EOWC Response to

Moving Ontario Forward – Outside the GTHA

Consultations

DUE FOR SUBMISSION SEPTEMBER 18 2015

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1. Executive Summary

Understanding the Significance of Moving Ontario Forward Outside the GTHA

Moving Ontario Forward (MOF) is a ten-year $31.5 billion plan of the Ministry of Economic Development, Employment and Infrastructure to "build **critical infrastructure** and an ***integrated*** **transportation network across the province**"[1]. The EOWC has

1. **Definitions Matter**: The EOWC notes that there is ***no definition*** of critical infrastructure in the Consultation Guide; nor is there a definition of an integrated transportation network. It is therefore not clear if the $31.5 billion is to be allocated largely or entirely to municipal assets or if other asset managers (universities, colleges, schools or hospitals) are also to be funded from this allocation. Because the Province has other funding mechanisms and programs for non-municipal infrastructure, it is the EOWC's view that Moving Ontario Forward Outside the Greater Toronto and Hamilton Area (MOFOGTHA) is ***focused exclusively on municipal infrastructure and primarily on transportation infrastructure --- including but not limited to transit.*** Our analysis and recommendations are predicated on that understanding.

2. **Take Priority Cues from Municipal Plans**: The EOWC submits that the ***criticality of infrastructure should be determined by municipalities***, rather than by the Province, based on municipalities' capital needs studies and asset management plans, including the priority those plans give to ***a) public safety, b) role and contribution of specific assets to maintaining and growing local, regional and provincial economies, and c) addressing local/regional environmental challenges.***

"The challenge of preparing for increasingly extreme and unpredictable weather events is already unfolding"
Premier Kathleen Wynne, AMO 2015

3. **Regional Allocations Encourage Integrated Thinking**: Prior to initiating consultation on MOFOGTHA, the Province allocated just over half of the $31.5 billion to the Greater Toronto and Hamilton Area (GTHA) based on the region's share of population. ***The EOWC supports the idea of regional allocations*** and proposes that this approach could be effectively used to support the Province's aspirations (which the EOWC shares) of an integrated transportation network across the province. In regions like Eastern Ontario, ***transportation infrastructure*** connects multiple communities across the region and is ***used by travelers from beyond the region*** – public authorities, businesses, transports and

[1] Source: Minister's message in Discussion Guide

tourists, not just the residents of one particular community. For example, ***Emergency Detour Routes*** (EDRs) are municipal roads; very large traffic volumes of traffic diverted off provincial highways use municipal roads on an increasingly frequent basis. ***In this submission, the EOWC calls for a specific allocation for Eastern Ontario (outside of Ottawa) and describes specific regional projects that would help to introduce an integrated regional transportation network.***

4. **Rural Areas Carry a Heavy Infrastructure Load**: The EOWC suggests ***caution in using purely population-based criteria*** to allocate infrastructure resources. Population-based allocations, without consideration of the types of infrastructure involved or ratepayers' financial resources, simply entrenches the financial burden of infrastructure on communities and regions that are already struggling to maintain these assets.

   The EOWC's 2011 White Paper on Municipal Infrastructure showed that municipalities in Rural Eastern Ontario held $8.7 billion[2] in capital assets and were investing roughly $378 million a year in this infrastructure. ***More than half of these assets ($5.06 billion) are transportation infrastructure.***

   > ***"That may not be the way it's always been done, but when I talk about building Ontario up, I am talking about all of Ontario."***
   >
   > Premier Kathleen Wynne, speaking at AMO in August of 2015, referring to allocating infrastructure funds regionally

   The same analysis suggested that the capital infrastructure deficit at that time was $3.74 billion and continues to rise by roughly $150 to $200 million a year. At this pace, the deficit in Rural Eastern Ontario is almost certainly above $4.0 billion now. Our analysis suggests that at least ***$3.0 billion of that deficit is for transportation infrastructure***[3]. The 2011 analysis also suggested that an **additional annual investment** for each of 10 years, of **$686 million a year**, is required to keep pace with infrastructure maintenance needs**.**

   It is inconceivable that a rural region with a population of three-quarters of a million people and 28,000 lane-kilometres of paved roads[4] across a 45,000 square kilometre area can afford these levels of investments on its own.

[2] Valued at cost.

[3] The 2012 Financial Sustainability Update report estimated the deficit for roads to be $2.48 billion and $526 million for bridges. This analysis was based on FIR and other data on the percentage of assets rated as being in good or very good condition, combined with a set of field-derived assumptions on the costs of rehabilitating or extending the life of various types of roads and bridges.

[4] There are roughly 94,400 lane-kilometres of roads in Eastern Ontario and 8,500 bridges. Rural Eastern Ontario is responsible for three quarters of all roads and 60% of all bridges. By EOWC estimates, Rural Eastern Ontario is responsible for twice as much transportation infrastructure as in the City of Ottawa.

5. **It is Time for a New Approach to Infrastructure Investments**. *In her remarks at the AMO* conference in August of 2015, Premier Wynne referred to the importance of transformative innovations and the challenge all governments face in 'doing things differently'. Through this submission, the EOWC is signaling our keen interest in:

> ***"Too often, the only obstacles you face in making these transformative innovations are those put up by rigid provincial rules or bureaucratic structures."***
>
> Premier Kathleen Wynne, speaking at AMO in August of 2015, referring to the Community Hubs Strategic Framework and Action Plan

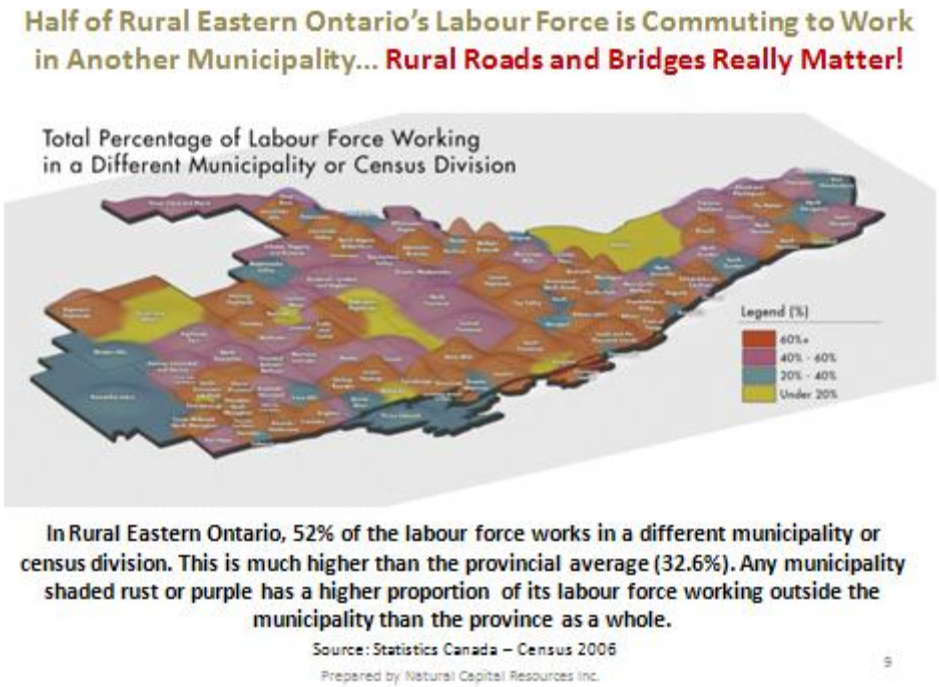
   - Providing regional leadership in thinking differently about infrastructure.
   - Working collaboratively with our municipal colleagues in separated cities and towns across Eastern Ontario to set priorities strategically, and link infrastructure investments to an agenda of regional prosperity.
   - Pursuing regionally-focused R&D efforts to extend the life cycle of key infrastructure assets and keep maintenance as cost-effective as possible.
   - Advocating bold ideas through which we can maintain and knit together our transportation infrastructure into a truly integrated, intelligent regional network.
   - Adding value to infrastructure, particularly through integration of information technology, to support economic development as well as safe, cost-effective asset utilization.

   These ideas have emerged from our 2014 regional Transportation Needs Analysis and our recently-completed Eastern Ontario Economic Development Strategy. Both reports were undertaken in conjunction with the region's separated cities and towns (the latter strategy did not include the City of Ottawa). The EOWC is committed to continuing to work with our colleagues across the region to ensure that our infrastructure serves the regional prosperity agenda.

   We invite the Province to affirm its commitment to 'doing things differently' in the infrastructure arena by making MOFOGTHA allocations that will enable us to move forward in a new way. In the absence of a fresh approach, the financial sustainability of local government and the communities we serve remains in serious jeopardy. And the Premier's aspirations for building up all of Ontario will be incomplete.

6. **The EOWC Supports the Vision of an Integrated Transportation Network**: As a result of its initial allocation to the GTHA, $15 billion remains for "**roads, bridges, transit and other critical infrastructure** in communities outside of (GTHA)". Of the $15 billion, the Province has suggested that allocations have already been made totaling $2 billion for specific projects in Northern Ontario and urban southern Ontario. With the proposed allocation of $1.0 billion for the heavily competition-based Ontario Community Infrastructure Fund (for small, rural and Northern Communities) and $0.272 billion for the Small Communities Fund (for local needs), ***there is a maximum of $11.5 billion available to move on the integrated transportation network across the province as well as other critical infrastructure***.

   The EOWC supports the provincial vision of a truly integrated network. In fact, our current and future economic prosperity depends on it. Every day, roughly half of the workforce in Rural Eastern Ontario crosses a municipal boundary to get to work. Often the workforce is moving back and forth between rural and urban areas (*see yellow portions of legend below*). Many rural residents also cross municipal lines for health care, education, shopping, entertainment and recreation making significant personal and household expenditures in the process. Freight also moves through rural areas, from field and forest to domestic and international markets. The economic engines of Rural Eastern Ontario may be less visible than the potential of the Ring of Fire, but they are just as important to the residents of our region. ***It is time to enhance and maximize the utility of our transportation assets for economic development purposes*.**



7. **The EOWC Supports a Ten-Year Timeline Matched by a Ten-Year Financial Commitment:** Given that some funds already allocated in 2014-15 may be considered part of MOFOGTHA, it is not clear what the Province's actual commitment to infrastructure funding is for roads, bridges, transit and other critical infrastructure outside the GTHA. The EOWC notes that the $11.5 billion allocation appears to be for a ten-year period, which is aligned with realistic *current* life spans for many municipal assets. ***The EOWC supports the 10-year planning horizon cited in the MOFOGTHA Discussion Guide but notes that a 10 year plan is meaningless unless there are solid funding commitments from the Province.***

8. **Stable, Permanent, Predictable Funding Helps in Many Ways:** The EOWC understands that some portion of the $11.5 billion for MOFGTHA would come from the sale of certain provincial assets such as a portion of Hydro One Networks Inc. (HONI). As a result, it is unlikely that significant funding would be available for most funding categories until at least 2017. As we have so often in the past, ***the EOWC continues to call for stable, permanent, predictable funding for municipal transportation infrastructure.*** The Province has recognized the merits of this approach in several of its infrastructure programs (e.g. Small Communities Fund). Municipal infrastructure investment financing predicated on the partial sale of provincial electricity assets (which Hydro One ratepayers in rural Ontario helped pay for) cannot yet be considered stable, permanent or predictable. ***The EOWC urges the Province to continue its efforts to establish stable funding to make the MOFOGTHA truly predictable, at least for a 10 year period. To that end, the EOWC also recommends that the Province support multi-year projects, thus enabling long-term planning and therefore prospects for cost-effective infrastructure maintenance and construction programs.***

9. **Maintenance of Existing Assets means Maintenance of Communities and Economies.** As municipal leaders, we understand the value of being strategic in our investments. We have to make strategic decisions every year as we approve our capital budgets in the context of our long-term capital plans and more recently asset management plans. Those plans cover all forms of infrastructure – from social housing and water & sewer systems to recreational facilities and roads and bridges. ***At every turn, we are weighing the relative importance of those assets to the social and economic development of our communities and our region***.

And while it is exciting to contemplate new infrastructure investments – and the EOWC has major project proposals to offer on that front – we also have to maintain what we already have. EOWC member municipalities are responsible for an estimated $10 billion in transportation assets in 2015[5], including 69,000 lane kilometers of roads and 8,500 bridges and other structures. These assets are helping to move products to market now, they are moving people safely through our area now. They are almost certainly our most important economic development asset. And they must be maintained, improved and used in new ways.

The EOWC recommends a significant increase to the $100 million a year allocation to the Ontario Community Infrastructure Fund; it should be at least doubled with a commitment to maintenance of existing critical infrastructure especially local roads and bridges. We recommend that the Province dedicate at least $2.5 billion for the OCIF.

Further, the EOWC reiterates our earlier statement that the definition of 'critical' infrastructure is one made by municipalities, not the Province. The EOWC submits that application-based programs, in which the Province makes the final decisions, are inconsistent with the work done over the last few years, to improve municipal asset management planning. While rural areas will likely designate transportation assets as their critical infrastructure, urban areas may have different priorities such as waste management facilities or land development services. Especially within the Ontario Community Infrastructure Fund and the Small Communities Fund, each municipality should be permitted to set their own priorities.

