



# Implementing the Growth Plan: Seeking Provincial and Municipal Alignment to Support a Prosperous Ontario

Prepared for the RPWCO, RPCO, and ORSTT

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June of 2016 will mark the tenth anniversary of the Provincial Growth Plan for the Greater Golden Horseshoe (P2G). It has also been a remarkable decade of global change.

In 2008, major economic shifts in the United States and declines in Europe profoundly affected the Canadian and Ontario economies. Unemployment rates rose and then tapered, manufacturing was reinvented, and the “knowledge economy” began to gain a greater foothold in Ontario communities. The result has been a greater understanding that the Province and its communities must be competitive players in the global economy, where success requires a high quality of life and nimble responses to investment opportunities. Implementation of P2G is a critical public policy tool in supporting that greater prosperity.

Since 2006, Municipalities in the Greater Golden Horseshoe (GGH) have worked diligently to implement the Growth Plan, and over the last decade, new and substantial investment in public transit has occurred. Metrolinx was created to drive investment in public transit. Communities like Ottawa, York and Waterloo have developed their own intra-regional rapid transit systems. Greater public reliance on transit has become a foundational element of supporting a variety of other “shifts” throughout the GGH, including higher densities, more compact growth, and a great focus on design excellence. However, there have also been challenges, and in some cases, impediments in realizing the objectives of the Growth Plan.

In support of the Province’s planned comprehensive review of the Growth Plan in 2016, the Regional Planning Commissioners of Ontario (RPCO), the Regional Public Works Commissioner of Ontario (RPWCO) and the

Ontario Regional and Single Tier Treasurers (ORSTT) came together to lend their expertise. These organizations have also been reporting to the Regional and Single Tier Chief Administrative Officers of Ontario, who share the view that this is important work for all.

It should also be noted that the Provincial Government has graciously funded a part of this work through the Ontario Growth Plan Implementation Fund. The Steering Committee, on behalf of the three participating organisations, would like to thank the Ontario Growth Secretariat for this funding support.

The barriers and opportunities identified in this report have been reached through a collaborative and informed process, bringing together subject matter experts from municipalities, the Province, and academia/research together. All participants are to be thanked, and our commitment to making P2G work better in partnership with the Province is reflected throughout this report. Our approach has been one of proactively identifying means of mutual gain in critical matters like better forecasting approaches, a more efficient development review and appeal process, and enhancements to financing tools that are much better aligned with our shared goals. While some of the recommendations are specific to the Growth Plan, we have also highlighted recommendations that are relevant to all municipalities in Ontario.

We look forward to advancing our shared agenda. The Growth Plan is a key influencer of community and Provincial prosperity, and together, with consideration given to incorporating the recommendations in this report, we know we will make measurable progress.

## The Joint Intensification Study Steering Committee

Rob Horne  
Commissioner of Planning, Development and Legislative  
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Chair, Regional Planning Commissioners of Ontario

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## Acknowledgements

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The author wishes to thank all those Commissioners and senior municipal staff who contributed their time and expertise to this study through interviews, data calls, participation at the Commissioners' workshop and in response to informal queries. This study is a product of your collective efforts.

The author also wishes to thank the members of the Expert Panel, Enid Slack, Pamela Blais and Chris Kennedy, for their expert advice, commentary and general support throughout this project.

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# EXECUTIVE SUMMARY

This report identifies key challenges and opportunities for the Province of Ontario and the municipalities in the Greater Golden Horseshoe to implement the Greater Golden Horseshoe Growth Plan (Growth Plan) in a way that is financially sustainable, uses infrastructure efficiently, creates livable communities and supports economic prosperity across the region. Findings reflect consensus positions developed amongst the Regional Planning Commissioners of Ontario, the Regional Public Works Commissioners of Ontario, and the Ontario Regional and Single Tier Treasurers. The analysis in the report draws upon the experience of eight of the largest municipalities included in the Growth Plan, the six inner ring regional and single tier municipalities (York Region, Durham Region, City of Toronto, Peel Region, Halton Region, and the City of Hamilton) and two outer ring municipalities, the Regions of Waterloo and Niagara.

While this report is focused on the experience of municipalities in implementing the Growth Plan in the Greater Golden Horseshoe (GGH), a number of the issues identified and recommendations in relation to financing growth, implementing efficient infrastructure and planning for employment are equally relevant to municipalities outside of the GGH.

Looking at challenges and opportunities in implementing the Growth Plan from the perspective of three disciplines—planning, public works and finance, allowed Commissioners to identify issues and their interlinkages. This provides a more complete picture of the landscape that municipalities are navigating as they manage growth in the Greater Golden Horseshoe.

Analysis and conclusions are presented in five sections: i) the policy and economic context within which the Growth Plan is being implemented on the ground; ii) conforming with Growth Plan projections and targets; iii) financing growth; iv) encouraging the efficient planning and deployment of growth-related infrastructure; and v) protecting employment lands.

## The Policy and Economic Context

### Misalignment of federal, provincial and municipal infrastructure investments

The 2008 recession and its aftermath accelerated an economic transformation that was already underway in Southern Ontario, resulting in a dramatic loss of manufacturing jobs and their replacement with jobs in the services sector, health and education institutions and logistics firms. These changes have had a significant impact on meeting Growth Plan projections and targets and financing growth, due to changes in employment, spatial demands for employment, and a decline in revenues from non-residential development charges (DCs) and property assessment in some areas of the GGH. While dips in business cycles are to be expected, the concern is that this structural change to the southern Ontario economy will not result in a cyclical rebounding of the manufacturing sector, despite a drop in oil prices and a decline in the value of Canadian currency.

This economic uncertainty reinforces the need for a coordinated federal- provincial and municipal economic strategy for the region, coupled with a commitment to strategic infrastructure investments to support this shared economic vision.

Instead, there is concern over what is seen as a misalignment in the timing and quantum of provincial and federal investments with municipal growth-related planning and infrastructure implementation. For example, at the provincial level, the Growth Plan requires that municipalities make detailed plans using a longer time horizon than provincial infrastructure plans or plans managed by Metrolinx.

At the federal level, Canadian cities are at a disadvantage compared to their OECD competitors, because Canada remains one of the only OECD countries without a long-term, predictable federal transit-investment strategy. This lack of a federal transit investment strategy puts municipalities at great risk and financial exposure when introducing or expanding transit. The announcement in the 2015 Federal Budget of a permanent transit fund beginning in 2017, albeit at a relatively low investment level, is a step in the right direction.

## Growth Plan Projections and Targets

### Lack of Confidence in Growth Plan projections

By 2041, it is projected that the Greater Golden Horseshoe (GGH) area in Ontario will be home to 13.5 million people and 6.3 million jobs. The pattern of development to accommodate this growth is being influenced by provincial policy contained in the Greater Golden Horseshoe Growth Plan, 2006, that encourages intensified, mixed use development.

The achievement of the Growth Plan is heavily dependent on the ability of municipalities to realize provincially assigned population forecasts and intensification and density targets. However, there is great concern that the Growth Plan jobs and employment projections and targets are too high or anticipate growth too soon in most areas of the GGH, outside of the City of Toronto. This is not to suggest that any one set of projections would be perfectly accurate. Economic conditions that shape growth temporally and spatially are inherently uncertain over a 30-year period. However, as municipalities are mandated to integrate Growth Plan projections and targets into their Official Plans (O.P.s), misalignment in the location and timing of population and jobs projections risks creating a systemic imbalance in municipal balance sheets, creating a risk of overbuilding or underbuilding critical, cost-effective, growth-related infrastructure. Greater flexibility in meeting projections and targets could save municipalities tens, even hundreds of millions of dollars.

There is slow progress in attracting jobs to greenfield development, particularly at higher densities. While there is value in a combined density target, a change in the way employment is defined under the target may be a more practical method of encouraging employment density in greenfield development.

Some progress is being made in inner ring and select outer ring municipalities to meet the Growth Plan's 40% residential intensification target. While this is good news, once achieved, the target still permits 60% greenfield development to continue. As municipalities in the inner ring with more mature economic activity reach the intensification target, there should be consideration of a review to raise the target, in consultation with the municipality.

Bringing O.P.s into conformity with the Growth Plan has proven to be a difficult and drawn out process. Every one of the eight municipalities surveyed for this study had their O.P. amendments appealed. Five of them continue to work through their appeals, five years after the 2009 adoption date.

Likewise, differences in the assumptions used by municipalities to determine their land budgets has made it difficult to defend the municipal comprehensive review at the Ontario Municipal Board, with appellants challenging the methodology for determining them. A uniform methodology, from the Province, for determining land budgets would help defend municipal land budgets at the time of municipal comprehensive reviews and avoid costly delays.

