>
<td>17215</td>
<td>KING ST</td>
<td>AT</td>
<td>BISHOP ST/Bishop St</td>
<td>CAM</td>
<td>1.6</td>
<td>0.2</td>
<td>1.4</td>
<td>$ 85,633</td>
</tr>
<tr>
<td>3</td>
<td>270</td>
<td>UNIVERSITY AVE</td>
<td>AT</td>
<td>Albert St</td>
<td>WAT</td>
<td>1.6</td>
<td>0.3</td>
<td>1.3</td>
<td>$ 77,285</td>
</tr>
<tr>
<td>4</td>
<td>14477</td>
<td>AINSLIE ST</td>
<td>AT</td>
<td>Main St</td>
<td>CAM</td>
<td>1.4</td>
<td>0.2</td>
<td>1.2</td>
<td>$ 75,369</td>
</tr>
<tr>
<td>5</td>
<td>29541</td>
<td>ERB ST</td>
<td>AT</td>
<td>ERBSVILLE RD/IRA NEEDLES BLVD</td>
<td>WAT</td>
<td>1.8</td>
<td>0.7</td>
<td>1.1</td>
<td>$ 68,963</td>
</tr>
<tr>
<td>6</td>
<td>11503</td>
<td>River Rd</td>
<td>AT</td>
<td>Holborn Dr/Access to Stanley Park Mall</td>
<td>KIT</td>
<td>1.2</td>
<td>0.1</td>
<td>1.1</td>
<td>$ 66,127</td>
</tr>
<tr>
<td>7</td>
<td>275</td>
<td>UNIVERSITY AVE</td>
<td>AT</td>
<td>Phillip St (com't driveway)</td>
<td>WAT</td>
<td>1.0</td>
<td>0.1</td>
<td>0.9</td>
<td>$ 52,105</td>
</tr>
<tr>
<td>8</td>
<td>373</td>
<td>KING ST</td>
<td>AT</td>
<td>UNIVERSITY AVE</td>
<td>WAT</td>
<td>1.4</td>
<td>0.6</td>
<td>0.8</td>
<td>$ 48,628</td>
</tr>
<tr>
<td>9</td>
<td>2269</td>
<td>ARTHUR ST</td>
<td>AT</td>
<td>CHURCH ST</td>
<td>WOO</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>$ 46,972</td>
</tr>
<tr>
<td>10</td>
<td>20086</td>
<td>HESPELER RD</td>
<td>AT</td>
<td>Avenue Rd/Jaffray St</td>
<td>CAM</td>
<td>1.0</td>
<td>0.2</td>
<td>0.8</td>
<td>$ 45,557</td>
</tr>
<tr>
<td>11</td>
<td>10715</td>
<td>Kingsway Dr (multi-res driveway)</td>
<td>AT</td>
<td>Wilson Ave</td>
<td>KIT</td>
<td>0.8</td>
<td>0.1</td>
<td>0.7</td>
<td>$ 42,090</td>
</tr>
<tr>
<td>12</td>
<td>20275</td>
<td>Industrial Rd</td>
<td>AT</td>
<td>Lang's Dr</td>
<td>CAM</td>
<td>0.8</td>
<td>0.1</td>
<td>0.7</td>
<td>$ 41,519</td>
</tr>
<tr>
<td>13</td>
<td>14619</td>
<td>DUNDAS ST</td>
<td>AT</td>
<td>Elgin St</td>
<td>CAM</td>
<td>0.8</td>
<td>0.1</td>
<td>0.7</td>
<td>$ 41,275</td>
</tr>
<tr>
<td>14</td>
<td>6632</td>
<td>King St</td>
<td>AT</td>
<td>Queen St</td>
<td>KIT</td>
<td>0.8</td>
<td>0.1</td>
<td>0.7</td>
<td>$ 39,833</td>
</tr>
<tr>
<td>15</td>
<td>8880</td>
<td>VICTORIA ST</td>
<td>AT</td>
<td>Joseph St</td>
<td>KIT</td>
<td>0.8</td>
<td>0.2</td>
<td>0.6</td>
<td>$ 39,286</td>
</tr>
<tr>
<td>16</td>
<td>20365</td>
<td>HESPELER RD</td>
<td>AT</td>
<td>Dunbar Rd</td>
<td>CAM</td>
<td>1.0</td>
<td>0.4</td>
<td>0.6</td>
<td>$ 37,389</td>
</tr>
<tr>
<td>17</td>
<td>10710</td>
<td>FAIRWAY RD</td>
<td>AT</td>
<td>Wilson Ave</td>
<td>KIT</td>
<td>1.0</td>
<td>0.4</td>
<td>0.6</td>
<td>$ 35,689</td>
</tr>
<tr>
<td>18</td>
<td>6110</td>
<td>HIGHLAND RD</td>
<td>AT</td>
<td>FISCHER-HALLMAN RD</td>
<td>KIT</td>
<td>1.0</td>
<td>0.4</td>
<td>0.6</td>
<td>$ 34,423</td>
</tr>
<tr>
<td>19</td>
<td>11061</td>
<td>KING ST W</td>
<td>BTWN</td>
<td>Andrew &amp; N to signals (Central/KCI)</td>
<td>KIT</td>
<td>0.6</td>
<td>0.0</td>
<td>0.6</td>
<td>$ 34,243</td>
</tr>
<tr>
<td>20</td>
<td>5971</td>
<td>KING ST</td>
<td>AT</td>
<td>Princess St</td>
<td>WAT</td>
<td>0.6</td>
<td>0.0</td>
<td>0.6</td>
<td>$ 33,895</td>
</tr>
</tbody>
</table>
Top 20 Cycling Collision Locations