10. **Regional Allocations Provide a Mechanism for Supporting Regional Priorities.** The Discussion Guide acknowledges that the infrastructure needs and priorities are different in each region of the province. The EOWC heartily agrees and is eager to discuss this substantive submission to the Province that sets out the regional priorities for Eastern Ontario (with Ottawa considered separately from our submission). We are perplexed by the Province's decision to apply a "regional" approach to setting aside $16 billion for the City of Toronto and the Hamilton Area, then treat all the other regions of Ontario (Western Ontario, Eastern Ontario, Northern Ontario, National Capital Region/Ottawa) as one homogeneous region. They are not.

[5] Estimated based on extrapolated increase @ 5% per year in asset book value since 2011 ($4.97 Billion); growth rate based on actual change in 2009 to 2011 period.

Our recommendation is therefore that the allocation of funds in all categories except the Ontario Community Infrastructure Fund and the Small Communities Fund be made on a regional basis just as the Province has already done for the GTHA. Then the regions can allocate resources according to their priorities.

11. **Either the Province is Committed to Regional Projects or It Isn't.** We are perplexed by the Province's encouragement to stakeholders to think regionally, then citing multiple examples of 'single community' potential projects with a) no indication of the existence of business cases to support these projects or b) a sense for whether these projects would be seen as regional priorities by surrounding communities. ***The EOWC respectfully asks the Province to re-confirm its commitment to regional projects and to make sure that ensuing program decisions reflect that commitments***. If the cited projects have been approved for funding before criteria are set, they should be catalogued and treated as part of a regional allocation. Otherwise, small cities, towns and rural areas are disadvantaged by competing for funding for other truly regional projects from a budget allocation that has already been heavily drawn down even before evaluation processes begin. ***We ask that the Province confirm the amount of total funding still available (across all categories other than OCIF and SCF funds) for investment on a regional basis, after all pre-approved projects are taken into account.***

> **"Think about how existing and potential future programs can affect a region as a whole (think beyond an individual community or a specific program)"**
>
> Source: http://www.ontario.ca/page/infrastructure-consultation

> **"We will invest in the modern infrastructure we need to help create jobs and support regional economic growth --- now and for generations to come."**
>
> Source: http://www.ontario.ca/page/infrastructure-consultation

12. **Inclusion of Natural Gas and Next Generation Categories is an Excellent Idea.** These two program components acknowledge that there are circumstances of market failure, where a pure private sector response is extremely unlikely. In these cases, targeted investments, potentially in the form of public-private partnerships, can move infrastructure investments over the financial feasibility threshold and unlock economic development potential in parts of the province that would otherwise continue to sit on the sidelines.

Natural Gas Program Component: The EOWC is already working with the region's agricultural and energy stakeholders who are identifying natural gas opportunities in the region and looks forward to working with utilities on ways to help bring natural gas to un- or underserviced areas, The EOWC expects to see natural gas projects come forward in due course**.**

Next Generation Program Component**:** The EOWC supports the inclusion of this investment category in the MOFOTGHA program; we have innovative regional projects to put forward that would be consistent with provincial thinking on this front. These projects build on and will help increase utilization of the recently completed Eastern Ontario Regional Network initiative and the follow-on EORN Digital Strategy as well as the recently completed Eastern Ontario Regional Economic Development Strategy. The latter strategy includes multiple 'next generation' opportunities to benefit communities and the economy of Eastern Ontario.

13. **Moving Freight is as Important as Moving People.** Both the original Moving Ontario Forward – Outside the GTHA paper and the follow-up Discussion Guide focus much more heavily on moving people than moving freight. The only explicit reference to moving goods is on page 3 of the Discussion Guide (see sidebar): There is great emphasis on transit projects in the Discussion Guide and virtually nothing that invites comment on moving goods. And yet, moving goods – whether from agriculture, forestry, manufacturing, or other natural resource sectors – is extremely important for the communities and the economy of rural Eastern Ontario.

> **"To compete in a global marketplace, we need to make sure goods can get to market quickly, and people can get around safely and efficiently across the province."**
>
> Minister Duguid's message in MOFOGTHA Discussion Guide

The EOWC encourages the Province to acknowledge explicitly the importance of goods to the Gross Provincial Product[6] and the need to create an integrated transportation network that enables us to move goods as well as people. Further, the EOWC notes that transportation infrastructure for moving goods includes roads, bridges, rail, marine, air and intermodal facilities, some of which is owned and/or operated by municipal governments. It is vital that these facilities be developed and maintained to connect easily and cost-effectively with freight-related assets owned/operated by other private and public sector organizations. Ontario has an opportunity to be proactive in pursuing trade agreements with the European Union or other jurisdictions, capitalize on an advantageous Canada-U.S.

[6] For instance, economic impact multipliers in natural resource and manufacturing sectors are often higher than service industry multipliers.

exchange rate, and better serve domestic markets. A transportation system – and the goods that flow through it – is essential to our future economic prosperity. We urge the Province to broaden its thinking beyond moving people and beyond public transit. In Rural Ontario, our roads are our transit system and our connection to distant markets.

The EOWC also encourages the Province to acknowledge that infrastructure needed to move goods bears little relationship to population or size of community; rather, infrastructure needs are related to the specific types of work required to create and move goods, the distances these goods must travel to reach markets, and to the volume of goods emerging from or being moved into a particular region. The Province appears to have appreciated this fact, given pre-approval of and separate allocation of $1 billion for Ring of Fire transportation infrastructure in Northern Ontario. We ask that the Province bring this type of thinking to deliberations about transportation infrastructure in Eastern Ontario.

By proposing a major freight-oriented regional transportation project as part of this submission, the ***EOWC seeks the Province's confirmation that regional projects of these types would be deemed eligible for Moving Ontario Forward funding consideration***, presumably under a separate funding stream (as with the Ring of Fire investment) or as a sub-category within either the Connecting Links Program or Additional Infrastructure Investments to Support Economic Growth Program.

14. **$15 Million a Year for the Connecting Links Program is Inadequate**. If the Province is truly committed to an "integrated transportation network across the province", the annual allocation to this program should be one of the MOFOGTHA's largest financial commitments. In this submission, the EOWC has proposed major projects to help achieve the integrated transportation network the Province desires and we presume other regions are doing the same; $15 million a year is not enough to address this laudable goal. Again, ***the EOWC strongly recommends that the allocation for the Connecting Links Program be at least doubled to $300 million ($30 million a year).***

Summary of Recommendations:

15. The EOWC offers the following recommendations for provincial consideration in taking the next steps on Moving Ontario Forward Outside the Greater Toronto Hamilton Area.

Recommendation 1: The EOWC recommends that assessments of the criticality of infrastructure be made by municipalities based on their asset management plans and capital needs studies, and further that these assessments explicitly include three criteria: *a) public safety, b) role and contribution of specific assets to maintaining and growing local, regional and provincial economies, and c) addressing local/regional environmental challenges.*

Recommendation 2: The EOWC supports the idea of regional allocations and calls for a specific allocation for Eastern Ontario (outside of Ottawa), a significant share of which would be devoted to regional projects that would help to introduce an integrated regional transportation network. Our recommendation is that the allocation of funds in all categories except the Ontario Community Infrastructure Fund and the Small Communities Fund be made on a regional basis just as the Province has already done for the GTHA. Then the regions can allocate resources according to their priorities.

Recommendation 3: The EOWC recommends that the province's regional allocations for capital maintenance of transportation assets be made based on regional share of those assets. Further the EOWC recommends that pre-approved projects be considered as part of the regional allocations for the regions outside of the GTHA; the regional allocations for Eastern Ontario, Western Ontario, Northern Ontario and the City of Ottawa would therefore be made from the full $15 billion not the $11.5 billion remaining.

Recommendation 4: The EOWC supports the 10-year planning horizon cited in the MOFOGTHA Discussion Guide but notes that a 10 year plan is meaningless unless there are solid funding commitments from the Province.

Recommendation 5: The EOWC encourages the Province to continue and extend its efforts to establish stable funding to make the MOFOGTHA truly predictable, at least for a 10 year period. To that end, the EOWC also recommends that the Province support multi-year projects, thus enabling long-term planning and therefore prospects for cost-effective infrastructure maintenance and construction programs.

Recommendation 6: The EOWC recommends a significant increase to the $100 million a year allocation to the Ontario Community Infrastructure Fund; it should be at least doubled with a commitment to maintenance of existing critical infrastructure especially local roads and bridges. We recommend that the Province dedicate at least $2.5 to the OCIF and reiterate that these funds would be available across all of Ontario not just Eastern Ontario, and would be dedicated to local rather than regional needs.

Recommendation 7: The EOWC encourages the Province to acknowledge explicitly the importance of goods to the Gross Provincial Product[7] and the need to create an integrated transportation network that enables us to move goods as well as people. The EOWC also encourages the Province to acknowledge that infrastructure needed to move goods bears little relationship to population or size of community; rather, infrastructure needs are related to the specific types of work required to create and move goods, the distances these goods must travel to reach markets, and to the volume of goods emerging from or being moved into a particular region. Further, the EOWC seeks the Province's confirmation that regional projects of these types would be deemed eligible for Moving Ontario Forward funding consideration.

Recommendation 8: The EOWC strongly recommends that the allocation for the Connecting Links Program be at least doubled to $300 million ($30 million a year) and notes that this allocation would be available to all regions of the province outside the GTHA.

Recommendation 9: The EOWC respectfully recommends that $2.84 billion be allocated to Eastern Ontario (outside of Ottawa) for the purposes of regional projects. Further, the EOWC anticipates that another $0.93 billion would be dedicated to local projects in Eastern Ontario through OCIF and SCF. It is understood that these investments would be made over a 10 year period, beginning in 2016-2017. The allocation of these resources is summarized in the following chart.

[7] For instance, economic impact multipliers in natural resource and manufacturing sectors are often higher than service industry multipliers.

Moving Ontario Forward - Outside the GTHA Program Component	Provincial Allocation ($ Billion)	EOWC Recommended Allocation ($ Billion)	Proposed Minimum Eastern Ontario Allocation ($ Billion)
Ontario Community Infrastructure Fund**	$1.00	$2.50	$0.83
Small Communities Fund***	$0.27	$0.27	$0.11
Connecting Links**	$0.15	$0.30	$0.10
Southern Highway Projects*	$1.00	$1.00	$0.25
Northern Highway Projects			$0.00
Ring of Fire	$1.00	$1.00	$0.00
Natural Gas Expansion**	$0.08	$0.08	$0.03
Additional Infrastructure Investments to Support Economic Growth*	$11.50	$9.85	$1.23
Additional Infrastructure Investments to Support Transportation*			$1.23
Total	**$15.00**	**$15.00**	**$3.77**
Shaded Areas are part of Proposed Regional Projects Allocation			**$2.84**
Unshaded Area is Recommended Funding for Local Municipal Projects			**$0.93**
** Calculated at 25% of total (North, West, East, Ottawa)*			
*** Calculated at 33% of total (North, Western, Eastern)*			
****Calculated at 40% of total (because it is a component dedicated to Southern Ontario)*			

Recommendation 10: The EOWC recommends that the processes of internal allocation of the $2.84 billion to worthy investments be managed by the EOWC in conjunction with the leadership of the separated cities and towns in the region, known as the Eastern Ontario Mayors Committee (EOMC). The EOWC appreciates that members of the EOMC will have slightly different investment priorities and proposes that all project proposals will be subject to the same prioritization criteria (presented in this submission or otherwise negotiated).

2. Introduction

The scale of the infrastructure challenge facing Ontario is daunting, and Ontario is far from the only jurisdiction with such challenges. Indeed, the provision and maintenance of infrastructure is a global concern with renewed calls for innovative approaches to addressing the challenge[8]. Over the past decade, Ontario has completed significant infrastructure planning work and introduced related legislation and policy (*see sidebar for examples*) but as a province we do not appear to have gotten ahead of the curve. Moving Ontario Forward is the latest provincial effort to do so and the associated consultation process is much appreciated by the EOWC.

Infrastructure Initiatives in Ontario:

- **2004: Release of *Building a Better Tomorrow Framework***
- **2005: Five-year $30 billion investment plan (*ReNew Ontario*)**
- **2005: Passage of the *Places to Grow Act***
- **2005: Creation of *Infrastructure Ontario***
- **2006: Growth Plan for the Greater Golden Horseshoe**
- **2007: *Provincial-Municipal Fiscal and Service Delivery Review***
- **2009: Growth Plan for Northern Ontario**
- **2009: Provincial announcement of $32.5 billion in public infrastructure investment (over 2 years)**
- **2011: Release of *Building Together* (Ontario infrastructure plan)**
- **2013: Introduction of Asset Management Plan requirements for municipalities**
- **2015: Provincial consultation on *Moving Ontario Forward's* $31 billion proposed investment in public infrastructure.**

The financial resources required to maintain and manage Ontario's public infrastructure are substantial. The Ontario Ministry of Finance[9] has referred to a 2006 analysis that estimated the resources needed to rehabilitate public infrastructure across the province – $19 billion[10] (2006 Residential and Civil Construction Alliance of Ontario). Two years later, the Provincial-Municipal Fiscal and Service Delivery Review put the number at $22.4 billion for municipal infrastructure alone[11] (2008). Since municipal infrastructure was said to account for nearly half of the Province's public infrastructure stock, the associated rehabilitation costs would be roughly $45 billion, with another $7 to $8 billion a year required annually to meet current and future needs. The Association of Municipalities of Ontario reported that the municipal infrastructure gap in 2008 was $60 billion. That number has almost certainly increased significantly since then. While

[8] See dedicated chapter on infrastructure in No Ordinary Disruption: Four Global Forces Breaking All the Trends, Richard Dobbs, James Manyika, Jonathan Woetzel, 2015

[9] Source: http://www.fin.gov.on.ca/en/economy/ltr/2010/ch5.html

[10] Future expansion and replacement costs add another $6 to $7 billion *a year*, not including requirements for sewer and water, education facilities and social housing.