## Financing Growth

### Insufficient development charge revenue to pay for growth

Ultimately the successful implementation of the Growth Plan must be supported by a sustainable financial model whereby growth pays for growth. The inadequacy of development charge revenues, the risk inherent in paying in advance for large scale infrastructure, and the lag in payback for these major investments, are all contributing to the financial burden that municipalities are bearing in paying for growth. Simply put, growth is not paying for growth, leaving the remainder to be paid for by property tax and user rate payers.

As development charges are proving to be insufficient to pay for growth in intensified urban developments, many municipalities are using an increasing share of their debt capacity to finance growth-related infrastructure. Some municipalities are deferring growth related capital projects, and some are turning to front-ending agreements to reduce the risk associated with carrying considerable debt to fill the gap.

New transit systems to support intensification are proving to be the greatest financial burden and the most difficult to finance under the current *Development Charges Act* limitations.

Bringing the quantum and timing of growth revenues in line with growth costs through amendments to the *Development Charges Act* is essential to support the implementation of the Growth Plan, and to meet growth demands more generally. Proposed amendments to the *Development Charges Act* under Bill 73 go some way in addressing these concerns. Timely commitments from the federal and provincial governments with respect to transit funding and other strategic investments are also needed.

## Infrastructure Efficiency

### Better Integration of Land use and Infrastructure decisions

Infrastructure is the primary driver of growth costs. If it is deployed efficiently and appropriately, it can not only save municipalities money, it can be a public revenue generator by driving growth and other forms of value to the community. If it is deployed inefficiently, it can add to costs and become a drag on both growth and public revenues.

Building in an assessment of costs, benefits, and risk exposure to infrastructure planning and decision making can make the difference between the former vs the latter outcome.

Some municipalities and other public agencies are undertaking more sophisticated analysis to determine how to deploy infrastructure more efficiently to reduce costs, minimize risk and promote value, in balance with other operational, environmental and societal objectives. Better integration of land use and infrastructure decisions can also support planning for infrastructure efficiency.

External influences, like lengthy and complex provincial approvals and OMB decisions that go against Official Plans also contribute to infrastructure costs.

## Employment Lands Protection

### Stronger Provincial support for employment lands protection

Some GGH municipalities are under intense pressure to convert employment lands, leaving some areas with insufficient employment lands for the next twenty year period, particularly larger parcels of land.

Notwithstanding a strengthened provincial policy framework for protecting employment lands, municipalities have found that support for this strengthened provincial policy does not always extend across some provincial ministries and agencies, in the implementation of provincial plans, and in OMB hearings.

Greater support is needed from the Province to support the protection of employment lands, especially strategic employment lands that are essential to move people and goods, along 400 series highways, at border crossings, and around active ports and harbours.

In this shifting employment landscape, some developers are challenging municipal assumptions on which their employment land DC calculations are based, calling into question whether the currently accepted methodology to calculate employment DCs needs to be reconsidered.

## Conclusions and Recommendations

Municipalities are still on a learning curve in planning for and servicing more intensified and dense growth in the GGH. They are adapting and improving their strategies along the way. This study explores the added challenges and opportunities posed by federal and provincial governments in supporting growth in the GGH. The compounding effect of the issues raised in this study stands in the way of the successful implementation of the Growth Plan, and is contributing to the strain of financing this growth.

To address these issues, the following recommendations were agreed to by the RPWCO, RPCO, and ORSTT Commissioners at a March 2 workshop. As noted above, while this report and its findings are focused on the Greater Golden Horseshoe and the Growth Plan, much of the analysis and many of the conclusions are relevant to municipalities outside of the GGH. **In order to highlight these, recommendations with broader geographic relevance have been identified with an asterisk (\*).**

## Policy and Economic Context

### Recommendation #1

The Province's long term infrastructure plan should be required to conform with the Growth Plan over a planning horizon that is compatible with municipal planning horizons, that is, 15 + years, through an amendment to the proposed *Infrastructure for Jobs and Prosperity Act* (Bill 6) currently before the Legislature. The Infrastructure Plan should provide enough detail in terms of timing and specific projects so as to enable coordination with complementary municipal infrastructure investments.

### \*Recommendation #2

The Federal Government should make a long term commitment (15 + years) to stable funding for transit, amounting to a minimum of 30% of capital costs.

## Conforming with Growth Projections and Targets

### Recommendation #3

In light of Ministry of Finance projections, Growth Plan population and employment projections should be reviewed and revised. Consideration should be given to building flexibility into the projections, providing a numeric and timing range within which the projected growth is expected to occur.

### Recommendation #4

The Province should continue to prescribe the 40% minimum intensification target for inner ring municipalities but, once the target is achieved, based on the progress towards intensification in more 'mature' regions and cities over time, the Province should, in consultation with municipalities, raise the intensification target.

### Recommendation #5

The Province should amend the combined employment and residential density target for greenfield development to distinguish among the types of employment that are included so that industrial and knowledge-based jobs would be excluded and only population-related jobs would be combined with the residential target.

### \*Recommendation #6

The Provincial Government should provide a uniform methodology for determining land budgets, developed in consultation with municipalities.

## Paying for growth

### \*Recommendation #7

To ensure that growth pays for growth, the Province should amend the *Development Charges Act* (DCA) as follows:

- removal of the 10% discount (Sec. 5.(1) 8.)
- removal of service level cap based on 10 –year historical average (Sec. 5.(1) 4.)
- removal of all other service exemptions such as waste facilities, parks.
- removal of 50% industrial expansion exemption (4. (2))
- removal of clause in the DCA that prohibits municipalities from gaining, or developers from losing financially as a result of an OMB appeal. (16. (4))
- Metrolinx should not be given authority to charge DCs for growth related infrastructure and should no longer be permitted to invoice municipalities for costs associated with Metrolinx assets.

## Infrastructure efficiency

### Recommendation #8

The Province should limit appeals of Growth Plan-related OPs with significant infrastructure cost implications through amendments to the *Planning Act* and/or the *Places to Grow Act*.

### \*Recommendation #9

The Province should introduce reasonable fixed timeframes for provincial decision points in the environmental assessment process, including Part II bump-up requests.

### Recommendation #10

Relevant provincial legislation (*Places to Grow Act*, *Planning Act*, proposed *Infrastructure for Jobs and Prosperity Act* (Bill 6) and policies (Provincial Policy Statement) should be amended to facilitate and encourage municipalities to:

- a) further integrate land use planning, infrastructure and financing considerations at the beginning of the land use planning process;
- b) standardize the practice of making all lifecycle costs (ongoing operations and maintenance, replacement costs) transparent when considering costs of new growth related infrastructure;
- c) undertake comprehensive business case assessments of major infrastructure works like transit, large water and wastewater treatment facility expansions, that includes consideration of costs, benefits and return on investment.

## Employment lands

### Recommendation #11a

The province should articulate criteria in the Growth Plan for identifying strategic employment lands, including but not limited to land adjacent to 400 series highways corridors, airport lands, border crossing areas, active ports and harbours, and strategic transit corridors, and allow for 'generational' protection of these lands, either with no time horizon, or a minimum 30 year horizon.

### Recommendation #11b

The Province should limit appeals related to strategic employment lands through amendments to the *Places to Grow Act* and/or the *Planning Act*.

### \*Recommendation #12

The Ministry of Municipal Affairs should launch Growth Plan training and specific implementation guidance for provincial ministries, boards and agencies whose policies may infringe or conflict with a municipality's efforts to protect employment lands.

### Recommendation #13

The Growth Plan should establish a process to negotiate 'land swaps' between municipalities and the Province to allow for the protection of consolidated employment lands where provincial policy, e.g. provincially significant wetlands, has the effect of severing employment lands; where this involves the Greenbelt or Oak Ridges Moraine plans, the swap of equivalent land parcels to protect employment lands should result in 'no net loss' to the territory delineated in these Provincial plans.

### Recommendation #14

Where designated employment lands are consistent with the Growth Plan, the Province should make these non-appealable to the OMB through amendments to the *Planning Act* or *Places to Grow Act*. When a municipality has planned for various categories of employment lands in a conformity exercise, appeals should be prohibited OR the scope of the appeal should be limited to population-based employment only.

### \*Recommendation #15

The Province should support other measures of determining employment land DCs used in other jurisdictions that better reflect actual servicing costs, such as lot size, trip generation (people and distribution).