<table>
<thead>
<tr>
<th>2017 Ranking</th>
<th>GeoID</th>
<th>Street 1</th>
<th>Locate</th>
<th>Street 2</th>
<th>MUN</th>
<th>Avg /Yr over 5-year Observed Cyclist Coll</th>
<th>Avg /Yr Total Predicted Cyclist Collisions</th>
<th>Collision Difference (Observed - Predicted)</th>
<th>Excess Social Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20107</td>
<td>HESPELER RD</td>
<td>AT Munch Ave/Isherwood Ave</td>
<td>CAM</td>
<td>1.2</td>
<td>0.3</td>
<td>0.9</td>
<td>$56,724</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>10741</td>
<td>COURTLAND AVE</td>
<td>AT Siebert Ave (corp'd driveway)</td>
<td>KIT</td>
<td>1.0</td>
<td>0.1</td>
<td>0.9</td>
<td>$56,490</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>20363</td>
<td>HESPELER RD</td>
<td>AT BISHOP ST</td>
<td>CAM</td>
<td>1.2</td>
<td>0.4</td>
<td>0.8</td>
<td>$49,337</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>17762</td>
<td>WATER ST N</td>
<td>BTWN AINSLIE &amp; Simcoe</td>
<td>CAM</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>$47,860</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>8991</td>
<td>UNIVERSITY AVE E</td>
<td>BTWN Regina &amp; WEBER</td>
<td>WAT</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>$45,481</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>28255</td>
<td>HESPELER RD</td>
<td>AT CAN-AMERA/YMCA (250 Hespeler Rd)</td>
<td>CAM</td>
<td>1.0</td>
<td>0.3</td>
<td>0.7</td>
<td>$43,251</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>6913</td>
<td>King St</td>
<td>AT Stirling Ave</td>
<td>KIT</td>
<td>0.8</td>
<td>0.1</td>
<td>0.7</td>
<td>$42,516</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>11301</td>
<td>King St</td>
<td>AT Cedar St</td>
<td>KIT</td>
<td>0.8</td>
<td>0.1</td>
<td>0.7</td>
<td>$42,489</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>7057</td>
<td>WEBER ST</td>
<td>AT Water St</td>
<td>KIT</td>
<td>0.8</td>
<td>0.1</td>
<td>0.7</td>
<td>$42,403</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>1616</td>
<td>KING ST S</td>
<td>BTWN William &amp; Willis Way</td>
<td>WAT</td>
<td>0.6</td>
<td>0.0</td>
<td>0.6</td>
<td>$34,662</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>14500</td>
<td>Beverly St</td>
<td>AT Kerr St</td>
<td>CAM</td>
<td>0.6</td>
<td>0.1</td>
<td>0.5</td>
<td>$32,867</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>30956</td>
<td>HESPELER RD</td>
<td>BTWN Dunbar &amp; CAN-AMERA/YMCA #250</td>
<td>CAM</td>
<td>0.6</td>
<td>0.1</td>
<td>0.5</td>
<td>$32,065</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>9209</td>
<td>HIGHLAND RD</td>
<td>AT West Ave</td>
<td>KIT</td>
<td>0.6</td>
<td>0.1</td>
<td>0.5</td>
<td>$31,376</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>6480</td>
<td>WEBER ST</td>
<td>AT Young St</td>
<td>KIT</td>
<td>0.6</td>
<td>0.1</td>
<td>0.5</td>
<td>$30,633</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>14619</td>
<td>DUNDAS ST</td>
<td>AT Elgin St</td>
<td>CAM</td>
<td>0.6</td>
<td>0.1</td>
<td>0.5</td>
<td>$30,554</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>14475</td>
<td>WATER ST</td>
<td>AT MAIN ST/Main St</td>
<td>CAM</td>
<td>0.6</td>
<td>0.1</td>
<td>0.5</td>
<td>$29,846</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>27301</td>
<td>VICTORIA ST</td>
<td>AT IRA NEEDLES BLVD</td>
<td>KIT</td>
<td>0.6</td>
<td>0.1</td>
<td>0.5</td>
<td>$27,852</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>5888</td>
<td>VICTORIA ST</td>
<td>AT Duke St</td>
<td>KIT</td>
<td>0.6</td>
<td>0.1</td>
<td>0.5</td>
<td>$27,381</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>6110</td>
<td>HIGHLAND RD</td>
<td>AT FISCHER-HALLMAN RD</td>
<td>KIT</td>
<td>0.8</td>
<td>0.3</td>
<td>0.5</td>
<td>$27,371</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>27142</td>
<td>Columbia St</td>
<td>AT Hagey Blvd/University of Waterloo Access(n.campus)</td>
<td>WAT</td>
<td>0.6</td>
<td>0.2</td>
<td>0.4</td>
<td>$26,512</td>
<td></td>
</tr>
</tbody>
</table>
Vehicle Collision Ranking Methodology