[11] An additional $3.7 billion investment was projected to be needed annually to meet current and future needs.

welcome, the $30 billion allocated for this purpose in Moving Ontario Forward will likely address less than half of the need. We need to make the most effective use of these resources, both to address the obvious need, to leverage federal support, and to 'flatten the curve' of future infrastructure resource demand. In the EOWC's view, accomplishing these tasks will require all of us to think differently about infrastructure investments.

In describing its commitments to the future (for infrastructure), the Ministry refers to improving "Ontario's competitiveness and help meet future needs including rapid population growth in the GTA and other urban centres." The EOWC believes this description of the role of infrastructure is limited – both strategically and geographically. Infrastructure must address more than population growth and it must serve more than urban centres. By definition, much of our infrastructure connects communities – urban and rural – and it also connects producers and consumers, whether those consumers are in Ontario or are in distant places. It connects people who want to share – whether that is sharing an experience, a workplace, information, decisions, or ideas. Limiting our possibilities and our options for infrastructure investments limits the future for our residents, our economy and our society. We must all learn to think differently about infrastructure investments.

For the EOWC, the over-arching questions for consideration in Moving Ontario Forward are:

a) What are the best types of investments to make for long-term prosperity (to ensure a Return on Investment)?
b) What processes should govern the deployment and evaluation of these investments for maximum effectiveness and efficiency?
a) How much investment is affordable at any moment in time and how do we make the most effective use of infrastructure capital available at any moment in time?

The preceding questions form the backdrop for the EOWC's consideration of specific questions from the Discussion Guide, and the balance of this submission represents our collective response to the Guide questions.

"Not only can successful firms invest and acquire abroad, they can also export goods to the emerging global middle-class of consumers." Although it may seem self-evident, it is important to note that export activity is dependent on transportation infrastructure as well as a range of other business services." And transportation equipment as well as five other manufacturing sectors are considered to be 'high productivity' industries."

Source: Mowat Centre in commenting on Ontario's manufacturing sector
http://www.automayors.ca/83_ontario_made_summary.pdf

(The other five sectors are food, beverage and tobacco, petroleum and coal products, chemicals, primary metals, and computer and electronic products.)

3. Implications of Moving Ontario Forward for Areas Outside the GTA

The Moving Ontario Forward Discussion Guide appears to be predicated on four assumptions, all of which the EOWC questions.

- **Assumption #1: A per capita allocation system is assumed to be appropriate and fair** when considering allocation of *capital* infrastructure funding. There is no reason to think this is case. It is convenient but because it does not consider householders' ability to pay or the size of the burden carried by each household in a jurisdiction, per capita allocation fails the equity test. And because it is based on a historical fact (population), it makes no connection to potential for growth or the ability to implement proactive strategies to capitalize on that potential.

- **Assumption #2: Return on Investment (RO) is easy to quantify**. Short-term construction phase ROI is reasonably easy to quantify; ROI from long-term investments is less so. Especially if process-related factors and the geographic distribution of that ROI are taken into account. The literature suggests that *how* and *where* we make infrastructure investments can be an important determinant of ROI and especially to whom those returns accrue.

- **Assumption #3: ROI is found only in large urban areas.** In other words, infrastructure investments in rural areas have no demonstrable ROI. This assumption may well be a self-fulfilling prophesy. If the lion's share of infrastructure investments are made in large urban areas (because of this assumption), then the likelihood of ROI accruing to those urban centres increases dramatically. This assumption may have been justified to some degree in the past (because of the innovation-from-proximity phenomenon) but the rapid deployment of technology is shortening the distance and increasing the rapidity of interactions among collaborators and partners. Communities of interest now form and expand much more quickly than in past, and can be much more dispersed than before. Economies of scales are significantly flattened by advanced technologies (example: additive manufacturing) and a wide range of services – from education & training to financial services can be delivered digitally on a global basis. We discount the contribution rural populations can make to our economies at our peril. At worst, this assumption promulgates a sense of dependency in rural areas which only increases the support burden on urban areas.

- **Assumption #4: ROI is found in individual communities rather than "network" infrastructure** (e.g. transportation networks, ICT networks). This is not at all clear and likely overlooks the importance of infrastructure in deriving ROI from supply chain relationships and regional (rather than local) economies. In fact, the provincial economy is a collection of regional and local economies. It is difficult to think of a sector that is organized on a strictly provincial basis. Trade, traffic, business and social transactions cross municipal boundaries at will. And telecommunications is increasingly blind to boundaries altogether. It is important to keep the "nodes" of networks (site-specific infrastructure assets and their host communities) strong but they are likely to remain so only if the "network" infrastructure is also strong. Examples of network infrastructure are energy transmission networks, transportation networks, and ICT networks.

Without full consideration of these assumptions and the degree to which they ought to underpin the design and implementation of Moving Ontario Forward, it is likely that Ontario will fail to extract the full strategic and ROI value from its multi-billion dollar investment. It is equally unlikely that the rural areas, small towns and cities will be in a position to make their full contribution to the province's economic growth and development, or to maintain healthy, sustainable communities. Municipal governments outside the GTHA are left with many questions about our real prospects for participation in MOFOGTHA (*see chart below*). We encourage the Province to revisit the preceding assumptions and clarify its intent with this program.

Component	Opportunity for Participation by Eastern Ontario?	Total (Initial) Allocation ($ Billion)	Proportion that May Already Be Committed
Ontario Community Infrastructure Fund	Yes	$1.00	Unknown
Small Communities Fund	Yes	$0.27	Unknown
Connecting Links Program	Possibly	$0.15	Unknown
Southern Highways Projects	Possibly	$1.00	Unknown
Northern Highway Projects	No		Unknown
Ring of Fire Investments	No	$1.00	100%
Natural Gas Expansion	Possibly	$0.08	Unknown
Additional Infrastructure Investments to Support Economic Growth	Unknown	$11.50	Unknown
Additional Infrastructure Investments to Support Transportation	Possibly		Unknown

4. Return on Investment in Infrastructure – What Does the Literature Say?

The examination of Return on Investment (ROI) for infrastructure investments has taken many forms over the past several decades – from short-term considerations of job creation and additional economic activity from the construction phase of infrastructure projects to longer-term impacts of these investments on business productivity, innovation and increased exports (*see Appendix E for a sampling of relevant literature*). From these analyses, the following conclusions emerge:

1. *Infrastructure Investments Do have Demonstrated ROI.*

   A. Construction-stage ROI tends to be more immediate but the extent of impact in a host jurisdiction is highly dependent on the 'leakage'[12] effects associated with the project. The immediacy of impact tends to make physical infrastructure investments attractive as a strategy to stimulate economies during 'soft' economic times. If as some analysts observe, Canada is slipping back into recession, this short-term impact could be quite beneficial to the Ontario economy and would be welcomed in Eastern Ontario.

   B. Machinery and equipment investment ROI is usually focused on purchase and installation of equipment at one particular site (e.g. new manufacturing processes or ICT equipment). In Ontario, these types of equipment have tended to have lower ROI because so much machinery and equipment is imported into the province.

   C. Longer-term ROI tends to be based on how strategic the investment was in its conception. For instance, was the investment designed as a stop-gap measure or to put capacity in place as supports to other types of economic activity or to support the provision of vital public (social or health) services? Was the investment made with life cycle cost in mind or just low cost of acquisition? Many infrastructure investments are 'network' investments – whether transportation systems or broadband networks – because they connect multiple players in supply chains or in multiple communities. These types of investments can play a pivotal role in integrating workers, businesses or entire communities into a regional or sub-regional economy. The EOWC believes that MOFOGTHA investments ought to be made strategically with a heavy emphasis on these 'network' opportunities.

[12] Leakage effect is the share of expenditures on any project that are paid out to suppliers in jurisdictions outside the host jurisdiction. 'Leaked' expenditures will not have any indirect (multiplier-based) impacts in the target jurisdiction. However, there will be impacts in any or all jurisdictions in which expenditures are made.

D. Economic impact multipliers vary enormously depending on the type of infrastructure investment made (e.g 0.4 to 2.2 according to some analyses). The recent Conference Board of Canada analysis of Ontario's infrastructure investments in the 2006-2014 period suggested that the average (inflation-adjusted) GDP multiplier was 1.1 ($1.10 in additional GDP for every dollar invested in public infrastructure with 16.7 person-years of employment per million dollars invested.

E. Impact is dependent on timing ("shocks" during economic crises) and decision-making processes (the literature expresses concern over last-minute allocations and ability of state/local level governments' capacity to absorb and execute well sudden addition of new projects (e.g. "capacity")

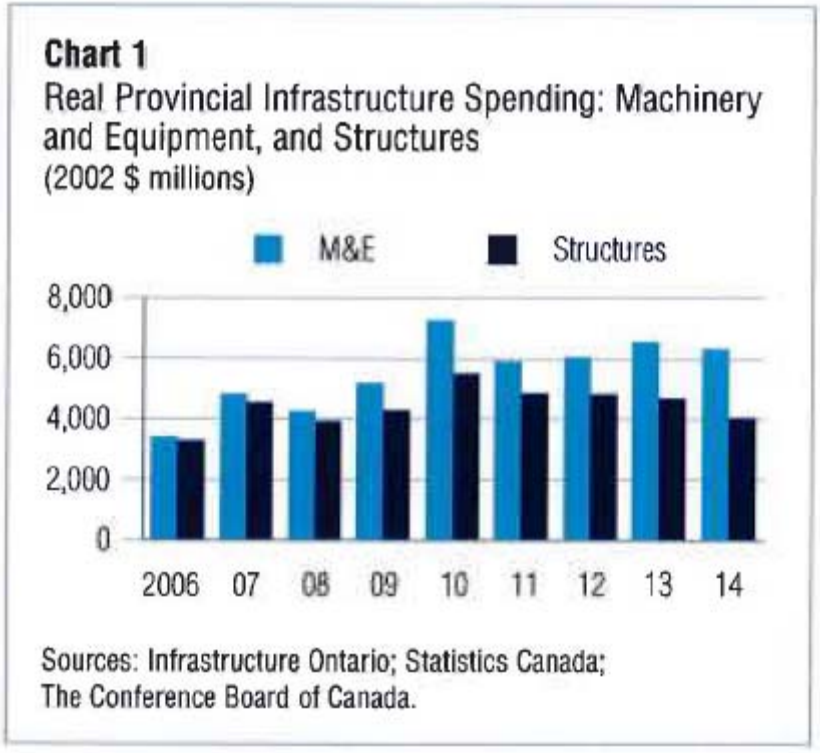
F. Benefits of investments in *transportation infrastructure* (beyond short-term construction stage impacts have been found to be:
   a) Reduction in commute times ---which may or may not be local. This tends to be the focus of transportation infrastructure investments in urban areas. There is still a lot of debate over the extent of these savings and how best to determine them.
   b) "Accessibility" and extension of economic activity by physical connection of communities. In North America, relatively little attention being paid to these benefits. In most jurisdictions, this work is deemed to have been "done". Such thinking overlooks the need to maintain these physical connections and the implications for urban workplaces if transportation networks degrade over time. This phenomenon is in evidence in Eastern Ontario for both people and goods (both of which count on well-maintained infrastructure to keep local and regional economies going.) Urban areas would be well advised to consider where their workers are coming from each day (see relief map of labour force commuting to work in other centres).
   c) Improved safety.

   The literature also expresses significant concern about the impact of political biases for what should be strategic decisions (if ROI is to be maximized.

- The Conference Board of Canada has a specific model of the Ontario economy through which it analyzed the ROI on provincial infrastructure investments (including funding flowing to local governments). Highlights of this analysis were:
  - Estimates indicate that for every $100 million (inflation-adjusted) invested in public infrastructure, real GDP was boosted by $114 million and roughly 1,670 person-years of employment were created or supported."