# 1. INTRODUCTION

## Key Points

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- This report reflects consensus positions developed amongst the Regional Planning Commissioners of Ontario, the Regional Public Works Commissioners of Ontario, and the Ontario Regional and Single Tier Treasurers of the Greater Golden Horseshoe (GGH) on key challenges and opportunities for the Province of Ontario and the GGH municipalities to meet growth and intensification targets contained in the GGH Growth Plan (Growth Plan) in a way that is financially sustainable, uses infrastructure efficiently, creates livable communities and supports economic prosperity across the region.
  - Analysis and conclusions are presented in this report in five sections: the first is focused on the policy and economic context; the second is on conforming with the Growth Plan; the third is on financing growth; the fourth is on encouraging infrastructure efficiency; and the fifth is on protecting employment lands.
  - By 2041, it is projected that the Greater Golden Horseshoe (GGH) area in Ontario will be home to 13.5 million people and 6.3 million jobs. The pattern of development to accommodate this growth is influenced by provincial policy contained in the Greater Golden Horseshoe Growth Plan, 2006, that encourages intensified, mixed use development.
  - The 2008 recession and its aftermath have had a dramatic effect on growth patterns and financing growth, due to changes in employment, spatial demands for employment, and revenues from non-residential DCs and property assessment in some areas of the GGH.
  - More than ever, coordinated infrastructure investments by federal, provincial and municipal governments are considered critical by business interests for the GGH to compete in a globalized economy, and to promote agglomeration.
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## 1.1 ISSUE STATEMENT

Eight years after the release of the Growth Plan for the Greater Golden Horseshoe, the Regional Commissioners of Public Works, Planning and Finance have commissioned this report to take stock of their members' collective experience in implementing the Growth Plan to date, to identify challenges and opportunities presented by growth pressures generally, and specific to the Growth Plan, and to share their own growth strategies and identify where they need further support.

GGH municipalities are on a learning curve in planning for and servicing more intensified and more dense growth. They are adapting and improving their strategies along the way. This study explores the added challenges and opportunities posed by federal and provincial governments in supporting growth in the GGH.

The strength of this report is in the integrated and shared vision of the three Commissioners' groups. Their views were gathered through individual interviews with Commissioners from the Regions of York, Durham, Peel, Halton, Niagara and Waterloo, and the Cities of Hamilton and Toronto. A workshop was also held with representatives from each of the groups. The three professions approach the issue of growth in different ways. Land use planners strive for an urban form that balances market forces and community and employment needs. Public works officials are seeking ways to deliver infrastructure efficiently to reduce initial capital costs as well as ongoing operational and maintenance costs and future replacement costs, while meeting operational, environmental and societal objectives. Finance officials are seeking a financially sustainable path for growth, where revenues and costs are in balance, and the impact on existing taxpayers and ratepayers is minimal. Notwithstanding these different perspectives and the different circumstances in various parts of the GGH, there was considerable consensus in key issues and recommendations.

While this report is focused on the experience of municipalities in implementing the Growth Plan in the Greater Golden Horseshoe, the issues identified and the recommendations in relation to financing growth, implementing efficient infrastructure and planning for employment are equally relevant to municipalities outside of the GGH.

This report also benefitted from review and comments from an Expert Panel consisting of Enid Slack, Pamela Blais, and Chris Kennedy.

Enid Slack is the Director of the Institute on Municipal Finance and Governance (IMFG) and an Adjunct Professor at the Munk School of Global Affairs at the University of Toronto. The IMFG focuses on the fiscal health and governance challenges facing large cities and city-regions in Canada and around the world.

Pamela Blais is an urban planner and Principal of Metropole Consultants Ltd. Her focus is on creating better cities by integrating planning, economic and environmental thinking in the analysis of urban issues and the development of innovative policy. She is the author of *Perverse Cities: Hidden Subsidies, Wonky Policy and Urban Sprawl*, which was shortlisted for the 2011 Donner Book Prize – awarded for the best Canadian public policy book of the year.

Chris Kennedy is a Professor of Civil Engineering at the University of Toronto, where he teaches Engineering Economics; and Design of Infrastructure for Sustainable Cities. He is the author of *The Evolution of Great World Cities: Urban Wealth and Economic Growth*.

The study is organized in five parts:

- i) The policy and economic context and dynamic on the ground within which municipalities are planning for and supporting growth and implementing the Growth Plan vision;
- ii) Progress and challenges in conforming to the Growth Plan, including an assessment of GGH municipalities' ability to meet Growth Plan projections, and the feasibility and practicality of meeting the current jobs and people targets;
- iii) Financial challenges of meeting large upfront growth costs to support greater density and intensification, and the tools available to pay for growth;
- iv) Ways in which infrastructure can be delivered more efficiently and some of the obstacles to maximizing infrastructure efficiency;
- v) The identification and protection of employment lands.

By exploring and integrating the views and experiences of senior decision makers in the three primary disciplines responsible for preparing municipalities for growth in the GGH, this study seeks to identify specific ways and means to better align provincial and municipal interests, policies and practices to implement the Growth Plan vision. Recommendations reflect consensus positions reached at a workshop held on March 2, 2015 with the participation of members from each of the three Commissioners' groups. These recommendations are presented with a view to realizing the objective of moving forward together. **Recommendations with broader geographic relevance have been identified with an asterisk (\*) in the summary of recommendations at the end of this report.**

## 1.2 Provincial Policy Context

By 2041, it is projected that the Greater Golden Horseshoe (GGH) in Ontario will be home to 13.5 million people and 6.3 million jobs, a 50% and 40% increase respectively over the current 9 million people and 4.5 million jobs. (MAH, 2014A)

Despite early efforts by the Province to encourage more intensified growth, including 'Growth and Settlement Guidelines' introduced in 1992 (Miller, et al., 1997), the predominant growth pattern in the GGH has largely been car-dependent suburban development, prompting one academic study to proclaim that Canada was not so much an urban nation, as a suburban nation (Gordon, 2013).

In the early 2000s, recognizing the growing problems of traffic congestion and rapid consumption of agricultural land by residential development, the Ontario Government developed a more definitive vision for the Greater Golden Horseshoe region aimed to promote more transit-oriented, intensified growth.

In 2006, the Ontario Government released its Greater Golden Horseshoe Growth Plan (MOI, 2006). This plan includes

- i) provincial population and jobs projections through to 2031 (subsequently amended and extended to 2041);
- ii) employment and residential density targets for both greenfield and urban growth centres; and
- iii) a standardized intensification target of 40%.

All of the projections and targets were required to be incorporated into municipal Official Plans by 2009.

The Province also created Metrolinx, a public agency responsible for developing a 25-year, Greater Toronto Area region-wide transit strategy. The strategy, 'The Big Move' was released in 2008, amended in 2013, and is to be comprehensively reviewed in 2016. (Metrolinx, 2008)

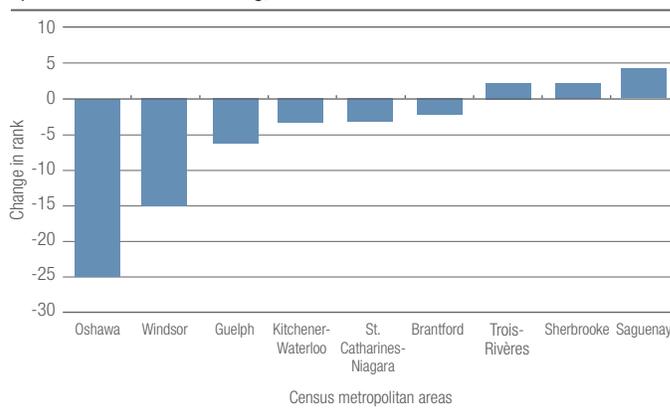
### 1.3 Economic Transformation in the GGH

The importance of the GGH region to the Ontario economy, and the Canadian economy as a whole cannot be overstated. According to Statistics Canada, in 2009, the Toronto Census Metropolitan Area (CMA), comprised of the City of Toronto, the regions of Halton, York, Peel and parts of Durham, accounted for less than 1% of Canada's land mass, but generated close to 20% of the country's GDP. That percentage increases to 25% when the 9 CMAs in the Greater Golden Horseshoe are added. At a value of 274 billion dollars, the region's GDP is larger than that of every province except Ontario and Quebec. (StatsCan, 2014)

While the region's preeminent position in the Canadian economy is impressive, it must not be taken for granted. After many years of growth fueled by a low Canadian dollar, access to the US market, and strong growth in sectors like the automotive and agricultural sectors, the southern Ontario economy began a gradual restructuring 10-15 years ago, a process that was significantly accelerated by the 2008 recession. Most notably, there has been a rapid decline in manufacturing as a share of Ontario's GDP, declining from 22% in 2002, to 13% by 2012 as low value added manufacturing has moved to lower cost jurisdictions and the rising value of the Canadian dollar has eroded exporters' competitive advantage. At the same time, due to advanced manufacturing, the labour intensity of manufacturing has declined. The combined effect has seen manufacturing's share of total employment in Ontario decline from a high of 24% in 1981, to around 12% in 2012.

