



City of  
**Peterborough**

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**To:** **Members of the General Committee**

**From:** **Richard Freymond**  
**Commissioner of Corporate and Legislative Services**

**Meeting Date:** **May 13, 2019**

**Subject:** **Report CLSFS19-020**  
**Municipal Contribution for Eastern Ontario Cell Gap and Capacity Expansion**

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## **Purpose**

A report to inform Council of the Eastern Ontario Regional Network Cell Gap and Capacity Expansion project, and a request for a municipal capital contribution towards the work.

## **Recommendations**

That Council approve the recommendations outlined in Report CLSFS19-020 dated May 13, 2019, of the Commissioner of Corporate and Legislative Services, as follows:

- a) That the presentation by David Fell, CEO of the Eastern Ontario Regional Network, be received;
- b) That the request for a Municipal Contribution be included in the Draft 2020 Capital Budget for consideration by the Finance Committee.

## **Budget and Financial Implications**

There are no budget or financial implications to receiving this report. The proposed municipal contribution for the City currently estimated to be in the range of \$553,300 - \$758,200, will be included in the Draft 2020 Capital Budget. Annual payments over a 4-year period range from \$138,327 - \$189,548.

## Background

### Eastern Ontario Mayors' Caucus and Eastern Ontario Wardens' Caucus

The Eastern Ontario Mayors' Caucus (EOMC) is made up of the Mayors of the 11 urban municipalities (separated, single-tier) of Eastern Ontario. The committee meets quarterly as a group with the municipal CAOs in attendance to discuss common issues relevant to municipalities in Eastern Ontario. The City of Peterborough is a member municipality.

The Eastern Ontario Wardens' Caucus (EOWC) works to support and advocate on behalf of the property taxpayers across rural Eastern Ontario. The EOWC covers an area of 45,000 square kilometres from Cobourg to the Quebec border, and includes 13 upper-tier and single-tier municipalities as well as 90 local municipalities.

The following map denotes the geographic area.



### The Eastern Ontario Regional Network

The Eastern Ontario Regional Network (EORN) is a non-profit organization that supports regional economic development through improved connectivity.

The EOMC and the EOWC have established a common objective of advancing Eastern Ontario as a region for economic growth and opportunity. Having a robust network of both

fixed and mobile broadband is a necessity in this universally connected world. People expect to access online content anywhere, anytime, and on any device.

The Eastern Ontario broadband project managed by the EORN and completed in the fall of 2014 was an example of the region investing in technological infrastructure. The project was funded jointly by the federal and provincial governments each of whom contributed \$55 million, EOWC and six of the EOMC municipalities contributed \$10 million, and private sector partners provided the remaining funding for the \$170 million project. The City of Peterborough did not participate in this project.

The subject of this Report, the Cell Gap and Capacity Expansion Project, is another project to support this vision and objective. It is a requirement to fix the "holes" in cell coverage in order to be able to then address the "capacity" challenges that come about when more and more people in concentrated areas vie for access.

David Fell, CEO of EORN will be present at the May 13, 2019 meeting to make a presentation on the work completed to date, provide a funding update from senior levels of government and the methodology for cost sharing among municipalities.

### **Overview of the project**

Today, nearly one-sixth of Eastern Ontario is in a cellular "dead zone" – meaning there are homes, businesses and major roadways with no cell service at all, and 40% of the region does not have enough capacity to support rapidly growing data demands or the increase load from large groups of users in one location – i.e. public events and tourism. Even if an area is well covered, the service levels may still be inadequate due to network congestion. This congestion occurs when there are a large number of users competing for limited spectrum resources.

To assess this situation, EORN commissioned four independent studies, including: an engineering cell gap analysis, costing study, cell market analysis and economic impact study to prove market failure. These studies looked at current services as well as forecasted growth by existing carriers. Extensive coverage and capacity gaps of mobile infrastructure operators in Eastern Ontario reflect the extent of market failures and underinvestment in networks in our region.