- Ontario's investments lowered the outflow of interprovincial migrants and boosted population.
- Overall, the number of unemployed people was reduced by about 62,500 per year, lowering the (provincial) unemployment rate by just under 1 percentage point.
- The Ontario government was deemed to have recovered 17% of infrastructure investments in the 2006-2014 period through taxes.
- Cost increases (price inflation) much more significant on construction (up 25% in 2006-2011) than for machinery and equipment (essentially flat),

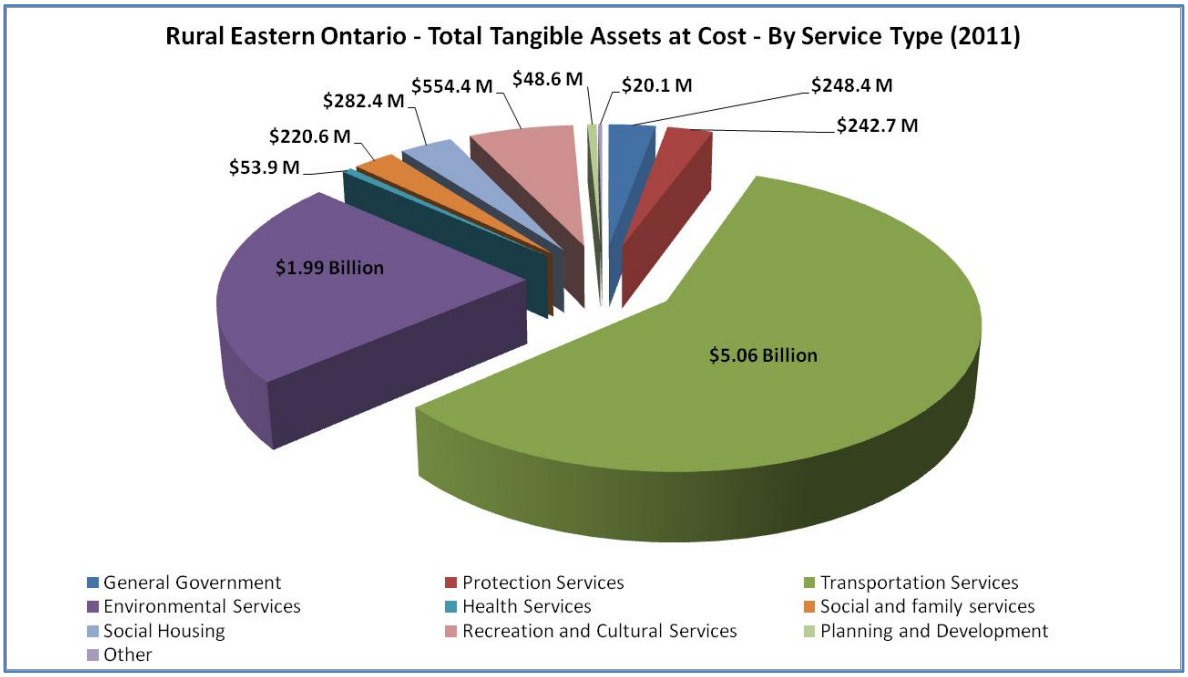
The EOWC notes that over the past decade, investment in machinery and equipment has always been higher than investment in structures, which includes roads and bridges. Machinery and equipment includes capital investment in health care and education. It is time to address this prolonged period of underinvestment in transportation infrastructure.



5. A Decade of Calling Attention to the Need for Investment in Infrastructure

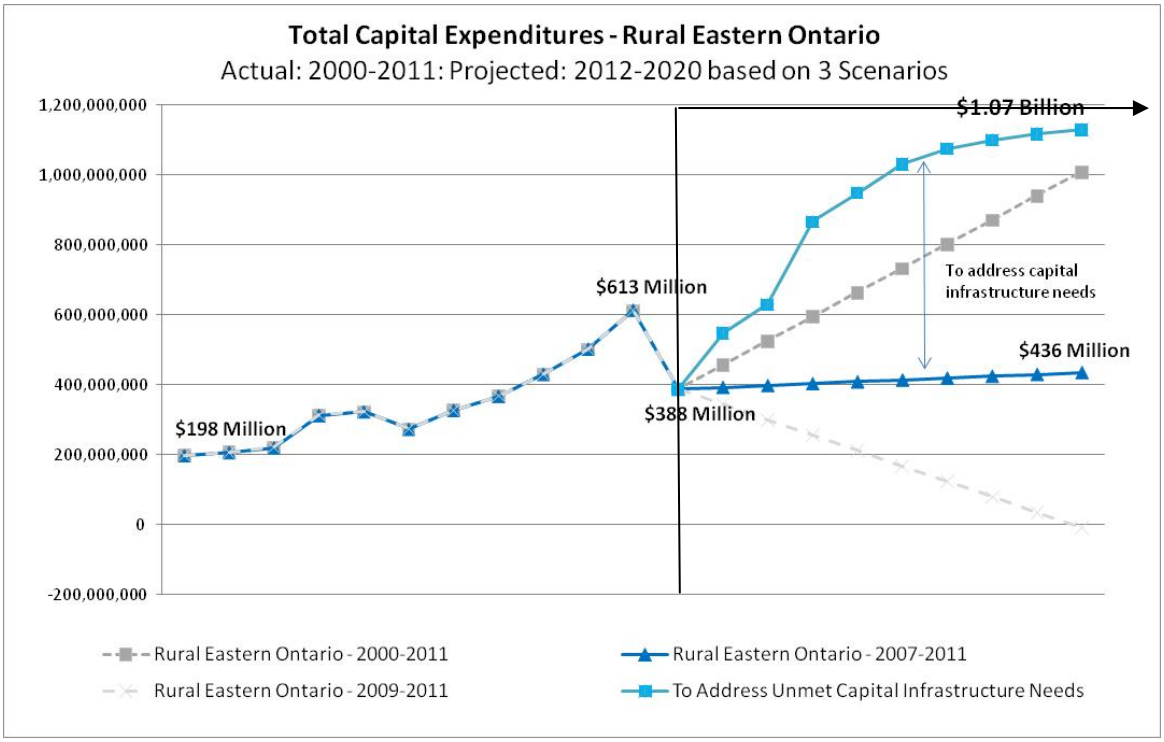
Given the major role that municipal governments play in the ownership and management of public infrastructure in Ontario, it is not surprising that the Eastern Ontario Warden's Caucus has made infrastructure a cornerstone of its collaborative work for the past decade. Bearing in mind that Rural Eastern Ontario has roughly 750,000 residents, our infrastructure responsibilities are daunting:

- We own and manage roughly **$10 billion in asset investments** (2015 estimate) to support transportation, health and long term care, protective and emergency services, social housing, environment, culture and recreation, and social and family services. Two types of assets (transportation and environmental services) account for 80% of our infrastructure…. Yet they are critical to our residents' well-being and to our economic sustainability. Half or our capital expenditures have been made since 2000.
- Our infrastructure requires annual operating expenditures of roughly **$2 billion a year**.
- Our small population and relatively low household incomes have created a **capital infrastructure deficit** which now exceeds the $3.74 billion estimate from 2011.



From Municipal Infrastructure White Paper EOWC 2013. See www.eowc.org.

Although some provincial officials may not know the size/scale of municipal infrastructure responsibilities or the state of that infrastructure, municipalities in Rural Eastern Ontario do. And we know how large the gap is that we must close. That's because over the past decade, the EOWC has conducted research, devised strategies to address our infrastructure needs as well as our need for economic development, developed collaborative relationships and undertaken bold regional initiatives to advance our region's future prospects. Our regional efforts were studied by a multi-institutional academic research team as part of a 2013 Canadian analysis of "New Regionalism" and rural resilience[13]. Rural Eastern Ontario's focus on infrastructure, particularly high-speed internet, has been noted in the team's reports and presentations.



From Municipal Infrastructure White Paper EOWC 2013

Because Rural Eastern Ontario has a large share of the region's roads, the costs to maintain each kilometre of road are effectively borne by a smaller number of households. On average, there are only five (5) households per lane-kilometre of roads in Rural Eastern Ontario. With costs to rebuild a lane-kilometre of paved road averaging close to $500,000, this means that each of the five households must carry about $100,000 in costs for road reconstruction. By comparison, the greater population density of the Separated Cities in Eastern Ontario means there are 25 households to support the cost of rebuilding one lane-km in Separated Cities. This works out to about $20,000 per household.

[13] http://cdnregdev.ruralresilience.ca/?page_id=5

The EOWC has the management capacity to undertake large-scale regional infrastructure projects. We manage $10 billion in infrastructure now with nearly $2 billion in annual operating expenditures. We invest an average of at least $300 million a year in infrastructure. And we have shown ourselves to be willing to be regional leaders. While some projects have been undertaken in conjunction with other regional stakeholders (such as the EOMC and Ontario East Economic Development Commission), the EOWC was the organization leading the way in regional infrastructure analysis and action. A separate technology-focused entity, EORN Inc., emerged from this work with a specific ICT and high-speed internet/broadband focus. With its highly-successful $170 million plus network build phase now behind it, EORN is focusing on driving adoption and utilization as well as making additional technology linkages to business parks in both the urban and rural areas of the region.

> ***"We need your help in making sure that investments are targeted to meet local needs and support economic development in your region."***
>
> Hon. Brad Duguid
> Discussion Guide Message

Examples of the EOWC's Work Related to Infrastructure:

- 2015: Digital Strategy[14] (EORN)) and forthcoming Cell/Mobile Broadband Gap Analysis
- 2014: Eastern Ontario Regional Economic Development Strategy (EOWC, EOMC, Ontario East) and Eastern Ontario CFDCs)[15]
- 2014: Eastern Ontario Transportation Needs Analysis[16] (Eastern Ontario CFDCs)
- 2014: Environmental Services White Paper (EOWC)
- 2014: Social Housing White Paper (EOWC)
- 2013: Municipal Infrastructure White Paper (EOWC)
- 2013: Municipal Affordability White Paper (EOWC)
- 2013: Ratepayer Affordability White Paper (EOWC)
- 2012: Eastern Ontario Financial Sustainability Update (EOWC)
- 2008: Active participation in Provincial-Municipal Fiscal Capacity and Service Delivery Review (municipal representation at all five discussion tables, and submission of regional data set on transportation infrastructure)
- 2007: Eastern Ontario Prosperity Plan (policy-focused document)
- 2005: Eastern Ontario Opportunity Action Plan (economic development focused document)[17]
- Regular participation in provincial pre-budget submissions as well as program design discussions (e.g. Eastern Ontario Development Fund, Eastern Ontario Development Program), often with other regional stakeholders such as the Eastern Ontario CFDCs.

[14] https://www.eorn.ca/en/EORN-resources/Digital-Strategy.asp
[15] http://www.eowc.org/en/futuredirections/Economic-Development-Strategy-2014.asp
[16] http://www.eotransportation.com/
[17] Plans and strategies developed under the auspices of the Eastern Ontario Wardens' Caucus are all available at http://www.eowc.org/en/futuredirections/easternontariofund.asp.

6. Recommended Principles and Allocation Criteria

Principles for Moving Ontario Forward

Province's stated objectives for this funding stream (from the Discussion Guide) are:

- To compete in a global marketplace
- To help create jobs
- To support regional economic growth

The EOWC agrees with these objectives, subject to the caveats expressed in earlier sections of this submission (competitiveness applies to everyone not just urban areas; jobs are created across the province not just in the GTHA; there is a real commitment to regional approaches; implementation processes and funding agreements are stable, predictable and permanent).

The chart below summarizes the EOWC perspective on the principles that ought to be the foundation of MOFOGTHA. Above all, we see these investments as major opportunities to think differently about infrastructure, to be bold and visionary not just in *what* we do but *how* we do it, and to 'walk the talk' on regional approaches that connect communities and economies within and without.

The EOWC believes that major progress has been made in Eastern Ontario over the past decade in building regional project development and management capacity, and that this capacity is now sufficient to justify taking the reins of a major regional infrastructure investment program. Further, the EOWC and its regional partners have done their homework (as the following chapter indicates). Our strategies and plans demonstrate clearly that we are already thinking differently. We invite the Province to collaborate with us in displaying the 'openness to bold solutions' called for in the MOFOGTHA Discussion Guide.

Guiding Principles in Discussion Guide	EOWC Comment and Elaboration on Principles
• Collaboration (sharing lessons learned)	• Agree; integrate collaborative spirit across infrastructure, from planning to actual project execution, evaluation and application of lessons learned
• Interconnectivity (of communities)	• Agree; extend beyond financing models to "next generation" solutions especially impact of technology
• Openness to Bold Solutions (innovation, private equity)	• Agree; acknowledge through emphasis on regional allocations and shift in locus of decision-making to where the infrastructure is deployed and managed; be open to new business models including 3Ps; invest in R&D for innovative solutions
• Shared Investments (multiple	• Agree; long-term commitments can mitigate cost

responsibilities and obligations)	pressures and enable better fulfillment of responsibilities and obligations at all levels
• Evidence-Based (research, business case, asset management plans)	• Agree; expectations must also take regional-specific infrastructure R&D and ROI into account, as well as the 'business case' for maintenance (not just initial capital investment); clarity needed on 'business case', noting that municipalities routinely require a 'business case' for their investments
• Outcome-Oriented ('best' outcomes, economic, social and environmental)	• Clarity needed on 'best outcomes' but generally agree with a focus on economic, social and environmental outcomes as long as local/regional outcomes are given significant consideration (not just province-wide outcomes)
• Regionally-focused	• Agree; however there is an ongoing need for OCIF and SCF; the "nodes" of regional networks (individual communities) need to be maintained
• Adaptive and Responsive (allow for unforeseen situations, respond to climate change)	• Focus on resilience from adaptive infrastructure; requires consideration of some redundancy (e.g. EDRs) for unforeseen situations; climate change is one of many requirements for responsiveness (others are technological change, demographic and social change, financial sustainability, transparency)

Recommended Prioritization Criteria for Financial Allocations

- **Regional** projects (beyond OCIF and SCF), those which address interconnectedness of multiple communities for economic and social development purposes and to improve access to/deployment of human services, support supply chains within and across sectors, connect producers and consumers wherever the latter might be, provide safe, efficient ways to move people around the region and connect to the rest of the province, other provinces or international jurisdictions safely and efficiently. As noted in earlier sections of the submission, in focusing on network infrastructure, we cannot forget the nodes. To this end, the EOWC has recommended retention and indeed a slight expansion of the financial commitment to 'local' projects. However, we believe the lion's share of available resources should go to truly regional projects.