The decline in manufacturing has hit some parts of the GGH region particularly hard. As shown in the graph below, of the nine CMAs with 25% or more of their output in manufacturing in 2001, the six that have fallen in ranking are all in Ontario, of which three are in the GGH (Oshawa, Kitchener-Waterloo, St. Catharines-Niagara). (StatsCan, 2014)

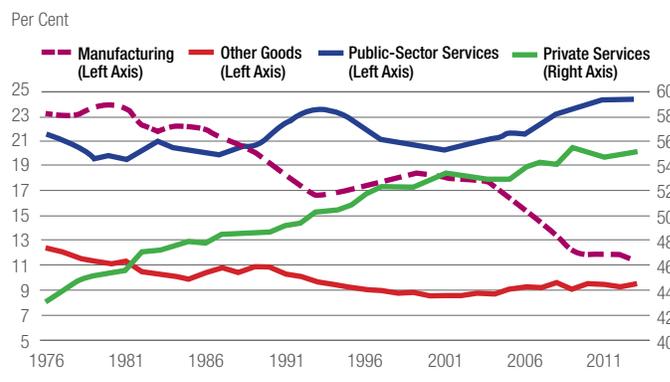
Figure: 1 Change in per capita GDP product rank, census metropolitan areas specialized in manufacturing, 2001-2009



Sources: Statistics Canada, authors' calculations based on data from multiple sources.

At the same time, there have been gains in the service sector, including professional, scientific and technical services, health care and financial services. As can be seen in the figure below, private sector services has increased its share of employment from 44% in 1976 to 55% in 2012. (MoF, 2014)

Figure 2: Service Sector's Share of Ontario Employment Increasing



Notes: Other Goods includes agriculture, fishing, forestry, mining, utilities and construction. Public Sector Services includes educational services, health care and social assistance, and public administration.

Source: Statistics Canada, Labour Force Survey.

Most recently, the steep decline in oil prices in the latter half of 2014, the 20% drop in the value of the Canadian dollar over the last two years, and the surprising decision of the Bank of Canada to lower its lending rate in early 2015 has introduced more uncertainty to the economic picture for Southern Ontario and the GGH. While historical conventional wisdom would assume that a weaker currency is good for exports, there is concern that manufacturing will not rebound as it has in the past. In fact, manufacturing employment has not increased since 2010, despite a weaker Canadian dollar for the last two years. Bank of Canada Governor Stephen Poloz' explained this failure of the manufacturing sector to bounce back as being 'simply because companies that were there (in Canada) before are no longer present...' (Bloomberg News, 2015) Still, there remains hope that the manufacturing that has stayed in Southern Ontario will expand production.

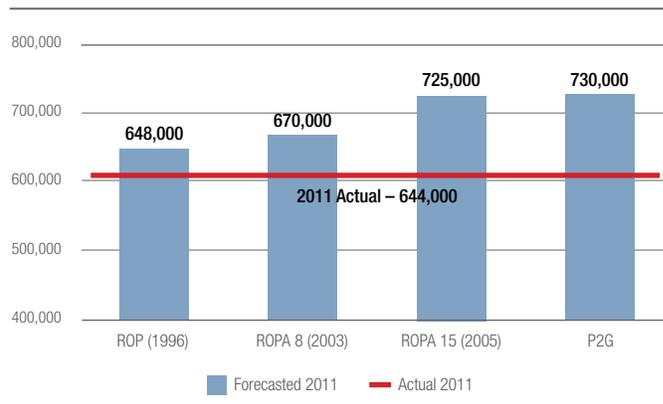
There are a number of implications of this restructuring of the Ontario and GGH economy and the uncertainty of what lies ahead with respect to the Growth Plan.

From a land use planning perspective, the geospatial needs for employment lands is changing rapidly with an increase in demand for office space, health and education institutions and warehousing space (over 2000 logistics firms have moved into Peel Region in the past ten years) and a decline in demand for manufacturing space. This shift also has implications for forecasting and meeting jobs and people projections and targets, particularly where employment density has declined due to an increase in warehouse and logistics employment.

The above graph illustrates the difficulty at the municipal and provincial level of accurately forecasting employment.

From a financial point of view, the loss of manufacturing and in some areas its replacement with health and educational institutions or warehouse space has resulted in a significant loss in employment DC revenue. The City of Hamilton and the regions of Halton, Durham, York and Peel have all reported a decline in employment DC revenues in recent years.

Figure 3: Peel Region Forecasted vs. Actual Employment, 2011



In areas where manufacturing has been replaced by hospitals and post secondary institutions that are exempt from paying property taxes to the municipality under the *Municipal Act*, payments-in-lieu (PILs) do not match the costs associated with servicing these sites.

This is largely because PILS have been frozen at \$75 per "head" since 1987 for colleges/universities and per "bed" for hospitals and correctional facilities. The City of Hamilton has called on the Province to raise this amount to \$125 per head/bed, the amount this levy would be had it been indexed for inflation. This would have generated an additional \$1.7 million in funding for the City of Hamilton. (City of Hamilton, 2010)

Finally, this decline in employment DC revenues and property tax revenues as a result of changing economic activity has had the effect of squeezing budgets generally, and budgets in support of growth infrastructure specifically, resulting in the phasing in of infrastructure that would otherwise move forward more quickly.

## 1.4 Federal and Provincial Coordinated Support for Growth

This uncertain economic climate reinforces the importance of coordinated federal and provincial support for growth and prosperity in the region. Ultimately, municipal governments have limited influence over economic growth. They plan for buildings and land use, they build local infrastructure, and they make efforts to attract individual businesses. However, a shared vision and commitment from the federal and provincial governments are needed to support investments in strategic infrastructure to drive businesses to the GGH and shape the future economy.

Much of the discussion over the importance of federal and provincial investments has focused on public transit to relieve gridlock. While this is extremely important, it is only one aspect of a much more complex network of investments in infrastructure that is strategically important to the economy, such as airports, active ports and harbours, border crossings, and highways, needed to move goods efficiently to make the region more globally competitive.

In addition to moving goods, moving people is equally important. Recent academic research on US municipalities has shown how even modest increases in transit investments can drive higher density employment, spurring economic agglomeration worth millions of dollars in higher wages. (Chatman, 2013). Agglomeration refers to the benefits of co-locating a business where there is a concentration of similar or complementary economic activity, resulting in improved labour market accessibility, increased exchange of information and economic specialisation. (Billings, 2014). Transit and transportation investments enable agglomeration by bringing people to the clusters.

This is why, for example, the Region of Waterloo is working to connect creative industries between Waterloo and Toronto, to create positive agglomeration effects.

The three orders of government need to reach a common understanding of the strategic infrastructure investments needed to support economic growth and attract businesses in a fiercely competitive, global economy. It must be based on an understanding of the geospatial configuration of leading

economic sectors, where clusters of businesses are locating, and how strategic infrastructure like transit hubs, highways, border crossings, airports and other public infrastructure investments can support the movement of goods and people.

The importance of strategic infrastructure investments from higher order governments to keep the GGH Region competitive in a globalized economy has been raised by the business sector. In its '2014 Scorecard on Prosperity', the Toronto Region Board of Trade (BOT) paints two pictures of the economic future of the Toronto Region (Toronto Region Board of Trade, 2014). The first, the base case, assumes a 'business as usual' scenario *'that puts Toronto at risk of serious underperformance'*. This would result from continued delays in provincial transit investments, a deterioration of existing municipal infrastructure, low productivity in key economic sectors and a mismatch of skilled people with labour market needs. According to BOT, the key to a more competitive, prosperous future for the Toronto region is dependent on reversing these trends, and in particular,

- i) Delivery on the next wave of Metrolinx' Big Move
- ii) Investments in other types of public infrastructure

The importance of public infrastructure and transit to the future economic health of the region was also underlined in a 2013 TD Economics special report on 'Sustaining T.O.'s momentum after the global recession' (Burleton, 2013). In it, TD Bank Deputy Chief Economist Derek Burleton identifies seven structural issues that impede the Toronto Region's economic recovery, most notably:

- i) Gridlock that currently costs the region \$6 billion in lost productivity annually, and if not addressed will cost \$15 billion by 2031; and
- ii) The infrastructure deficit, that is compounded by the fact that municipalities 'lack the fiscal and administrative flexibility to adequately tackle the challenge.'