The Region of Waterloo adopted the network screening methodology as outlined in the American Association of State Highway and Transportation Officials Highway Safety Manual (HSM) in 2014. The HSM provides the best factual information and proven analysis tools for crash frequency prediction. The primary focus of the HSM is to provide the analytical tools for assessing the safety impacts of transportation project and program decisions.

The network screening process applies concepts of observed collisions, expected collisions and predicted collisions. None of these concepts are meant to imply that there is an “acceptable” number of collisions at a given location.

Transportation Engineering applies safety performance functions (SPF) to intersections and midblock locations to predict expected collisions. A safety performance function predicts the average number of collisions per year at a location as a function of exposure and, in some cases, roadway or intersection characteristics (e.g., number of lanes, traffic control, or median type).

Observed collisions, expected collisions and predicted collisions are all used to estimate excess social collision costs. The average cost of a collision that results in property damages (PD) only is estimated to be $5000 ($4500 at roundabouts due to lower speeds). The average cost of a collision that results in a fatal injury or non-fatal injury (FI) to a person is estimated to be $60,500. These estimated costs include property damages and loss of income due to injury etc.

The value of the excess social cost provides a weighting of the collisions based on severity. For example, a location with a high number of minor (non-injury) collisions may have a lower excess social cost than a location with fewer collisions but a higher severity (injuries and fatalities).
Region of Waterloo  
Transportation and Environmental Services  
Water Services

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: November 6, 2018  
File Code: L04

Subject: Implications of New System Certificate

Recommendation:

For information

Summary:

Water Services has been collaborating with the Ministry of the Environment, Conservation and Parks (MECP) to streamline the drinking water certificates for the Region’s water supply system. To support this process, an agreement is required by the MECP to clarify operating responsibilities related to the transmission and dual water mains. This agreement documents existing operational and maintenance practices between the Region and the Cities of Kitchener, Waterloo, Cambridge and the Townships of Wilmot and Woolwich for transmission and dual water mains. The agreement will also clarify the Overall Responsible Operator (ORO) responsibilities.

An ORO is designated by the municipality to ensure that a knowledgeable and experienced staff person is available by phone or in-person at all times. Additionally, the ORO is to provide advice to all operators working within the system and to respond immediately and effectively to emergencies.