- **Integrated** projects**,** those that link up infrastructure in ways that form or complete networks regardless of asset ownership, connect multiple types of infrastructure (e.g. transportation linkages to single-location infrastructure assets; integrate information-rich and/or embedded technologies in physical assets to increase safety, efficiency, productivity, civic engagement); deliver on integrated transportation system concept (e.g.. Connecting Links).

- **Collaborative** initiatives, those that may have multiple partners and/or beneficiaries, including public-private partnerships; may involve tailored governance structures to ensure accountability and ongoing ability to meet needs articulated at the outset; may involve collaborative funding and/or financing mechanisms.
- **Next Generation** projects, those that go beyond just 'catching up' or filling an obvious gap with conventional/last generation solutions; emphasis on creating platforms that anticipate future developments (e.g. technology-laden vehicles, remote sensing applications, the move to customized solutions, modular and/or mobile approaches, driverless movement of people or goods, use of technology to capitalize on new markets), rather than 'dead-end' developments. R&D initiatives required to validate the project intent and concept would be included here provided the results would be shared widely as part of 'lessons learned'.
- **Demonstrated contribution to community and/or economic development**, those that strengthen the social fabric of communities and the provision of vital human services, build local/regional capacity in specific sectors or in operating and managing infrastructure, strengthen business/commercial and industrial sectors or supporting services such as utilities, technologies, financial resources, typically by providing platform technologies or other infrastructure assets that are not otherwise achievable due to market failure.
- **Financial feasibility**, those that justify financial investment given the anticipated outcomes presented in business case and associated ROI; part of the business case should be financial commitments from partners and/or expressions of support in principle imparting a strong sense that the required financial resources to execute the project would be forthcoming.
- **Consistent with long-term strategies** and asset management plans, as articulated in regional and local plans.
- **Implementation capacity**, those that demonstrate the availability of committed partners with the governance, legal, financial, operational and project management capacity to execute the project at the level contemplated by the business case (level is: local, collaborative, regional).

7. Recommendations on Allocation Process

Proposed Reallocation of $15 billion: As noted in the Executive Summary, the EOWC recommends that the allocation of the $11.5 billion in available resources be made in a slightly different fashion than presented in the Discussion Guide. As summarized in the following chart, we recommend:

- Increasing the OCIF allocation to $2.5 billion (from $1.0 billion)
- Keeping the SCF at $0.272 billion
- Increasing the Connecting Links component of the program to $3.0 billion (from $1.5 billion)
- Leaving the Southern and Northern Highways, Ring of Fire and Natural Gas allocations as presented in the Discussion Guide (total: $2.08 billion)
- Allocating the remaining $9.85 billion to Additional Investments to Support Economic Growth and to Support Transportation. Note that the EOWC's definition of 'transportation' goes beyond transit to include roads and bridges/large culverts, rail, marine, air and intermodal facilities, or other similar assets that support safe, efficient movement of people and goods.

The EOWC respectfully requests a ten-year regional allocation for infrastructure of $2.84 billion for Eastern Ontario (outside of Ottawa) and further recommends that the processes of internal allocation of these resources be managed by the EOWC, which is a separate legal entity, in conjunction with the leadership of the separated cities and towns in the region, known as the Eastern Ontario Mayors Committee (EOMC).

The EOWC appreciates that members of the EOMC will have slightly different investment priorities and proposes that all project proposals will be subject to the same prioritization criteria (presented in this submission or otherwise negotiated). All municipalities ought to have capital needs studies and asset management plans; many will have strategic plans, official plans, economic development strategies, transportation master plans and other similar guidance documents against which potential projects/initiatives can be validated. However Eastern Ontario also has multiple *regional* guidance documents (e.g. Economic Development Strategy, Transportation Needs Analysis, Digital Strategy) to use for regional purposes. To these guidance documents, the EOWC would add the requirement for a business case for any regional project, which details why such an investment should be made, how it contributes to local, regional and provincial social and economic development, a feasible plan and capacity requirements for pursuing the project, and the anticipated ROI.

Please note that the $2.84 Billion allocation requested does not include either of the Ontario Community Infrastructure Fund or the Small Communities Fund, both of which should be available to municipalities for truly local (single community) projects. The EOWC does not propose to manage the allocation/approval processes for those funds. However, we do encourage the Province to make both programs 100% allocation-based rather than application-based.

Moving Ontario Forward - Outside the GTHA Program Component	Provincial Allocation ($ Billion)	EOWC Recommended Allocation ($ Billion)	Proposed Minimum Eastern Ontario Allocation ($ Billion)
Ontario Community Infrastructure Fund**	$1.00	$2.50	$0.83
Small Communities Fund***	$0.27	$0.27	$0.11
Connecting Links**	$0.15	$0.30	$0.10
Southern Highway Projects*	$1.00	$1.00	$0.25
Northern Highway Projects			$0.00
Ring of Fire	$1.00	$1.00	$0.00
Natural Gas Expansion**	$0.08	$0.08	$0.03
Additional Infrastructure Investments to Support Economic Growth*	$11.50	$9.85	$1.23
Additional Infrastructure Investments to Support Transportation*			$1.23
Total	**$15.00**	**$15.00**	**$3.77**
Shaded Areas are part of Proposed Regional Projects Allocation			**$2.84**
Unshaded Area is Recommended Funding for Local Municipal Projects			**$0.93**
** Calculated at 25% of total (North, West, East, Ottawa)*			
*** Calculated at 33% of total (North, Western, Eastern)*			
****Calculated at 40% of total (because it is a component dedicated to Southern Ontario)*			

The EOWC has developed the preceding recommended allocations using a regional model based on four regions (North, West, East and Ottawa/National Capital Region) and divided each allocation relatively equally among the regions, based on the regions to which it applies. We have requested a slightly higher share of the two “Additional Infrastructure” categories because Northern Ontario is already receiving a $1 billion allocation for transportation infrastructure related to the Ring of Fire opportunity, which the EOWC supports. However, this ought to mean that Northern Ontario does not draw to the same extent from the Additional Infrastructure categories.

8. Examples of Potential Regional Projects

The EOWC has developed the following descriptions of five potential regional projects that could bring the articulated regional infrastructure vision to life in Eastern Ontario. These are not the only projects we would imagine bringing forward but they are currently top of mind, in part to support implementation of the recently completed regional economic development strategy, the EORN Digital Strategy, and the findings of the 2014 Transportation Needs Analysis. By definition, these strategies and the infrastructure that will make them come to life are regional, network-oriented projects. In addition to serving to implement the approved strategies, each project can engage and support dozens of individual communities across the region, enabling them to participate in far larger, high-impact projects than they could do on other own.

The five projects are:

- Regional Highway Integration Project
- Freight Transportation System Investment Project
- Commutershed Transportation Investment Project
- Intelligent Transportation System Project
- Region-wide Next Generation ICT Project

(*See Appendix A for one-page regional project descriptions.*)

The EOWC would be extremely interested in discussing with the Province the prospects for approval of these five regional projects or others that might emerge from ongoing discussions either among stakeholders within Eastern Ontario or with federal or provincial ministries representing transportation, agriculture, forestry, manufacturing, tourism, economic development, health and long term care, infrastructure or other related sectors.

While the EOWC is supportive of expanded access to natural gas-related projects, we believe most of them will take place at the level of the individual community. The EOWC proposes to limit its direct role in natural gas projects to advocacy on the regulatory front to 'lower the bar' to allowing natural gas projects move forward. Such projects would be expected to contribute to the economic prosperity of the region, presumably by enhancing utilities at brown or Greenfield development sites, or enhancing the growth potential and competitiveness of existing businesses. In addition to supportive advocacy, the EOWC would focus on the related infrastructure (primarily transportation & shipping related) that would help producers move their feedstocks/raw materials and finished goods safely and efficiently.

We emphasize that the nature of the priority regional projects requires explicit consideration of the following features, which are suggestive of the types of collaborations and partnerships that would be needed for successful implementation:

- Intermodal capability (passenger and freight haulers, rail system owners/maintenance authorities, signaling technology specialists, short sea/lake and transocean carriers as well as port authorizes, airlines and airports,
- Transportation and logistics usage (users from individual travelers and passenger transit systems – inner and inter community; transport companies, couriers and other short-haul operators, to customs and duties, immigration authorities etc.)
- Border crossings (transport companies, bridge authorities, customs and duties, immigration)
- Economic development corridors (transportation routes, signage, embedded technology, natural gas and other utility services, sector-specific supply chains, potentially financial and other business services, and education & training)
- Commutersheds (major employers and traffic patterns, passenger and commuting services including but not limited to public transit, urban-rural linkages, residential development plans, presence of schools and healthcare facilities, EMS services)
- ICT infrastructure (especially mobile voice, video/imaging and data capacity, embedded sensors, actuators, signaling devices, GPS, digital signage and alert capabilities etc.)

Appendix A: Examples of Potential Regional Projects

Name: Regional Highway Integration Project

Description: Development and implementation of a highway integration project, to upgrade and connect 1,500 lane-kilometres of municipal roads (and bridges) to 400 series and other provincial highways as well as to other transportation assets in the region (ports, airports, intermodal hubs). Project includes considerations for turn lanes, roundabouts, higher/heavier traffic and loads if highway is a designated EDR, strategic roadside improvements such as commuter lots, texting zones, enhanced transportation-related signage, signaling and lighting, as well as R&D for asphalt mixes specifically suited to the regional climate, to increase lifespan and better manage highway maintenance. This project would be undertaken in conjunction with the Intelligent Transportation System Project, an ICT-focused initiative presented separately. Both projects will provide the platform for the Commutershed Infrastructure Investment Project, also presented separately,

Fit with Province's Aspirations: Addresses expressed goal of "integrated transportation network across the province". Consistent with both Connecting Links and Expanded Highway Investments. Supports responsiveness to climate change and other unforeseen circumstances (provincial highway blockages). Addresses safety considerations for highways and especially bridges.

Fit with Regional Aspirations and Criteria: Supports implementation of Eastern Ontario Transportation Needs Analysis (2014), Eastern Ontario Economic Development Strategy (2014), and EOWC Municipal Infrastructure report (2013). Requires extensive collaborations (among rural and urban municipalities, with MTO, includes opportunity for public-private partnerships, supports significant support to regional economic development. Addresses one of three most important considerations for Foreign Direct Investment. Encourages municipalities to make strategic choices about transportation assets, high-traffic corridors, changing patterns of transportation, and locally-directed growth. Helps to address unintended consequences of EDR traffic and costly maintenance of highest traffic roads. Will draw upon asset management plans across region. Implementation capacity exists at both local and regional levels. Anticipated collaboration with MTO and research labs will enhance access to required expertise.

Role Technology Plays: Sets stage for Intelligent Transportation System Project. R&D components draw upon latest knowledge of materials and methods related to high-traffic/heavy load highways. Larger projects support efficient use of highway construction technologies and related equipment.

Business Case/ROI Implications: EOWC (and EOMC) have internal access to extensive transportation asset management talent. Literature exists to support estimates of a) short-term construction-related economic impact, and b) longer-term regional revitalization and stimulation of economic impacts. The project would also provide a long-term reason for local engineering and construction firms to invest in their own human resource capacity and related technologies.

Name: Freight Transportation System Investment Project

Description: This multi-year project would develop and implement a network of facilities and services that would provide an integrated, efficient system of moving goods from productive industries (esp. agriculture, forestry, manufacturing) to markets within and especially outside the region. Based on an analysis of current and projected flows of materials and goods, the project would link together transportation assets such as appropriately-designed highways, intermodal hubs (truck-rail, marine shipping, air freight, refrigeration etc.) and related services (logistics support, import/export expertise, product safety and certification labs). This project would be undertaken in conjunction with the Regional Highway Integration Project and the Intelligent Transportation System Project, both of which are presented separately. It is expected that the latter project would provide the mobile broadband/cell service to link together all elements of the freight transportation network.