These two reports confirm that the business sector recognizes that it is only through the integrated, sustained delivery of federal, provincial and municipal infrastructure investments that the Toronto Region will remain competitive into the future.

## 1.5 Misalignment Between Municipal Implementation and Federal and Provincial Support for Growth

Rather than supporting a shared economic vision, and coordinated investments in strategic infrastructure, there is growing concern that the Growth Plan is resulting in a misalignment of provincial plans, policies and investments with municipal planning and infrastructure implementation.

Municipalities appreciate the provincial government's commitment to a ten-year, \$130 billion infrastructure investment strategy. (MoF, 2015) The added \$2.6 billion to its \$31.5 billion in dedicated funds announced recently in the Ontario Budget 2015 is also welcomed. Notwithstanding this level of investment, municipalities need the Province to go one step further, to create more predictability and to reduce risk. Unlike municipalities that are required to conform to the Growth Plan projections and targets by integrating them into their Official Plans, DC bylaws, and infrastructure master plans, there is no requirement that the Province conform to the Growth Plan in the same manner. This creates a misalignment of municipal and provincial investments that is critical to achieve certain targets. Just one example is the need for two-way all day GO transit in Milton to meet that Urban Growth Centre's density targets. And yet there is no indication to date of when that GO service will be delivered.

Likewise, with the enormous expansion of the logistics sector to the west of Toronto, in Peel and Halton, these regions are planning their infrastructure 20 years out to accommodate the increase in truck traffic. Yet the Ministry of Transportation, responsible for the highways on which much of the traffic will travel, plans on a 5-year horizon.

This misalignment of the timing of necessary provincial investments with municipal investments creates increased risk and financial exposure for municipalities that are required by the Growth Plan to proceed with large infrastructure investments to support growth that is dependent on provincial infrastructure investments to materialize.

In order to reduce municipal exposure and support Growth Plan implementation, the Province and municipalities need to align the timing, location and quantum of their infrastructure investments. The release of the Province's first Long Term Infrastructure Plan is a step in the right direction, as is Bill 6, the *Infrastructure for Jobs and Prosperity Act*, which would require the Minister of Infrastructure to regularly table a ten-year infrastructure plan in the Legislature. (MEDEI, 2013)

### Recommendation #1

The Province's long term infrastructure plan should be required to conform with the Growth Plan over a planning horizon that is compatible with municipal planning horizons, that is, 15 + years, through an amendment to the proposed *Infrastructure for Jobs and Prosperity Act* (Bill 6) currently before the Legislature. The Infrastructure Plan should provide enough detail in terms of timing and specific projects so as to enable coordination with complementary municipal infrastructure investments.

The federal government also has an important role to play. It has been often pointed out that large metropolitan areas in Canada are at a disadvantage compared to their OECD competitors, given that Canada remains one of the only OECD countries without a long-term, predictable federal transit-investment strategy. A Federation of Canadian Municipalities' 2007 report called for 'a national transit strategy to improve the global competitiveness, quality of life, and environmental sustainability of Canada's cities'. (FCM, 2007). A planned permanent Public Transit Fund to support P3 transit projects in large metropolitan centres, beginning in 2017, announced in the 2015 Federal Budget, is a step in the right direction (DoF, 2015). However, at a relatively modest investment level of \$1 billion per year beginning in 2019, it will not match the contribution of cities and provincial governments.

### \*Recommendation #2

The Federal Government should make a long term commitment (15 + years) to stable funding for transit, amounting to a minimum of 30% of capital costs.

## 2. ACHIEVING THE GROWTH PLAN TARGETS, PROJECTIONS

### Key Points

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- There is concern that Growth Plan population forecasts are too high or may project growth earlier than anticipated in some areas of the GGH. Fixed projections cannot accurately forecast actual growth in different areas.
  - The eight GGH municipalities have met or are making progress towards the 40% intensification target within built up areas by 2015. Inner ring municipalities may need their intensification targets reviewed upwards to reflect their maturing economic activity and housing mix.
  - Many municipalities have difficulty meeting combined population and jobs density targets, particularly in greenfield development, underlining the challenge that municipalities have in generating a mix of jobs and people that the Growth Plan calls for.
  - Differences in the methodology and assumptions used by municipalities to determine their land budgets has made it difficult to defend them at the OMB during the municipal comprehensive review.
- 

Under the Growth Plan, municipalities are required to meet a number of growth, intensification and density targets, including:

- Municipal-specific population and employment forecasts through to 2041;
- A 40% intensification target, whereby municipalities must ensure that by 2015, and each year thereafter, 40% of its residential development occurs in built up areas;
- A 50 jobs and people density target for greenfield development;
- Density targets in urban growth centres (UGC)s that differ depending on location, ranging from 400 jobs and people in each of Toronto's 5 UGCs, to 150 jobs and people in Niagara Region's one UGC.

Upper tier and single tier municipalities were required to adopt policies and strategies to meet these forecasts and targets through amendments to their Official Plans by 2009. Many of these have been appealed (see Case Study #2: Waterloo's experience bringing its Official Plan into conformity with the Growth Plan).

This section will explore progress and challenges to date in conforming with the Growth Plan and achieving the above projections and targets.

### 2.1 Meeting Growth Plan Population Projections

Municipalities need to base their land use and infrastructure decisions on assumptions about future growth. The further out the projections, the harder it is to forecast accurately. Economic conditions, public policy, and strategic investments in transit can all have an impact on the pace and location of growth.

Prior to the release of provincial Growth Plan population forecasts, municipalities produced their own forecasts, either internally or with external expertise. Now that GGH municipalities must bring their Official Plans into compliance with the Growth Plan, the Growth Plan forecasted population numbers have enormous influence on planning in the GGH. These projections are used as the basis of everything from the Official Plan to infrastructure master plans to DC background studies.

Yet municipal confidence in the numbers is not strong. While the City of Toronto believes that it will meet or surpass population and employment forecasts, and Peel Region is confident it will meet population forecasts, other municipalities believe that both the population and employment forecasts are either too high or have the timing of growth wrong. As shown in Table 1, the Ontario Government's own Ministry of Finance population forecasts are at odds with the Growth Plan numbers.

Table 1: MOF population projections compared to GP projections expressed as difference in % growth from 2011 historical population

('000)	Historical	GP	MoF	% difference in growth from 2011	GP	MoF	% difference in growth from 2011	GP	MoF	% difference in growth from 2011
	2011	2021	2021		2031	2031		2041	2041	
Toronto	2704.6	2,975	3,030.90	2%	3,193	3,354.40	6%	3,400	3,639.30	9%
Durham	626.8	770	716.8	-8%	970	830.8	-22%	1,190	956.3	-37%
Halton	517.2	645	634.3	-2%	816	775.7	-8%	1000	931.5	-13%
Peel	1340.5	1,559	1,586.10	2%	1,766	1,855.60	7%	1,970	2,112.10	11%
York	1065.5	1,330	1,285.40	-4%	1,585	1,529.30	-5%	1,790	1,763.90	-2%
Hamilton	535.6	601	581.6	-4%	683	631.5	-10%	780	677.6	-19%
Niagara	442.8	483	457.9	-6%	544	478.2	-15%	610	495.2	-26%
Waterloo	523.8	624	584.7	-8%	742	650.9	-17%	835	712.7	-23%

(MoF, 2014; Hemson, 2012)

Table 1, above, compares the amount of growth anticipated by the Ministry of Finance as compared to the Growth Plan, based on 2011 historical population figures. The differences are startling, ranging from 9% more growth anticipated in the City of Toronto by 2041 according to MoF projections, to 37% less growth in Durham Region.

The City of Hamilton offers an on-the-ground example of the implications of conforming to growth projections that do not bear out. Looking at the provincial formula in 2010-11, and existing subdivisions, the models showed that Hamilton needed to invest in a wastewater plant expansion because of projections of 3,000 new residential units. On the ground, however, only 1,700 new units were built. A major expansion of a plant 5-6 years before it is needed could have resulted in millions of dollars of unnecessary expenditures and a need for the municipality to carry the debt on that expenditure for a protracted period of time. Hamilton opted to phase in the expansion.

Gaps between projections and actual growth are bound to occur. Arguably, it is impossible to have 100% confidence in any set of population projections, whether they be set by the Province or municipalities. The difference, however, is that if municipal projections do not bear out, in most cases the municipality can recalibrate plans based on changing conditions on the ground.