In response, EORN is proposing a \$213 million public-private initiative that would build on its high-capacity, fibre-optic backbone network to help close the gap in cellular services.

### **Costing/funding:**

The proposed network design would cost approximately \$168 million to address the coverage gap (79% of the total investment), with an additional \$35 million to address the future capacity gap – most of this investment would be made in the urban centres of Eastern Ontario (minimum 17% of the total investment), and \$10 million (about 5%) for EORN management costs, for a total project cost of \$213M.

For the City of Peterborough and surrounding region, the project will seek to improve both coverage and capacity.

**Current status of discussions with upper levels of government:**

The private public partnership investment structure is:

- one third funded by the Provincial Government - \$71 million,
- one third funded by the Federal Government - \$71 million; and
- one third funded by the private and municipal sectors - \$61 million from the private sector and \$10 million from the municipal sector.

For every one dollar contributed to the project by municipal governments in Eastern Ontario, the combined contribution by senior levels of government and the private sector will be \$21. The EOMC and the EOWC created a working group with two EOMC CAOs and two EOWC CAOs to develop an equitable funding formula for the municipal contributions. The proposed formula is based on three factors:

- an area contribution with 20% weight;
- a proposed 40% weighting for the population of each municipality as reported in the 2016 FIR; and
- 40% based on weighted assessment.

The application of this formula would see the EOMC members pay a total of \$2.7 million or 28% of the EORN operating cost and the EOWC members would pay \$7.3 million or 72% of the EORN operating cost. The cost for individual EOMC member municipalities based on the formula will range from approximately \$26K to \$950K.

The City's share is in the range of \$553,300 - \$758,200. If one or more of the members chooses not to financially contribute to the project, then their share will be distributed across the remaining participants, according to the funding formula outlined above. If any member chooses not to contribute, their municipality will receive no investment in their local cell infrastructure and others would get proportionally more.

## Summary

City residents expect to access online content anywhere, anytime, and on any device. Investing in connectivity infrastructure will create private sector business growth in the region and allow for the delivery of better public services in both the rural and urban centres.

Submitted by,

Richard Freymond

Commissioner of Corporate and Legislative Services

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Attachments:

Appendix A – April 4, 2018 Report to Eastern Ontario Mayors' Caucus - Eastern Ontario  
Cell Gap and Capacity Expansion Project

Appendix B – Eastern Ontario Regional Network - Presentation



# Eastern Ontario Mayors' Caucus

*Representing the Separated Municipalities (towns and cities) of Eastern Ontario*

Report to: Chair, Eastern Ontario Mayors' Caucus

From: CAO Maureen Adams (Cornwall)  
CAO Bob Casselman (Brockville)  
CAO Rick Kester (Belleville)  
CAO Gerard Hunt (Kingston)

Date of Meeting: Wednesday, April 4, 2018

Subject: **Eastern Ontario Cell Gap and Capacity Expansion Project**

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## **Background:**

The Eastern Ontario Mayors' Caucus (EOMC) and the Eastern Ontario Wardens' Caucus (EOWC) have established a common objective of advancing Eastern Ontario as a region for economic growth and opportunity. The development of the Eastern Ontario Economic Development Strategy has set the strategic direction of focus for this objective. The Eastern Ontario broadband project managed by the Eastern Ontario Regional Network (EORN) and completed in fall 2014 was an example of the region investing in technological infrastructure to enable the region to be positioned for overall economic growth and to be prepared for the changing landscape of technology, business and people needs in a rapidly changing world. The EORN project was funded jointly by the federal and provincial governments each of whom contributed \$55M, Eastern Ontario Wardens' Caucus (EOWC) and six of the EOMC municipalities contributed \$10M, and private sector partners provided the remaining funding for the \$170M project. Staying ahead of technological change and being positioned to be seen as a leader in Canada will ensure the region is capable of being a place for investment, opportunity and quality of life for years to come.