Fit with Province's Aspirations: Addresses expressed goal of making sure "goods can get to market quickly", "creating jobs" and supporting "regional economic growth". Consistent with principles of Interconnectivity of communities, Shared Investments, and Adaptive and Responsive. Consistent with Additional Infrastructure Investments to Support Economic Growth and to Support Transportation.
*

Fit with Regional Aspirations and Criteria: Supports implementation of Eastern Ontario Economic Development Strategy (2014), and Eastern Ontario Transportation Needs Analysis (2014). Requires extensive collaborations (among municipalities, with MTO, with air, rail and marine operators), includes opportunity for public-private partnerships, supports significant support to local and regional economic development. Demonstrates region's ability to deliver one of three most important considerations for Foreign Direct Investment (transportation). Enables businesses to build supply chains to get goods to market quickly and efficiently. Some implementation capacity exists at local and regional levels as well as in private sector firms in and outside the region. Sectoral associations can also provide expertise. Project requires ability to negotiate with internal and external stakeholders, including the private sector, to create intermodal facilities.

Role Technology Plays: Enhanced ICT services will enable logistics firms and transport companies to schedule deliveries/pickups and share information via the cloud (now commonplace in these industries).

Business Case/ROI Implications: This project supports local and regional economic development directly. Economic multipliers from goods-producing industries are very strong. Project would stimulate productive industries as well as transport and logistics firms, and related services (truck sales and repair, refueling stations, construction, container and other packaging operations, refrigeration services, and a full range of business services. The EOWC would build a collaborative project team for this initiative.

Name: Commutershed Transportation Investment Project

Description: This multi-year project would develop and implement a network of facilities and transit-like services to ensure that members of the labour force can get back and forth to work safely and efficiently, especially when commuting to work across municipal boundaries. The commutershed concept responds to anecdotal information from the regional economic development strategy, suggesting that in several areas of the region (sub-regions), large numbers of workers commute between urban and rural areas, with significant cost (and commute time) implications for workers and infrastructure requirements for employers (e.g. parking lots, extra lanes on roadways). This project will consider conventional and next generation approaches to workforce travel, possibly including designation of HOV lanes where volumes warrant, active transportation options, expanded commuter lots with drop-off zones, added technology and personal services (e.g. broadband hot spots, coffee service, convenience store, improved waiting areas), and group travel services (buses, vans). The same infrastructure could be used by citizens with mobility challenges to get back and forth to appointments. This project would be undertaken in conjunction with the Regional Highway Integration Project and the Intelligent Transportation System Project, both of which are presented separately.

Fit with Province's Aspirations: Addresses expressed goal of "moving people around safely and efficiently". Supports responsiveness to climate change (reduced GHG emissions from vehicles) and other unforeseen circumstances (extreme weather). Reflects provincial acknowledgement of economic growth being driven by regional economies.

Fit with Regional Aspirations and Criteria: Supports implementation of Eastern Ontario Economic Development Strategy (2014). Requires extensive collaborations (among municipalities, with MTO, with passenger transportation services), includes multiple opportunities for public-private partnerships, provides significant support to local and regional economic development. Provides opportunity for improved access to employment (and potentially improved incomes). Demonstrates region's ability to deliver one of three most important considerations for Foreign Direct Investment (workforce).Some implementation capacity exists at local and regional levels as well as in private sector firms in and outside the region. Project requires ability to negotiate with internal and external stakeholders, including the private sector, to create passenger transportation nodal facilities.

Role Technology Plays: Improved regional Broadband and mobile BB/cellular service coverage could be used to support commuter travel scheduling, and travel/transit service bookings.

Business Case/ROI Implications: This project supports local and regional economic development directly by improving the region's workforce' access to employment and (for employers) access to a larger pool of potential employees. Project could stimulate innovative solutions to the need for inter-municipal transit services, including possible public-private partnerships, and generate passenger-focused travel employment. Group travel services could also reduce traffic congestion and GHG emissions from vehicular transportation. The EOWC (and EOMC) can access internal expertise to manage this project.

Name: Region-wide Next Generation ICT Project

Description: Development and implementation of a multi-year program of ensuring comprehensive coverage of Eastern Ontario with mobile broadband/cellular access, filling in the (few) remaining gaps in fixed high-speed internet, and scaling up the existing network for citizens' needs in 2024. The objective of the project is to ensure that the technical capacity is in place to support Information and Communications Technology (ICT) applications across multiple sectors. Led by the Eastern Ontario Regional Network (EORN), this project will ensure build on the recently completed high-speed internet network and a detailed gap analysis for mobile broadband/cellular service, to support EORN's Digital Strategy. The Strategy is designed to ensure that ICT infrastructure is in place to support applications in sectors of strategic importance to the region: emergency services and home-based health services, municipal asset monitoring and deployment systems, tourism promotion and guidance systems, ICT safety and security applications, possible deployment of drones, VPN access for mobile workers, electronic records management, and citizen engagement. This project would be undertaken in conjunction with the Intelligent Transportation System Project.

Fit with Province's Aspirations: Addresses expressed goal of getting people (and goods) around "safely and efficiently". Consistent with principles of Openness to Bold Solutions, and Adaptive and Responsive. Consistent with Next Generation Signature Investments.

Fit with Regional Aspirations and Criteria: Supports implementation of EORN Digital Strategy (2014). Requires extensive inter-municipal collaborations, includes opportunity for public-private partnerships, supports significant support to local and regional economic development. Helps to make communities investment ready and attractive for business investment including Foreign Direct Investment. Formalizes the region's commitment to remaining at the leading edge of rural broadband infrastructure and related participation in the digital society. Will draw upon EORN's mobile broadband/cell service gap analysis. Strong implementation capacity exists at local and especially regional levels (via EORN). Anticipated collaboration with technology/service providers and sectoral organizations to add required domain expertise.

Role Technology Plays: This project is technology-centred beginning with broadband/cellular service provision to support a wide range of technologies from online applications to technologies embedded in a wide range of products.

Business Case/ROI Implications: Through EORN**,** EOWC has extensive experience with ICT projects and the importance of encouraging utilization, thus driving ROI. Multiple sectors can leverage ICT for improved productivity, service levels, and operational efficiencies. The project would help to brand Eastern Ontario as a "smart", connected region. EORN would almost certainly lead this project.

Name: Intelligent Transportation System Project

Description: Development and implementation of a multi-year program of embedding Information and Communications Technology (ICT) in the transportation system of Eastern Ontario, enabling interactive exchange of transportation-related information between these assets (roads & bridges, signage, weather and road condition monitoring stations, maintenance and winter control vehicles etc.) and the travelling public and those responsible for ensuring safe, efficient transportation across the region. For a region-wide grid of arterial roads, this project would introduce a) pan-regional mobile broadband and/or cell service, b) road condition webcams and weather stations, c) signage and other methods of alerting travelers to the availability of information via (mobile) wireless communications (e.g. tourism information, roadside services), and d) eventual use of transportation assets for driverless vehicles or for energy generation. Emergency Services personnel would use ICT to deliver services to clients' homes or communicate with specialized personnel via intensive data exchange. This project would be undertaken in conjunction with the Regional Highway Integration Project and the Commutershed Infrastructure Investment Project, both of which are presented separately.

Fit with Province's Aspirations: Addresses expressed goal of getting people (and goods) around "safely and efficiently". Consistent with principles of Openness to Bold Solutions, and Adaptive and Responsive. Consistent with Additional Infrastructure Investments to Support Transportation, especially Next Generation Signature Investments.

Fit with Regional Aspirations and Criteria: Supports implementation of Eastern Ontario Economic Development Strategy (2014), and EORN Digital Strategy (2014). Requires extensive collaborations (among rural and urban municipalities, with MTO), includes opportunity for public-private partnerships, supports significant support to local and regional economic development. Demonstrates region's ability to deliver two of three most important considerations for Foreign Direct Investment (transportation, technology). Encourages municipalities to make strategic choices about transportation assets, high-traffic corridors, and provision of vital services in mobile mode. Helps to mitigate unintended consequences of EDR traffic. Will draw upon EORN's mobile broadband/cell service gap analysis. Implementation capacity exists at local and especially regional levels (via EORN). Anticipated collaboration with MTO and technology/service providers will enhance access to required expertise.

Role Technology Plays: ICT will add value to regional transportation system, increasing efficiency of travel/logistics, improving travellers' experience in the region, and prepare the region for future developments in transportation. ICT will help transportation system managers monitor and respond to changing conditions, deploying available resources where they are needed most. Responsiveness of Emergency Services personnel will also be enhanced.

Business Case/ROI Implications: Through EORN**,** EOWC has extensive experience with ICT projects as well as with conventional transportation systems (EOWC and EOMC). Strategic use of technology can help to overcome low population density and improve deployment of public services. The project would help to brand Eastern Ontario as a "smart", connected region.

Appendix B: Summary of Recommendations Related to Infrastructure

(Drawn from Needs Analyses, Financial Sustainability White Papers and other regional reports)

Eastern Ontario Transportation Needs Analysis (2014)[18]:

This analysis was undertaken by Eastern Ontario CFDCs and a multi-stakeholder Steering Committee[19] to:

- To provide estimates on the return on investment for prioritized transportation infrastructure improvements
- To provide the foundation for an integrated regional approach to transportation planning by connecting the mandates, ideas, and plans for transportation improvements as envisioned by local governments, private sector businesses, the provincial and federal governments, and international agencies

The transportation network across Eastern Ontario includes the following assets:

- *Provincial and Municipal Highway Systems*: The Region is traversed by several freeways, including Highways 401, 416, 417, and 115, as well as a number of two lane, undivided provincial highways including Highways 7 and 17 which are part of the Trans-Canada Highway System.
- *Railway Systems*: The Study Area includes rail infrastructure and services operated by Canadian National Railway (CNR), Canadian Pacific Railway (CPR), VIA Rail, and smaller (but notable) regional and short line railways.
- *Marine Transportation and Deep Water Port/Harbour Systems*: Situated along the Great Lakes - St. Lawrence Seaway, Eastern Ontario is home to five marine ports/harbours with capabilities primarily suited to bulk commodities: Cornwall Harbour, Iroquois Dock Facility, Port of Prescott (now known as Port of Johnstown), Port of Bath/Lafarge, and Port of Picton. Several decommissioned or inactive industrial ports also exist in the region.
- *Airport Systems*: The project area is home to two airports with scheduled air activity (Ottawa International Airport and Kingston Norman Rogers Airport), as well as smaller airports (e.g. Brockville, Carp, Haliburton/Stanhope, Pembroke, Peterborough, Arnprior, Smiths Falls, Kawartha Lakes) that anchor recreational traffic, corporate traffic, medevac flights, charter flights, flight training, and small cargo shipments.
- *International Border Crossings*: Eastern Ontario is home to four international border crossings, including three bridges (Thousand Islands Bridge, Cornwall, and Johnstown) along the Highway 401 and 416 corridors, and one ferry crossing from Wolfe Island near Kingston.

[18] http://www.eotransportation.com/FINAL%20-%20Full%20Report%20(English)%20with%20title%20page%20and%20letter%20-%20Eastern%20Ontario%20Transportation%20Needs%20Analysis.pdf

[19] The Steering Committee was composed of representatives of the Eastern Ontario Community Futures Development Corporations, Eastern Ontario Mayors' Committee, Eastern Ontario Wardens' Caucus and the Ontario East Economic Development Commission as well as Queen's University School of Business. This analysis specifically included the Cities of Kingston and Ottawa.

Through these assets, the Region has access to intermodal infrastructure in Brampton, Montreal, Toronto, and Vaughan, international port/marine infrastructure in Montreal, and international airport infrastructure in Toronto, Montreal, Ottawa, and Syracuse (New York), which broaden the import and export reach of businesses in the Region.

The transportation needs of Eastern Ontario were based on historic and projected levels of demand and performance on a number of key indicators, including employment, GDP, business, and international/interprovincial trade:

- The projected 13% growth of population across the Study Area over the next 20 years suggests a need to ensure continued effort to efficiently move goods into and out of the Region.
- Employment growth across the Study Area has largely mirrored provincial trends, with cycles of growth and decline slightly more pronounced across Eastern Ontario than at the provincial level over the last 20 years. Knowledge-based and service sector employment is expected to drive moderate employment growth across the province over the next several years, but the comparative performance of Eastern Ontario in sectors such as construction, transportation and warehousing, trade, and agriculture suggests a notable portion of employment growth in the Study Area was within sectors of the economy that rely on – and demand – efficient transportation systems.
- GDP growth is expected across the province to 2035 (at an average of 2.1% annually). GDP growth will be driven by continued consumer spending, strong capital investment from businesses, domestic demand, and rebounding levels of trade and export. The general growth of the economy will have positive implications on wholesale trade and retail trade, which will drive goods movement, but also sectors that generate transportation demand through production of goods (e.g. manufacturing).
- Business growth in select goods-producing sectors of the economy in Eastern Ontario has driven advancement in service-producing sectors over the last several years, with agriculture, utilities, and construction showing a more positive trend since 2008. The continued growth of these industries – and related emerging opportunities such as renewable energy – has implications on supporting new and existing areas of opportunity in those sectors, as well as connections with new markets.
- Though international and interprovincial trade levels continue to fluctuate for Ontario (and Eastern Ontario), the transportation networks across Eastern Ontario – particularly the road network – plays a key role in ensuring access to Ontario's highest volume international and interprovincial trade markets (U.S. and Quebec respectively) which are primarily reached by trucking.