In the context of the Growth Plan, municipalities are required to conform to the projections in their Official

Plans, and have done so, then integrate them into their infrastructure master plans and DC bylaws. If municipalities conform to provincial projections, and do not adjust their plans to reflect slower growth on the ground, there is a strong risk that GGH municipalities will overbuild their infrastructure and be left with overcapacity and a much heavier than necessary debt burden.

Essentially the increment of growth that is stipulated in the Growth Plan population projections becomes the denominator in the DC bylaw. If the growth projection is wrong, it throws off the price, the volume and the revenues that are forecasted in the DC bylaw. In other words, the projections, if wrong, introduce a systemic imbalance in growth-cost recovery, and municipal balance sheets.

This lack of confidence has prompted some municipalities to work with two sets of numbers, one set to officially conform to Growth Plan forecasts through their Official Plan, and another set either developed externally or groundtruthed internally for more granular planning. Some differences between forecasts is based on the anticipated timing of growth, the five year increments, rather than the 2041 longer term projections. Even if the growth comes ten years later, building infrastructure costing tens or hundreds of millions of dollars ten years too early is a costly mistake. As one official explained, “We are careful to keep forecasts based on reality. We’ll continue to reflect alignment at the tail end of the period.”

The issue is not only on the residential side of the projections. Research conducted by Hemson Consultants for Peel Region suggests that the Growth Plan forecasts for employment may not be bearing out either, at least in the short term.

Table 2: GTAH Employment: Comparison of 2011 Growth Plan Estimates and 2011 NHS Results

Census Division	Growth Plan Amendment 2 background estimates	2011 National Household Survey Results	Difference	
			Employment	%
Toronto	1,1516,000	1,528,900	12,900	0.8
Peel	682,000	649,400	(32,600)	-5
York	539,000	485,400	(53,600)	-11
Durham	240,000	212,100	(27,900)	-13.2
Halton	254,000	233,900	(20,100)	-8.6
Hamilton	234,000	216,900	(17,100)	-7.9

Source: Hemson, 2014

The National Household Survey (NHS) results suggest that Growth Plan forecasts overestimate employment by up to 13%, underlining the importance of ground truthing the Growth Plan forecasts. The NHS is a voluntary survey, and is being found to underreport employment, which could account for a significant portion of this variation.

Municipalities will always have to make assumptions about short term and longer term growth. Given the economic uncertainty that Canada has seen even in the last year, it is important that municipalities are given some flexibility in meeting population and employment projections, to allow for adjustments in response to changing circumstances and the timing of growth. This flexibility would avoid premature and oversized infrastructure investments and the associated need to bear the debt burden for these expenditures over an unnecessarily long period of time.

### Recommendation #3

In light of Ministry of Finance projections, Growth Plan population and employment projections should be reviewed and revised. Consideration should be given to building flexibility into the projections, providing a numeric and timing range within which the projected growth is expected to occur.

## 2.1.1 40% Residential Intensification Target

The Growth Plan sets an intensification target deadline of 2015 for GGH municipalities to ensure that 40% of residential units are within built up areas, leaving up to 60% for greenfield development.

The eight GGH municipalities surveyed reported that they are on track or are making progress towards the 2015 Growth Plan residential intensification target. However there is evidence of slippage in some regions as the more profitable areas to develop within the built up areas are consumed, leaving only areas to be developed with tighter margins that are not transit-supported, or that require remediation or other costly retrofits.

Table 3: Progress Towards Achieving 40% Growth Plan Intensification Target 4-Year Average of Annual Residential Intensification Rate 2007-2010, 2011-2014

Municipality	2007-2010 4-year average (%)	2011-2014 4-year average (%)
City of Toronto	100	100
Niagara Region	64	51
Peel Region	47	34
City of Hamilton	48	30
Durham Region	46	37
York Region	46	52
Waterloo Region	36	55
Halton Region	33	35

(MAH, 2014A and responses from individual municipalities)

The City of Toronto, which has no greenfield development area left, is by definition at 100% residential intensification.

York Region's overall intensification continues to rise, with some built up areas already exceeding it. Within this intensified development, York is also achieving greater density. In fact, 2013-14 was the first year that York Region constructed more built up housing than ground related housing. It is on track to replicate this in 2014-15 based on building permits received to date. Thirty-six towers have been built or are in the pipeline (or being built) over the

last several years, most of which are residential buildings of a minimum 8-10 stories. Officials have speculated that improved transit to Vaughan Metropolitan Centre and Markham Centre may be driving this growth. The Region is confident that it can meet the residential intensification target in its remaining built up areas.

Waterloo Region has seen a steady increase in intensification, recording its highest rate of 62% in 2014. This rate is expected to remain well above 50% as the promise of the ION Rapid Transit system currently under construction attracts people to the built up area.

The City of Hamilton initially achieved over 40% intensification but has slipped in more recent years. Further intensification is transit dependent and will likely be very localized. Hamilton is seeing development in the downtown core, but much of it is concentrated in an area within 800 metres of the GO station. Investments in rapid transit to and from the GO station would accelerate infill development in the built up area.

Peel Region has dropped below the 40% target over the last four years, reflecting the fact that greenfield development on the edges of the built-up area in the 2007-2010 period has been absorbed.

Niagara Region has also experienced a decline in its residential intensification, as it had a surplus of vacant sites ready for development that have now been developed. Niagara's intensification rate will likely slip in future years as easy infill becomes scarce within the built up areas.

Halton Region achieved 40% residential intensification in 2013, fell to 32% intensification in 2014, and expects to reach 40% in 2015.

Durham Region has seen a decline in its average intensification rate over the last four years. This is likely a result of prior greenfield approved subdivisions coming to fruition. The intensification rate is expected to improve in the coming years as Durham builds out.

While good progress towards greater intensification is being seen in areas of York Region and Waterloo Region, new challenges are presenting themselves in areas in the Regions of Peel, Halton and Niagara as easy infill is absorbed.

This suggests the need for more deliberate intensification implementation strategies going forward.

There has been some criticism that residential development in greenfield areas still accounts for 50% or more residential development in many areas of the GGH. Even within those municipalities with greenfield land supply still available that are meeting the 40% target, there is concern that the target will be taken as a maximum threshold rather than a minimum as the Province had intended. (Neptis, 2013) The Environmental Commissioner of Ontario, Gord Miller, has suggested that the intensification target must be made higher to actually change the status quo in the dominance of greenfield development. (Environmental Commissioner of Ontario, 2014)

Participating municipalities agreed that as inner ring municipalities with maturing economies and demand for a mix of housing types reach the intensification target, the target should be reviewed to determine whether it should be raised.

#### **Recommendation #4**

The Province should continue to prescribe the 40% minimum intensification target for inner ring municipalities but, once the target is achieved, based on the progress towards intensification in more 'mature' regions and cities over time, the Province should, in consultation with municipalities, raise the intensification target.

### **2.1.2 Urban Growth Centre Density Targets**

In addition to the proportion of residential development that should occur within the built up area, the Growth Plan also stipulates density targets for urban growth centres (UGCs) and greenfield areas. These are based on joint jobs and residents per hectare by 2031.

Of the 21 UGCs in the municipalities surveyed, most are considered likely to achieve their density targets by 2031. However, a number of them are dependent on market conditions and infrastructure upgrades.

Table 4: Anticipated Progress Towards UGC Density Targets by 2031

Municipality and UGC	Residents and Jobs per Ha Density Target	Target reachable by 2031?
<b>City of Toronto</b>		
Downtown Toronto	400	Yes
Etobicoke City Centre	400	Yes
North York Centre	400	Yes
Scarborough Centre	400	Yes
Yonge-Eglinton Centre	400	Yes
<b>Peel Region</b>		
Mississauga City Centre	200	Yes
Downtown Brampton	200	Yes
<b>Halton Region</b>		
Downtown Milton	200	Depends on GO service
Midtown Oakville	200	Yes
Downtown Burlington	200	Yes
<b>Durham Region</b>		
Downtown Pickering	200	Depends upon market conditions and infrastructure improvements
Downtown Oshawa	200	Depends upon market conditions and infrastructure improvements
<b>York Region</b>		
Markham Centre	200	Depends on water and wastewater
Vaughan Corporate Centre	200	Depends on water and wastewater
Richmond Hill /Langstaff Gateway	200	Depends on Yonge line extension
Newmarket Centre	200	Depends on water and wastewater
<b>City of Hamilton</b>		
Downtown Hamilton	200	Localized around GO station
<b>Waterloo Region</b>		
Uptown Waterloo	200	Yes
Downtown Kitchener	200	Yes
Downtown Cambridge	150	No
<b>Niagara Region</b>		
Downtown St. Catharines	150	Yes

(Source: individual interviews with municipal officials)

Participating municipalities have reported progress towards the UGC jobs and residents targets, but in many areas it is very localized and selective.