Report:

Under the Safe Drinking Water Act, O. Reg. 128/04 ‘Certification of Drinking Water System Operators and Water Quality Analysts’ requires a municipality that supplies, distributes or distributes and supplies drinking water hold a certificate of classification (certificate) identifying the type of drinking system and class of system (ranging from
class I to IV). The class of facility is based on the complexity of the operation, infrastructure, and capacity of the water supply system.

Water Services staff initiated a comprehensive review of the 35 certificates with the goal of reducing the number of certificates held by the Region. This review required extensive collaboration with the Ministry of Environment, Conservation and Parks (MECP) over an 18 month period. To reduce the number of certificates, individual drinking water systems were combined into one larger water treatment system. For example, all of the water treatment systems and supply sources located in the City of Kitchener were amalgamated into one certificate. A similar process was followed for the cities of Waterloo and Cambridge and the four townships. The total number of certificates was reduced from 35 to 23 resulting in streamlined administration, reporting, and monitoring.

In addition, an integrated urban system (IUS) distribution system was created which consolidated all of the Region’s transmission mains, elevated towers, in-ground storage, valve chambers and booster stations connected to the Integrated Urban System water supply system. This integration allowed for one distribution system certificate to be issued by the Province. The certificate was issued as a class IV distribution system due to the complexity and infrastructure included in the system (highest level of certification).

As a two tier municipality, there are additional operational requirements related to the Regional transmission main and dual owned mains. Under the regulation, distribution samples and analyses of all watermains are required to ensure safe drinking water. As some of the Region’s transmission mains and dual mains have local service connections, duplicate sampling would be required. To streamline the operations, an agreement is required by the MECP to clarify operating responsibilities related to the transmission and dual water mains. This agreement identifies roles and responsibilities between the Region and the local municipalities related to operational functions and eliminate duplication of sampling. The agreement will also clarify the Overall Responsible Operator (ORO) responsibilities.

The MECP will provide regulatory relief to the Region for this streamlined approach based on the agreement established between the Region and the local municipalities. This agreement documents roles and responsibilities for operation and maintenance of the dual and transmission mains. The applicable roles and responsibilities are based on historical practice.

The draft maintenance agreement has been developed in discussion with the Cities and Townships. Under the Execution of Documents By-law 18-036, the TES Commissioner has the authority to sign the agreement on behalf of the Region.
Corporate Strategic Plan:

This initiative supports Corporate Strategic Plan Focus Area 3: Protect and Enhance the Environment.

Financial Implications:

Nil – No change from the existing structure

Other Department Consultations/Concurrence:

Legal

Attachments

Attachment A: Draft Overall Responsible Operator Agreement

Prepared By:  Olga Vrentzos, Manager, Water Operations and Maintenance, Transportation and Environmental Services

Approved By:  Thomas Schmidt, Commissioner, Transportation and Environmental Services
OVERALL RESPONSIBLE OPERATOR AGREEMENT BETWEEN:

The Regional Municipality of Waterloo

-the “Region”-

-and-

The Corporation of the [name]

-the “Municipality”-

WHEREAS the Region is the upper-tier municipality in Waterloo Region with jurisdiction over water production, treatment and storage pursuant to the Municipal Act, 2001;

AND WHEREAS the Municipality is a lower-tier municipality within Waterloo Region with jurisdiction over water distribution pursuant to the Municipal Act, 2001;

AND WHEREAS the Region has ownership and jurisdiction over water transmission mains within the Municipality, as set out in Schedule A of this agreement (the “Transmission Mains”), that have been consolidated and classified into a single Drinking Water Distribution subsystem, as agreed by the Ministry of the Environment and Climate Change (“MOECC”) and the Ontario Water Wastewater Certification Office (“OWWCO”).

AND WHEREAS the Region and Municipality have joint ownership and jurisdiction over dual mains in the Municipality, as set out in Schedule A of this agreement (the “Dual Mains”), that have been consolidated and classified into the Municipality’s Drinking Water Distribution subsystem, as agreed by the MOECC and the OWWCO.

AND WHEREAS the MOECC, for the purposes of Safe Drinking Water Act (the “Act”), requires that a signed agreement be established between the Region and the Municipality identifying roles and responsibilities in order to obtain regulatory relief from applicable sampling where direct connections to customers exist within Transmission mains.