Deficiencies and challenges for each of the Region's major transportation assets were as follows:

Highway/roadways (situated along NAFTA trade route from Quebec to U.S Midwest):

- Delays/congestion associated with traffic incidents and scheduled maintenance along highways and secondary roads (e.g. emergency detour routes)
- Need to coordinate capital planning (i.e. construction, maintenance, rehabilitation) across different levels of government, among different jurisdictions
- Growing infrastructure deficiency (e.g. roads and bridges) with limited sustainable funding resources
- Lack of financial means to cover maintenance and improvements of major regional roads.
- **Suggested Improvements: Upgrade and maintain major regional road corridors across region; selectively upgrade interchanges, long combination vehicle facilities, Emergency Detour Routes, and add lanes as well as streamlining over-dimension load permitting**

Rail (both CN and CP serve the region, offering access to the Port of Montreal and intermodal in GTHA:

- Decline of U.S. railroads poses challenges for Canadian carriers
- At-grade crossings limit potential for longer, modern container trains
- Quality of track infrastructure limits short-line capacity and speed
- Lack of locations to transfer loads from rail to truck and ship (intermodal facilities)
- Major companies reluctant to invest in service expansion outside of major trunk lines.
- **Suggested Improvements: constructing, reviving, upgrading and maintaining existing rail corridor through northern areas of region; upgrade highway/rail-at-grade crossings along major rail corridors**

Marine (used to ship ~ 10% of Ontario's freight tonnage through the Great Lakes-St. Lawrence Seaway:

- Much of existing marine infrastructure focused on moving bulk, lower time-sensitive materials, with no existing marine infrastructure for moving containers
- Heavy competition from truck transportation in the Region, which is used to move majority of goods into and out of the Region, through connections with adjacent ports, intermodal
- Lack of intercontinental and all-season deep water port in the region
- **Suggested Improvements: constructing new or revitalized, and possibly all-season deep water port facilities and infrastructure within the region, including intermodal capabilities, distribution terminals, shortsea shipping operations and ability to handle bulk and container cargo at existing sites.**

Air**:** (room to accommodate traffic growth within existing airport lands if infrastructure improvements are made; opportunities to support business travel and high-value, time-sensitive goods movement):

- Operations and capital costs associated with small airport facilities and comparatively limited air-related and revenues and government investment
- Need for infrastructure investment in a number of smaller airports
- Length of runways limit the size of aircraft that can land.
- **Suggested Improvements: Upgrading and expanding facilities at regional airports including runway extensions, terminal expansions and upgrades, Customs services and development of other air-related services.**

Intermodal (opportunities for air, rail, road and marine integration; medium-sized rail facilities or multiple smaller intermodal facilities at key road-rail junctions):

- No existing intermodal infrastructure in the Region
- **Suggested Improvements: Optimize multimodal transportation infrastructure in Eastern Ontario through development of one or more new intermodal facilities**

Border Crossings (direct route to eastern U.S. without crossing the GTHA; existing crossings handle notable amounts of cross-border traffic):

- Border crossing delays created through border crossing regulations, though not specific to Eastern Ontario
- Capital improvements underway to increase capacity at Thousand Islands and Cornwall crossings
- **Suggested Improvements: Further infrastructure investments are suggested.**

Return on Investment was assessed in two ways: ROI Ratio Method and Aggregate Ranking Method (scoring based on evaluation criteria, which were ongoing economic impact, immediacy). The highest ranked infrastructure improvements were:

- Upgrading and maintain major regional road corridors including MTO downloaded roadways
- Constructing new, revitalized, possibly all-season deep water port facilities and infrastructure
- Optimizing multimodal transportation infrastructure.
- Upgrading and expanding facilities at regional airports (runway extensions, terminal expansions and upgrades, other air-related services)
- Provincial and other major highways interchange upgrades and widening.

All 12 major improvement areas had ROI Ratios in the 2.5 to 3.4 range. Initial capital investment requirements for each improvement area were calculated and presented in the report. The total capital requirements were roughly $14 billion.

Eastern Ontario Regional Economic Development Strategy (2014):

This strategy[20] was developed by the Eastern Ontario Wardens Caucus together with the Eastern Ontario Mayors' Committee, the Eastern Ontario CFDC Network and the Ontario East Economic Development Commission to:

- Identify opportunities to advance the economy of Eastern Ontario, and
- Improve the underlying conditions for economic development throughout the region.

Seven major themes emerged from an extensive consultation process:

- Providing the right infrastructure for business (physical and human; growth corridors & nodes)
- Creating a stable and predictable business environment
- Introducing a new regional approach to economic development (greater inter-municipal collaboration and advocacy, especially rural-urban)
- Delivering innovation services (esp. entrepreneurship training and supports, incubators)
- Redoubling our efforts on workforce development and attraction
- Re-inventing traditional sectors of the economy, and
- Accelerating the adoption of new technologies.

Three strategic priorities were identified with short (2-3 years) and long-term (3-5 years) timeframes and associated actions:

- ***Workforce Development and Deployment*** (short-term: to strengthen the access and quality of labour market intelligence to address the needs of business and individuals; long-term: create opportunities to bring together business and education to increase dialogue focused on strengthening alignment between business needs and education programming and curriculum)
- ***Technology Integration and Innovation*** (short-term: assemble competitive intelligence that will foster incubation, research and testing, peer-to-peer networking, and information-sharing among regional businesses; organizations and institutions; long-term: promote and expand the availability of traditional and non-traditional investment supports, and ensure accessibility for a wide range of local businesses and organizations
- ***Integrated and Intelligent Transportation Systems*** (short-term: build the regional transportation infrastructure that improves Eastern Ontario's access to major domestic and international markets; long-term: provide enhanced regional transportation services to area business and residents)

The strategy also describes a new Regional Economic Governance Model (not a new organization) that brings stakeholders together to implement key initiatives. The strategy also suggested how existing business infrastructure might be leveraged to the economic betterment of the region (shared service agreements; making better use of under-utilized assets).

[20] http://www.eowc.org/en/futuredirections/resources/EconomicDevelopmentStrategy2014.pdf

Digital Strategy: A Road Map to Digital Leadership

Following completion of a $170 million rural broadband network that is helping more than 99 percent of Eastern Ontario residents and businesses access high-speed internet, the Eastern Ontario Regional Network has developed a ten-year Digital Strategy[21] to ensure that the network keeps pace with the change and that residents, businesses and public services use the network to reach their full potential.

The vision underpinning the Digital Strategy is as follows: By 2024, Eastern Ontario will be recognized as one of the world's most digitally connected rural regions, where citizens businesses, and public services fully embrace and harness the potential of high-speed broadband. In this context, EORN Inc. will promote and develop access to high-speed broadband and other technologies, which will create wealth; expand employment and education; and enhance quality of life throughout the region.

The strategy's specific goals are to a) increase user intake, b) improve broadband access, and c) demonstrate technology leadership, in four focus areas:

- Regional Economic Development
- Municipal Services
- Broadband Education
- Infrastructure (Fixed and Mobile) to fully scale current infrastructure and expanded to meet citizens' needs in 2024. This includes building off the current network to increase mobile access in the future.

The strategy includes seeking additional funding (Digital Canada 150) to serve areas in Eastern Ontario without terrestrial broadband, and conducting a gap analysis for mobile broadband and cell coverage throughout the region (almost complete in September 2015). Based on the analysis, EORN Inc. will build the case for investment in mobile broadband expansion, if required. The strategy includes promoting improved broadband access in 62 business parks/areas wired through EORN, engaging municipal planning departments to support broadband infrastructure in new developments, and identifying opportunities to improve emergency response communications in conjunction with available spectrum options such as the 700 MHz band. EORN has already been actively involved in the regional rollout of the MTCU-supported Magnet online human resource portal that helps to match jobseekers with employers seeking to hire, and will ultimately provide near-real-time data on regional labour force issues.

The Eastern Ontario Regional Network is a corporation created by the Eastern Ontario Wardens Caucus to undertake broadband and ICT-related ventures. EORN has its own Board of Directors, drawn from the EOWC, participating members of the separated towns and cities, the technology community, and the aboriginal community. The network design and build phase involves major contracts with private service providers as well as more than 25 separate contracts with ISPs and other supply chain members.

[21] https://www.eorn.ca/en/resources/Digital_Strategy/EORN_Digital_Strategy_Executive_Summary_2015.pdf

Municipal Infrastructure White Paper:

Recommendations for EOWC and Constituent Municipalities:

E-1: It is proposed that the EOWC continue to actively support the development and implementation of a regional economic development strategy, with the long-term objective of stimulating growth as well as jobs across the region, which will in turn stimulate growth in the region's tax base.

E-2: It is proposed that the EOWC create a regional infrastructure task force to explore ways to reduce the need for future infrastructure investments, reduce maintenance costs for existing infrastructure, and manage required infrastructure as efficiently as possible.

E-3: As part of the regional infrastructure task force, It is proposed that the EOWC lead the creation of a transportation infrastructure renewal network comprised of municipalities in Rural Eastern Ontario, to explore (among other topics) possible cost savings through collaborative action (examples: reducing costs through larger tenders and equipment sharing) and greater use of techniques to extend the life of existing assets.

E-4: It is proposed that all municipalities in Rural Eastern Ontario be encouraged to ensure that their Asset Management Plans are complete by the end of 2013 as required.

Recommendations for the Province of Ontario:

U-1: It is proposed that the EOWC work in partnership with the Province of Ontario to design and to implement as soon as possible a permanent, predictable, non-competitive infrastructure fund designed specifically for small, rural and remote areas.

U-2: It is proposed that the Province of Ontario continue implementation of the social services upload to 2018, thereby providing additional fiscal capacity for municipalities to address infrastructure maintenance needs as well as assisting in the provision of other critical municipal services.

U-3: It is proposed that the Province of Ontario provide Eastern Ontario municipalities that have significant Crown lands or other lands with assessment constraints (e.g. managed forests, farmland, aggregate sites etc.) within their jurisdictions with compensation reflecting these property-based limitations. The compensation could be a Payment-in-Lieu or an annual share of revenues accruing to the Province from these lands (e.g. royalties from stumpage fees). This compensation would be in recognition of the service provided by municipalities in building and maintaining roads and bridges, and providing emergency services for these tax-exempt lands.

Municipal Affordability White Paper:

"Expenditures for four major services (Transportation Services, Protection Services, Environmental Services, and Health and Emergency Services) all rose by more than **80%** since 2000 – several more than doubled in that timeframe." Note that two of these areas (transportation services and environmental services) have significant capital infrastructure implications for local governments).

The White Paper predicted that by 2020, operating expenditures for transportation services in Rural Eastern Ontario would cost more than $2,100 per household – at least a third of all municipal operating expenditures. Transportation services operating expenditures could account for 40% of all municipal operating expenditures. Across the region as a whole, this represents a doubling of per household expenditure since 2011.

U-10: It is proposed that the Province of Ontario modify the terms of the Provincial Gas Tax funding program to broaden the definition of transit to include alternatives to municipally-owned transit, where the municipality has oversight for the alternative approach. Examples would be private or not-for-profit services that operate on a fixed schedule and which are supported by the municipality, or volunteer services that provide scheduled service for appointments or meetings at health or social service organizations. These volunteer services must also be supported by the municipality.

Ratepayer Affordability White Paper:

E-3: It is proposed that the EOWC continue to encourage EORN to investigate and provide leadership to deployment of new, internet-based technologies by small and medium-sized businesses including but not limited to agriculture, forestry, manufacturing and fabrication, construction, information communications technology (ICT), transportation & logistics, health care, education, and tourism. Increased utilization of the regional broadband network for business purposes is expected to expand markets, increase private sector economic activity, create jobs, and ultimately, increase non-residential assessment.

E-4: It is proposed that the EOWC actively support the development of an integrated regional transportation and (non-traditional) transit system in Rural Eastern Ontario to increase access to markets in and outside the region, as well as improving cost-effectiveness of workforce commutes in and out of the region. Enabling the workforce to get back and forth to work in a cost-effective way is expected to increase employment and related earnings.

Environmental Services White Paper:

"Across Rural Eastern Ontario, there has been more than **$2.06 billion** invested in Environmental Services assets to the end of 2012. More than **$736 million** was invested in the first eight years (2000 to 2008) following the Walkerton tragedy. The book value of these environmental assets is now $1.4 billion, suggesting that more than **$600 million** in value has been lost ($2.06 minus $1.44 billion).

This lost value can be thought of as the **minimum capital infrastructure deficit** in environmental services; however, there are also significant **unfunded liabilities and legacy costs** – likely to be a minimum of **$100 million** – that must also be considered. And these costs do not include costs for new or expanded landfills. As a result, the **combined capital infrastructure deficit** in Environmental Services is likely to be in excess of **$700 million**.