The City of Toronto is the exception. It is on target for both residential and employment targets in its UGCs for 2031. Toronto is currently adding about 14,000 jobs per year, and while it may not sustain this level of employment into the future, it is confident that it will meet the jobs numbers needed to meet the Growth Plan targets.

In three of its UGCs, Yonge and Eglinton, downtown Toronto, and North York, densities of 400 people and jobs are already being met.

The two remaining UGCs, Scarborough and Etobicoke, are not realizing either target yet, but are expected to by 2031, based on planned and approved development that is not yet built.

In Peel Region, residential growth has outpaced projections for Mississauga City Centre. However, job density targets have not been met, given rising unemployment. Peel has one of the highest unemployment levels in the area. Employers want office space in Mississauga, but in the absence of transit, employers are demanding parking space paid for by the City of Mississauga. For example, it is believed that the Royal Bank of Canada (RBC) moved its offices to Highway 401 and Mississauga Road instead of Mississauga Centre for this reason. Introduction of the Bus Rapid Transit is expected to change this situation.

Durham Region's two UGCs, downtown Oshawa and downtown Pickering, are not yet meeting the density targets and are facing several challenges to do so. Firstly, according to the Region, market research has shown that there is not demand for high density development in either centre. The best that can be hoped for is very concentrated residential density around the GO stations. Another significant barrier is that neither UGC has sufficient sanitary sewer capacity to accommodate such densities. Significant upfront investments by the Region would have to be made to increase sewer capacity in both centres, with no guarantee that there would be sufficient demand to meet the density target.

While York Region is seeing more towers being built, the density targets continue to be a challenge. Higher densities in York Region's third UGC, Richmond Hill Langstaff Gateway, is dependent on the Yonge subway line subway extension. Other development is water and wastewater dependent.

Halton Region expects that two of its UGCs, Burlington and Oakville, will reach their density targets by 2031. Metrolinx' plans to expand the Oakville GO station into a Midtown Oakville Mobility Hub is expected to pay dividends in terms of density for Oakville. In Burlington, a mature employment area, has been able to keep its employment density consistent at around 46 jobs per hectare. Downtown Milton, a newer area, is expected to be a challenge. Due to its location west of Toronto, it is attracting warehousing and logistics employers, which bring an employment density of about 16 jobs per hectare. While it makes sense for downtown Milton to be designated a UGC, future density is dependent on transit. It will not be able to attract office employers until it has 2-way all day GO service like Oakville enjoys. Such service for Milton is in the Metrolinx plan, but is as yet unfunded.

The City of Hamilton is seeing greater density directly around its GO station, but not beyond that immediate area.

Niagara Region reports that it is on track to meet its targets for its UGC, downtown St. Catharines.

Waterloo Region UGCs are lagging behind on both employment and people. Waterloo and Kitchener have some blocks that reach densities, but are not achieving them overall. Cambridge, its third UGC, is seeing no significant intensification. At the time of the development of the Growth Plan, Waterloo Region had flagged that Cambridge should not be designated a UGC, but in the end it was included. Investment in all-day, 2-way GO service to Kitchener to which the Province has committed will assist with achieving higher densities in Waterloo Region.

While participating municipalities are confident about most of their UGCs meeting the density targets as laid out in the Growth Plan, the targets will be met with a much higher residential density with lower employment density. This reflects the difficulty for many areas of the GGH to attract sufficient employment outside of Toronto, and some parts of Peel and York Region. Specific infrastructure investments by the Province would help achieve greater employment densities within certain UGCs.

### 2.1.3 Greenfield Density Target

Unlike the UGC density targets, the greenfield density target is uniform across the GGH, in the inner and outer ring, at 50 jobs and people per hectare.

Despite being quite low, the joint greenfield density target of 50 residents and jobs is proving to be the hardest of all targets to achieve under the Growth Plan. Some officials expressed frustration that residential demand and job supply is simply different in different regions of the GGH and imposing one target does not reflect this diversity.

As the jobs and people targets are linked, in areas that cannot attract the jobs, greater residential densities are required to meet the linked target, even where there is little demand for residential development of greater density. There is consensus amongst the eight participating municipalities that the uniform density target for greenfield development is impractical.

Durham Region, for example, has already accommodated 50 people per hectare, but due to its low employment density, it has reached an overall density of 37 jobs per hectare. As a result, it needs to boost its residential density to over 60.

York Region is coming up against the same challenge. It is able to meet a density of 50 people per hectare, but is at a much lower density for jobs in greenfield development. While the Region has no problem attracting residential development, regional officials concede that attracting new employment to designated greenfield employment lands is a challenge. Land owners realize a higher profit sooner, for residential development. Therefore, they are generally not open to the Region's Economic Development efforts related to the employment areas in the DGA. Added to which, residents who are already established do not want to see employment lands developed adjacent to their neighbourhoods, and where there are employment lands, residents do not want to live near them.

Again, in Peel Region, while it can reach 50 people per hectare density, employment in greenfield areas has not materialized at the same density. For example, Caledon has 43 jobs per ha. While Peel is still growing, it has seen a deceleration in employment growth from a 20% to a 10% increase. As business location decisions are based on access to labour, Peel Region cannot yet compete with the City of Toronto. Peel is expecting a harder time to attract office

space and jobs due to improvements in transit services to and within the City of Toronto. Yet public transit to and from Toronto and parts of Mississauga remains very limited. For instance, there is no direct transit connection between Mississauga Centre and downtown Toronto. And movement within Peel Region is hampered by very limited transit options. Commuting on transit from Newmarket to Brampton can take half a business day. A recent announcement by the Ontario Government that it will invest in an LRT linking Mississauga and Brampton will no doubt have a positive impact. (MTO, 2015)

Halton Region is seeing a growth in employment with low densities, associated with warehouses and logistics. While it is achieving about 53 people per hectare density in its greenfield residential development, it is much lower on its employment density, at around 16 jobs per hectare, bringing its overall density to around 42 jobs and people per hectare.

The City of Hamilton is also seeing a large gap between its jobs density targets in greenfield development, and its residents, having reached around 80 people to 10-12 jobs per hectare. Its low employment numbers require that it go far higher in its residential densities to achieve 50 jobs and people per hectare. With its large employment districts with no residential development, residential development has to be made up elsewhere. Hamilton believes that these employment districts should be removed from the joint target equation.

In Waterloo Region, greenfield densities for people are at around 60-70 people per hectare in new subdivisions. It is again on the jobs side that Waterloo Region is not seeing significant density. However, it currently does not have the means to measure jobs as it has not undertaken a comprehensive jobs survey.

In Niagara Region, it has been able to attain a balance in jobs and people in greenfield development, standing currently around 55 jobs and people per hectare.

This sketch of the different circumstances in the various cities and regions in the GGH underlines the point that the uniform density target does not fit all circumstances in the GGH. For Toronto, at the centre of the GGH economy and without greenfields to be developed, this is a non-issue. But for those regions like Peel and Halton, to the west of Toronto, that are seeing a growth of logistics and warehousing, their

employment densities are going to continue to be low for the foreseeable future. Likewise, for regions like York and Durham that have higher density employment in some select areas like Markham and Oshawa respectively, but very low employment densities in many other areas, for the City of Hamilton facing declining employment, and those municipalities in the outer ring, reaching higher employment densities is proving a challenge. Given the difficulty of encouraging greater density in employment in many parts of the GGH, particularly in greenfield development, a majority of municipal officials interviewed were convinced that the Growth Plan combined greenfield jobs and people density target as currently conceived is not practical for their municipality. However, there was a reluctance to delink the targets completely. There was consensus that the combined target had value, but needed to be amended in a way that distinguishes which types of employment are included.

#### **Recommendation #5**

The Province should amend the combined employment and residential density target for greenfield development to distinguish among the types of employment that are included so that industrial and knowledge-based jobs would be excluded and only population-related jobs would be combined with the residential target.

#### **BOX 1: PROVINCIAL POLICY THAT HAS THE EFFECT OF LIMITING INTENSIFIED GROWTH**

Municipalities have a number of examples where provincial policy limits growth in desirable areas. For instance, 80% of Durham Region is designated Greenbelt under the provincial Greenbelt Act and Plan. (MAH, 2005)

The provincial Highway 413 'GTA West Corridor' renders much of the corridor undevelopable, including four kilometres of prime land south of Bolton.

Within the City of Hamilton, the Whitebelt, the area between the Greenbelt and the urban boundary, is precluded from residential development due to its proximity to the airport. Highway 6 frontage is captured by the Provincial Greenbelt Plan.