The Cell Gap and Capacity Expansion Project is another project on the cutting edge to support this vision and objective. It is a requirement to fix the "holes" in cell coverage in

order to be able to then address the "capacity" challenges that come about when more and more people in concentrated areas vie for access.

The following sections of this report provide a summary of the project, the solutions to the challenges throughout the region, the financial components and return on investment and the next steps as they are known today.

David Fell, CEO, Lisa Severson, CSRO and Mike Rutter, Co-Lead from EORN will be present at the April 4 meeting to make a presentation updating the Mayors on the status of upper level government funding, describing a methodology for cost sharing among the municipalities of the region and engaging in a discussion on next steps/timing.

We thank Mr. Fell and the EORN board for their vision, their tireless work to bring technology to strengthen the region's competitive advantage and for the energy to move this project forward.

**Overview of the project:**

For Eastern Ontario to work and grow, people need high-speed internet access at home, work and on the road. They expect to access online content anywhere, anytime, and on any device. In order to participate in this universally connected world, Eastern Ontario needs a robust network of both fixed and mobile broadband. Today nearly one-sixth of Eastern Ontario is in a cellular "dead zone" – meaning there are homes, businesses and major roadways with no cell service at all, and 40% of the region does not have enough capacity to support rapidly growing data demands or the increase load from large groups of users in one location – i.e. public events and tourism. (Even if an area was well covered, the service levels may still be inadequate due to network congestion. This congestion occurs when there are a large number of users competing for limited spectrum resources.)

To assess this situation, EORN commissioned four independent studies, including: an engineering cell gap analysis, costing study, cell market analysis and economic impact study to prove market failure. These studies looked at current services as well as forecasted growth by existing carriers. Extensive coverage and capacity gaps of mobile infrastructure operators in Eastern Ontario reflect the extent of market failures and underinvestment in networks in our region.

In response, EORN is proposing a \$213 million public-private initiative that would build on its high-capacity, fibre-optic backbone network to help close the gap in cellular services. This will keep products and services that create prosperity moving across the region, and keep Eastern Ontarians connected to the world – at home, at work and on the road.

**Costing/funding:**

The proposed network design would cost approximately \$168M to address the coverage gap (79% of the total investment), with an additional \$35M to address the

future capacity gap – most of this investment would be made in the urban centres of Eastern Ontario (minimum 17% of the total investment), and \$10M (about 5%) for EORN management costs, for a total project cost of \$213M.

**Current status of discussions with upper levels of government:**

The private public partnership investment structure is:

- one third funded by the Provincial Government - \$71M,
- one third funded by the Federal Government - \$71M; and
- one third funded by the private and municipal sectors - \$61M from the private sector and \$10M from the municipal sector.

For every one dollar contributed to the project by municipal governments in Eastern Ontario, the combined contribution by senior levels of government and the private sector will be \$21. This is an outstanding return on investment for the critical communications infrastructure that is necessary to keep Eastern Ontario connected.

The EOMC and the EOWC created a working group with two EOMC CAOs and two EOWC CAOs to develop an equitable funding formula for the municipal contributions. The proposed formula is based on three factors:

- an area contribution with 20% weight;
- a proposed 40% weighting for the population of each municipality as reported in the 2016 FIR; and
- 40% based on weighted assessment.

The application of this formula would see the EOMC members pay a total of \$2.7M or 28% of the EORN operating cost and the EOWC members would pay \$7.3M or 72% of the EORN operating cost. The cost for individual EOMC member municipalities based on the formula will range from approximately \$26K to \$950K, with payment spread over a number of years as described below. CAOs Casselman and Adams were part of the team determining the funding formula as directed by EOMC.