NOW THEREFORE, in consideration of the mutual terms and conditions herein, the Region and Municipality agree as follows:

1. For the purposes of the Act,

   (a) the Region, without cost to the Municipality, shall assume overall responsibility for Transmission Mains and ensure that an Overall Responsible Operator (“ORO”) pursuant to the Act is designated at all times;
(b) the Municipality, without cost to the Region, shall assume overall responsibility for Dual Mains and ensure that an ORO pursuant to the Act is designated at all times;

(c) the Municipality, without cost to the Region, shall ensure that a distribution sampling program is conducted in accordance with the applicable regulations of the Act for the distribution system including for the Transmission Mains, Dual Mains and local mains where water is distributed directly to a customer of the Municipality; and

(d) the Municipality (Cambridge, Kitchener and Waterloo) shall maintain, based on consultation with the Region and as defined in any mutually agreed upon maintenance agreement, all Transmission Mains and Dual Mains with the Region reimbursing the Municipality for 100% of the actual costs for the Transmission Mains and 50% of the actual costs for the Dual Mains. By mutual agreement, any maintenance agreement is subject to change.

(e) the Municipality (Wilmot and Woolwich) shall maintain, based on consultation with the Region and as defined in any mutually agreed upon maintenance agreement, all Dual Mains with the Region reimbursing the Municipality for 50% of the actual costs for the Dual Mains. The Region will maintain the Transmission Mains at its own cost. By mutual agreement, any maintenance agreement is subject to change.

2. Both parties shall provide records to the other, pursuant to the Act or upon written request, in relation to their respective roles as set out in paragraph 1 of this Agreement.

3. Nothing in this Agreement shall affect any other rights or obligations of the Region and Municipality in relation to Transmission Mains and Dual Mains and both parties shall remain responsible for future capital costs as applicable and required.

4. Each party, both during and after the term of this Agreement, shall at all times, and at its own cost, expense and risk, defend, indemnify and hold harmless the other, its elected officials, officers, employees and all respective heirs, administrators, executors, successors and assigns from any and all losses, damages, fines, penalties and surcharges, liabilities (including, but not limited to, any and all liability for damage to property and injury to persons, including death),
by the other party pursuant to this Agreement, its agents, employees and subcontractors, provided such losses, damages, fines, penalties and surcharges, liabilities, judgments, claims, demands, causes of action, contracts, suits, actions or other proceedings of any kind and expenses as defined above are due or claimed to be due to the negligence, breach of contract, and/or breach of law of the other, its agents, employees or subcontractors.

5. Either party may terminate this Agreement on 90 days written notice to the other.

6. All notices pertaining to this Agreement shall be in writing and shall either be personally delivered, given by facsimile transmission (with confirmed answer back) or sent by courier, priority post or registered mail, return receipt requested, to the representative of the Region or the Municipality, as appropriate, at their respective addresses appearing as follows:

To the Region: The Regional Municipality of Waterloo
Manager, Water Operations & Maintenance
Water Services
150 Frederick St., 7th Floor
Kitchener, ON N2G 4J3

To the Municipality: [Municipality]

Notices given hereunder shall be deemed given on the date upon which they were personally delivered or, if sent by facsimile transmission, twenty-four (24) hours after transmission with confirmed answer-back or, if mailed, five (5) days after mailing. Either party may advise the other in writing of any change of address for the purposes of giving notice.

7. In the event of any expiration or termination of this Agreement for any reason whatsoever, the provisions of this Agreement by their nature extend beyond the expiration or termination of this Agreement will survive and remain in effect until all obligations are satisfied.

8. Each party, at the request of the other, shall execute and deliver such assurances and do such other acts as may be reasonably required or desirable to give full effect to the provisions and intent of this Agreement.

IN WITNESS WHEREOF the parties have affixed their respective corporate seals, attested by the hands of their respective officers duly authorized in that behalf.
Date:

THE REGIONAL MUNICIPALITY OF WATERLOO

Name:
Title:

I have authority to bind the corporation.

Date:

[Municipality]

Name:
Title:

Name:
Title:

I/we have authority to bind the corporation.
Schedule A:

For Cities this should reference GIS database, as the data is updated and quality checked by both tiers.

For Wilmot & Woolwich, this should reference a list and map of the dual and transmission mains in each township. Annual updates will be required.