Taking anticipated annual capital maintenance expenditures plus capital expenditures to address the infrastructure deficit into account, Rural Eastern Ontario should be investing at least $131 million a year in Environmental Services assets. Currently, the region is investing roughly $85 million a year (on average), suggesting an **annual capital investment shortfall of at least $46 million**. Annual landfill monitoring requirements (post closure costs) will add at least another $1 million to this amount for the next 10 years, rising thereafter.

Rural municipalities hold **$127 million in environmental reserves**, $94 million of which is for wastewater, storm water and waterworks systems. Just $22.5 million is for solid waste disposal and only $7 million is for waste diversion.

Landfills dominate solid waste management responsibilities in many of Eastern Ontario's rural municipalities. Municipalities in Rural Eastern Ontario have **nearly 500 landfills** (90% of all landfills in the region); roughly 200 of the landfills – almost all of which are municipal – are open but more than 300 are closed. In addition to monitoring responsibilities in perpetuity, municipalities also face significant costs associated with closing landfills when their capacity is fully utilized, and in replacing this capacity.

For municipalities facing landfill closures in the next several decades, **total closure and post-closure costs** are likely to be in the **$95 to $135 million range**. After dedicated environmental reserves are taken into account, **net (unfunded) closure and post-closure costs** are likely to be in the **$100 million** range. These costs do not include costs to expand existing landfills (if that is an option), establish new landfills, address associated regulatory submission costs or enhanced regulations for closed (or open) landfills.

U-3: It is proposed that the Province partner with municipalities to undertake joint market development projects (province-municipalities) to determine how best to aggregate, find markets, build demand or the supply chain for different types of materials diverted from landfills in Rural Eastern Ontario. In this case, the emphasis is on finding business models, transportation solutions, and customers for diverted materials so as to reduce net costs of operating landfills, extend their useful life, and increase total diversion across the region. This work is expected to complement and support initiatives which examine the economic viability of Material Recovery Facilities (MRFs) across the province.

U-4: It is proposed that the EOWC work with the Association of Municipalities of Ontario (AMO) and the Province of Ontario --- particularly the Ministry of the Environment --- to explore immediate or near-term opportunities for:
a) Alternative, safe ways to utilize legacy assets such as closed landfills or lagoons to generate revenues which could be applied to ongoing compliance costs or cover other costs of municipal services. (Example: landfill gas capture/energy generation, energy from waste, material processing/reprocessing)
b) Expedited or fast-track methods through which approvals to expansions of existing landfills can be obtained. (Examples could be significant increases in threshold conditions that trigger Environmental Assessments, practical application of reasonable use guideline re: groundwater).

U-8: It is proposed that the Province adopt a policy of assessing the financial implications of, and providing additional funding, to support municipalities when new environmental regulations are being introduced, or when existing assets are being reviewed for compliance with new/more recent environmental legislation or regulations.

It is further proposed that any new or modified environmental legislation or regulations be accompanied by a long-term provincial commitment to fund 100% of any and all new capital or operating costs associated with implementation or management of affected environment assets or services delivered by municipal government.

It is further proposed that, for legacy assets (those whose siting or operating conditions were originally approved by the Ministry of the Environment or introduced before Ministry approval processes were introduced), any orders for physical improvements or increased monitoring be funded 50:50 by the Ministry (Province of Ontario) and the municipality. This co-funding model would apply in the absence of any new (post-2013) legislative or regulatory changes, whether or not there is an imminent danger to public health or the natural environment."

Social Housing White Paper:

"Municipal Governments Responsible for $467 Million in Social Housing Assets (At Cost)
Local governments in rural and urban areas of Eastern Ontario (not including the City of Ottawa) are responsible for $467 million in social housing assets (at 2012 cost). These assets now have a book value of $257 million, suggesting that these assets have lost 45% of their value, as amortization expenses have outstripped municipalities' ability to reinvest to maintain them. If these assets are considered on a replacement cost basis, they would be valued at $1.17 billion; this increases the capital investment requirements in the region dramatically.

Roughly 14,000 Social Housing Units across Eastern Ontario: There are currently more than 9,000 municipal social housing units across Eastern Ontario, with another 3,000 to 5,000 being operated by other non-profit organizations or the private sector (Rent-Geared-to-Income units). In total, it is likely there are more than 14,000 units across the region.

$526 Million Capital Infrastructure Deficit The review suggests that communities in Eastern Ontario – rural and urban areas alike – face major challenges in responding to the housing needs of their fellow citizens. As with many other areas of infrastructure, municipalities, their local housing corporations and local not for profit housing providers are struggling to maintain social housing stock. Based on

replacement cost assumptions, the capital infrastructure deficit for social housing is estimated to exceed $526 million (2012). If this deficit were addressed over a 10-year period, $52.7 million a year in capital investment would be required.

The financial implications of **regular/ongoing maintenance** of these assets are that Eastern Ontario municipalities (not including Ottawa) should be investing **$39 million a year** for capital maintenance of social housing assets. Rural municipalities should be investing $19.6 million a year while the separated cities and towns should be investing $19.4 million a year. These estimates do not include any provision for growth (more people needing affordable housing nor any major renovations to or replacement of existing units). Nor does it address the capital accumulated infrastructure deficit.

Municipalities Face $71 Million Shortfall in Annual Capital Expenditures: Even before declining federal support for capital expenditures is taken into account, municipalities in Eastern Ontario face a $71 million net shortfall in capital expenditures. This estimate takes into account the need for municipalities to address the social housing capital infrastructure deficit ($52.6 million/year) and to make annual capital investments in the existing asset base to keep these assets in good condition ($39 million). It also considers that municipalities in Eastern Ontario are already investing roughly $20 million a year in social housing.

End of Agreement Viability Questionable in Eastern Ontario: The federal government's existing commitment to capital support for social housing is declining (as the debentures for each project are discharged); this phenomenon has come to known as End of Agreement (EOA). Research conducted by the (Ontario) Housing Services Corporation over the last several years suggests that only one in eight municipal social housing projects in Eastern Ontario will be financially viable on both an operating and capital basis after their federal financing agreement runs out (these agreements come to an end on a staggered basis in the 2000-2039 period). At least 80% of projects are expected to have insufficient reserves set aside or insufficient operating revenues to cover costs in a post-EOA environment. A third of municipal projects are projected to be non-viable on both capital and operating bases.

Existing Housing Units are At Risk: Information collected across Eastern Ontario to date suggests that financial viability of housing stock is at least as tenuous as across the province as a whole. Often, the level of reserves available to address ongoing capital maintenance is less, the projects are reaching EOA sooner, and residents' financial circumstances are more challenging than for the province as a whole. As a result, new financial strategies – and enabling public policy – will be needed to help municipal governments and their community partners address a post-EOA world. Yet, new strategies and policies will not be enough; there will also be an ongoing need for federal and provincial participation in the social housing sector.

Appendix C: One Page Regional Project "Template"

Project Name:

Project Description:

Fit with Provincial Aspirations:

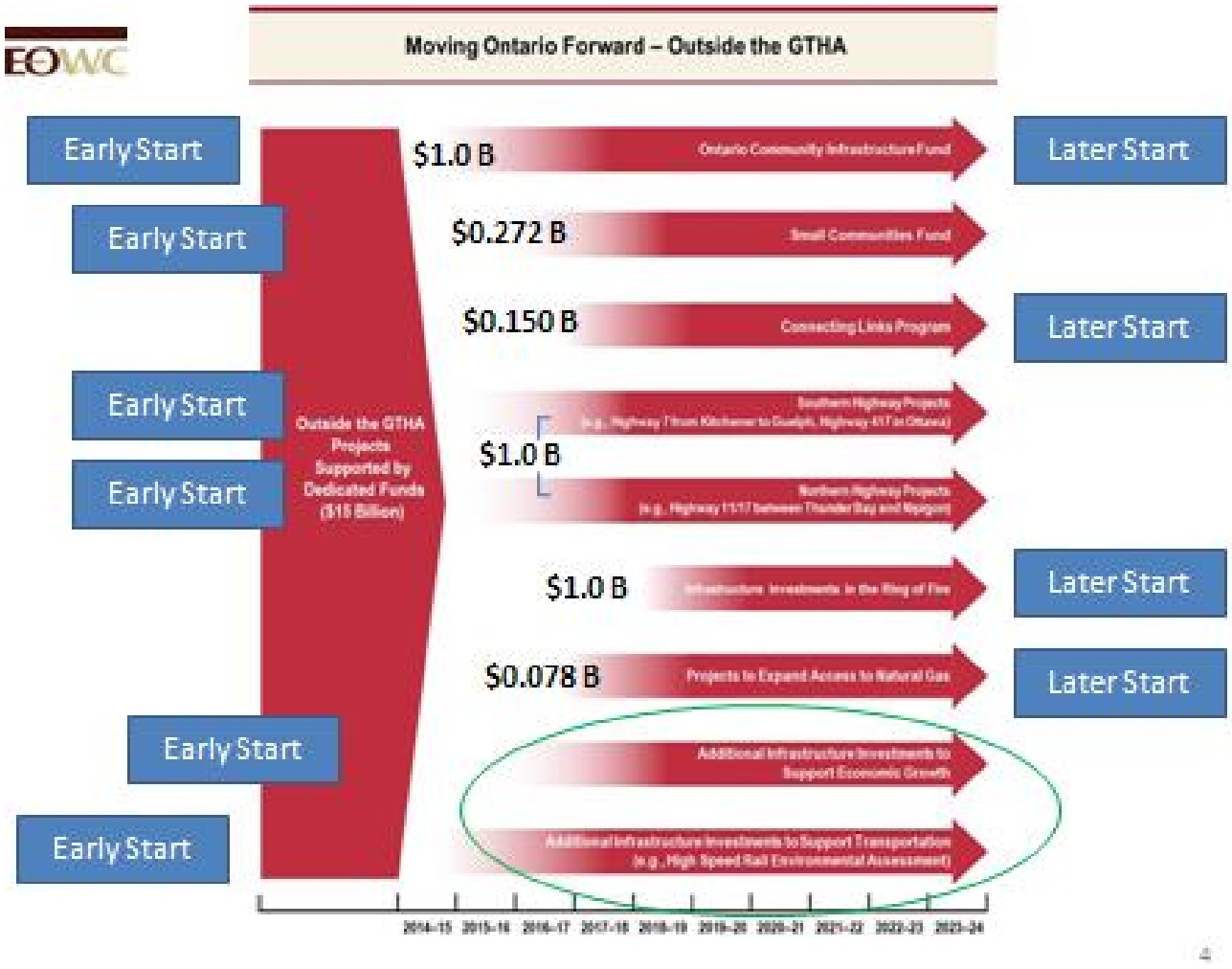
Fit with Regional Aspirations and Criteria:

Role Technology Plays:

ROI Implications:

How Should Project Move Forward/Who Could Lead:

Appendix D: Timeline for Moving Ontario Forward – Outside the GTA



Appendix E: A Sampling of Relevant Literature on Infrastructure ROI

- *Infrastructure and Local Economic Development*, Janet M. Rives and Michael T. Heaney, article in Regional Science Perspectives, 1995
- *Infrastructure Investment, Endogenous Growth and Economic Convergence*, Kenneth Button, Institute of Public Policy, George Mason University, 1998
- *Impact of Transport Infrastructure Development on Regional Development*, Organization for Economic Cooperation and Development (OECD), 2002
- *Linkages Between Infrastructure and Economic Growth* – Dr. Carolyn O'Fallon of Pinnacle Research, prepared for Ministry of Economic Development, New Zealand,2003
- *Infrastructure and State Economic Development: A Survey of the Issues* – Richard H. Mattoon, Federal Reserve Bank of Chicago, rick.mattoon@chi.frb.org prepared for Emerging Challenges: New Insights on the Economy and Society, 2004
- *Methodology for Measuring Output, Value Added, and Employment Impacts of State Highways and Bridge Construction Projects* – Michael Babcock and John Leatherman, article in Journal of the Transportation Research Program, 2011
- *More Extraordinary Returns. Public Investments Outside of "Core" infrastructure* – Josh Bivens, Economic Policy Institute, 2012
- *A New Economic Analysis of Infrastructure Investment*. A Report Prepared by the Department of the Treasury with the Council of Economic Advisors, 2012 (a support document for President Obama's 2013 plan to revitalize U.S. infrastructure.)
- *The Foundations of a Competitive Canada: The Need for Strategic Infrastructure Investment,* The Canadian Chamber of Commerce, undated
- *Infrastructure 2013, Global Priorities, Global Insights*, Urban Land Institute, Ernst & Young
- *Infrastructure for Sustainable Development*, European Commission, Development & Cooperation – EuropeAid 2013
- *Canada's Infrastructure Gap. Where It Came From and Why It Will Cost So Much to Close,* Hugh Mackenzie, Alternative Federal Budget Technical Paper, 2013
- *At The Intersection. The Case for Sustained and Strategic Public Infrastructure Investment,* Casey Vander Ploeg and Michael Holden. A Canada West Foundation Public Policy Brief, 2013
- *The Economic Impact of Ontario's Infrastructure Investment Program,* Antunes, Beckman and Johnson, 2013; same authors had earlier published The Economic Impact of Public Infrastructure in Ontario.