The Ontario Ministry of Infrastructure is currently in a detailed review phase of the EORN business case. The provincial government is developing a province wide broadband strategy, and they want the EORN cell gap project to be the first project announced as a part of this new strategy. The outcome of the June 7<sup>th</sup> election will determine the timing and sequencing of the announcement for approval, but EORN also has letters of support from Opposition MPP's in Eastern Ontario and have worked with the opposition to encourage and support a \$100M commitment to broadband in one of the election platforms.

EORN is also working closely with the federal government at both the political and staff level to ensure that the review and approval process is coordinated. We anticipate an announcement within the next six months and a project start sometime in 2019. Municipal contributions would likely start in 2019. As with the original EORN project a commitment from the municipal sector of the 5% (\$10M) will be required in order for the Province to commit to a contract negotiation. Municipal contribution payment schedules could either be paid as a one time up front payment with 5% interest paid on the



declining balance over three years; or on a semi-annual installment basis without interest over a four-year period.

Provincial Budget 2018:

The following is an excerpt from the budget of March 28, 2018.

*To ensure that people of Ontario can fully participate in the 21<sup>st</sup> century economy and access basic services, the government is investing an additional \$500 million over three years to expand broadband connectivity in rural and northern communities. This will include an investment of up to \$71 million towards improving cellular coverage in eastern Ontario, and up to \$20 million to Telesat to support a Low Earth Orbit (LEO) satellite constellation project, which will help enable access to secure broadband services in rural and remote Ontario. These investments will also help to increase average speeds in underserved and unserved communities.*

**Benefits:**

Economic analysis indicates that this project will create jobs and private sector business growth:

- Potential jobs: Over 10 years, about 3,000 full-time job equivalents.
- Potential revenues: \$420M in private sector business revenues.

Supporting key priorities of the region's Economic Development Strategy:

- Creating an integrated and intelligent transportation system.
- Supporting technological integration and innovation.
- Supporting workforce development

Better public services: Delivering government and community services to sparsely populated regions is all the more difficult and costly. The use of mobile apps for service delivery, payments and the sharing of vital information such as road work, weather conditions and traffic issues can vastly improve services provided to rural residents.

Improved social connectivity: Whether friends and family live next door, across town or across the world, people depend on the internet to connect to one another via social media, as well as one-to-one communications enabled by the internet via cellphones and tablets.

**Planning for the future and service provider accountability:**

Mobile broadband demand is growing by leaps and bounds. More people are using devices to run apps that require greater bandwidth. *"For the first time, more Canadian households subscribe exclusively to mobile wireless services (20.4%) than to wireline (i.e., landline) telephone services (14.4%)"* - 2015 Communications Monitoring Report, CRTC. Given this rapid growth in mobile broadband use, and the ongoing deployment of new generations of technology such as the current announcements surrounding a 5G corridor – how will EORN plan for the future to accommodate these trends.

EORN goes through an open, competitive and public Request for Proposal (RFP) process which identifies the provider that is best able to meet the design requirements in the most cost-effective way. EORN then negotiates a contract which includes service level agreements (SLAs) and requires the service providers to add additional capacity into the network as usage increases and the network becomes congested over time. Contracts with private sector partners set out long-term technical and customer service requirements. EORN is charged with managing and monitoring vendor performance and ensuring that all contractual obligations are met, both during the construction phase and once the network is operational.

**Next steps:**

The next few months will be critical for the project. Continued advancement of the project to the provincial and the federal governments for funding support is a priority and local commitment is an important component. Representatives from Eastern Ontario Regional Network (EORN) are available to present information to EOMC councils. Councils represented by the Eastern Ontario Wardens' Caucus (EOWC) have received the EORN presentation over the past number of months.

**Recommendation:**

That the Eastern Ontario Mayors' Caucus (EOMC) support the Cell Gap and Capacity Expansion Project for the Eastern Ontario region; and,

That EOMC support the funding level, subject to receipt of upper level government funding; and

That respective councils of the separated towns and cities receive a report and presentation from Eastern Ontario Regional Network (EORN) for the decision on the respective local (municipal) contributions.