These provincial policies have the effect of limiting options available to municipalities to promote intensified growth.

## CASE STUDY #1: RECONCILING PROVINCIAL POLICY AND GROWTH-RELATED INFRASTRUCTURE NEEDS: UPPER YORK SEWAGE SOLUTIONS

### Issue

In 2008, the Regional Municipality of York began seeking Environmental Assessment Act approval for a sustainable sewage servicing solution to accommodate provincially-approved growth forecasted to occur in the Towns of Aurora, Newmarket and East Gwillimbury, including Holland Landing, Queensville and Sharon. An additional 47 million litres per day (MLD) is required to support growth to 2031 in the Upper York Sewage Solution service area, however provisions of the Lake Simcoe Protection Act prevented full discharge to Lake Simcoe.

### Importance of Upper York sewage solution to Growth Plan

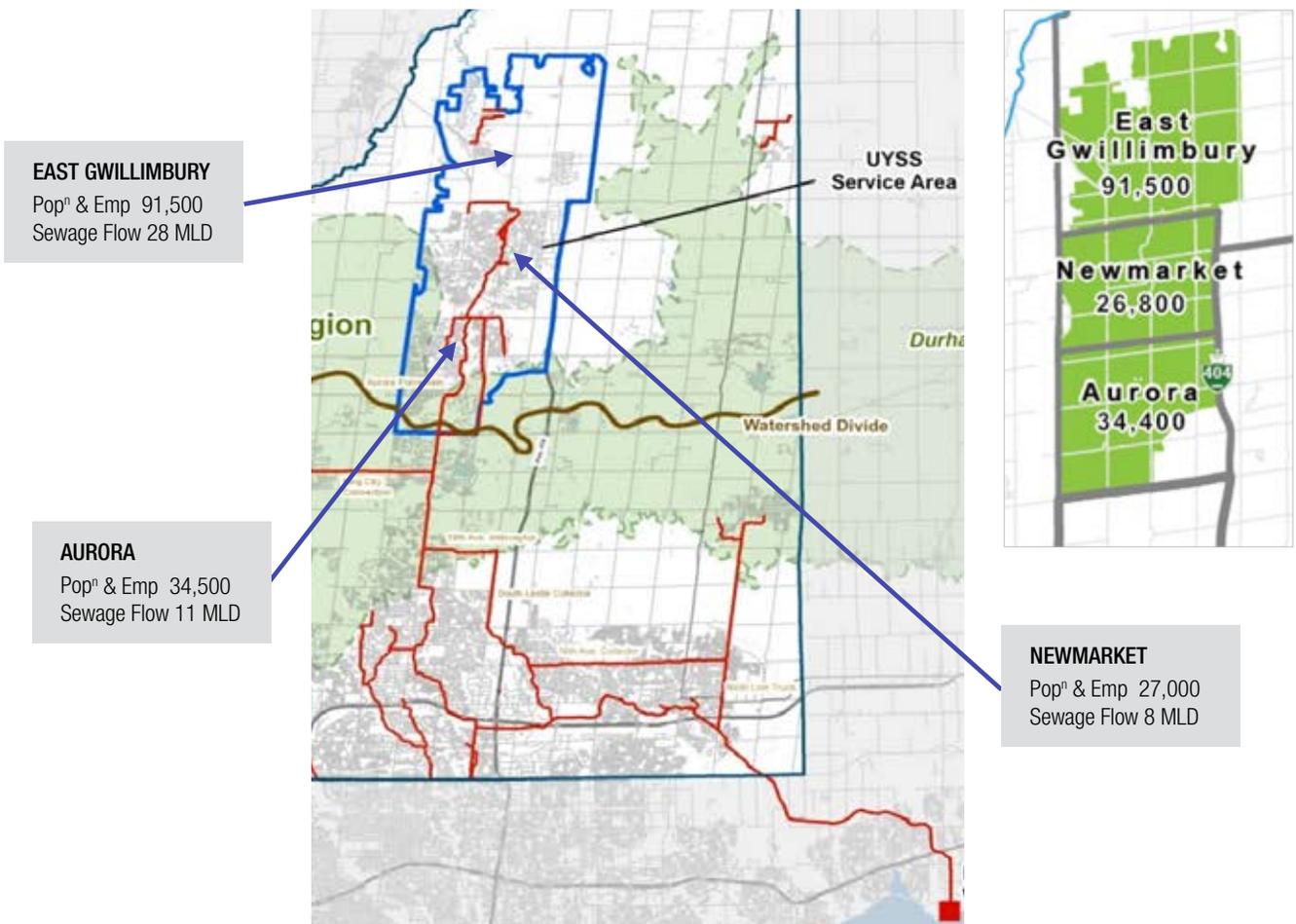
Ontario's Growth Plan together with York Region's Official plan approved growth to meet forecasted population and employment targets and forms the basis for growth in the Upper York Sewage Solution service area for the northern portion of York Region. Provincial investments within the area totals with a collective value approaching \$300 million:

- 404 extension from Green Lane to Ravenshoe Road
- GO transit servicing to East Gwillimbury
- VIVA rapid transit works in Newmarket

### Background

York Region began its Individual Environmental Assessment (IEA) Study in June 2008 to develop a sustainable sewage servicing solution to accommodate forecasted growth in the Upper York Sewage Solution service area.

Figure 4: Map showing UYSS Service Area including population and sewage flow metrics to support growth to 2031.



The Ministry of Environment and Climate Change approved an Individual Environmental Assessment Terms of Reference in 2010. This approval was conditional upon the Environmental Assessment also including an assessment of an “Innovative Alternative” referring to innovative wastewater treatment technologies, such as development and use of a wastewater purification system and water recycling facilities.

During the process with the Province through the IEA, the MOECC confirmed five commitments as outlined by the Minister’s conditions on the Term of Reference to allow assessment of “Innovative Alternative”:

1. Recognize technology to achieve low phosphorus levels (0.01 to 0.02 mg/L)
2. Compliance based on annual total phosphorus loading to surface water
3. Confirm use of existing Holland Landing Lagoons Facility Certificate of Approval (C of A) and Total Phosphorus cap
4. Enable York Region to acquire phosphorus credits for removal of septic systems and from stormwater improvements to increase Holland Landing Lagoon C of A Total Phosphorus cap
5. Collaborate on establishing water reuse project guidelines to permit the distribution of reclaimed water to Regional customers

Throughout the IEA process, the Region discussed and requested clarification on Lake Simcoe Protection Plan policies that would impact “Innovative Alternative” options. MOECC clarified Lake Simcoe Protection Plan policies and worked with the Region to vet options that met all provincial policy objectives, including but not limited to the Growth Plan, Environmental Protection Act, Ontario Water Resources Act (Permit to Take Water and Intra-Basin Transfer provisions), Endangered Species Act, Lakes and Rivers Improvement Act, Ontario Heritage Act, and provisions to protect the Oak Ridges Moraine.

In 2010-11, a detailed assessment of two viable options to develop a sustainable sewage solution was completed through the IEA process. Options included: i) Discharge to Lake Ontario; and ii) Lake Simcoe Water Reclamation Centre and York Durham Sewage System (YDSS) Improvements. The latter option including the Lake Simcoe Water Reclamation Centre, YDSS improvements and project specific phosphorus off-setting program was identified as the preferred option (2011).

Based on the IEA work completed by the Region, the preferred Upper York Sewage Solution option included:

1. Water Reclamation Centre – Clean treated water will be discharged into the Holland River which has the potential to improve water quality

in the river. In addition, use of reclaimed water is an opportunity to demonstrate the value of this water as a resource which can be used for industrial and irrigation purposes

2. Modifications to Existing York Durham Sewage System – Will provide additional system reliability during high flow conditions and accommodate wastewater from growth in the service area
3. Project Specific Off-setting Program – Will remove phosphorus from other sources within the Lake Simcoe watershed and result in a net reduction of phosphorus into the Lake Simcoe watershed

In 2013, the MOECC advised that the phosphorus off-setting strategy would require an amendment to the Lake Simcoe Protection Plan; the Individual Environmental Assessment report was put on hold pending resolution of total phosphorus off-set issue. MOECC advised the Region to continue to consider other alternatives that would not require an amendment to the Lake Simcoe Protection Plan.

By 2013, the Region had invested \$25 million and 3 years of effort in developing the IEA preferred alternative relying on documented concurrence of a total phosphorus off-setting strategy from MOECC.

### **Solution Brokered**

MOECC direction on the IEA was based on an interpretation of the Lake Simcoe Protection Plan that the Water Reclamation Centre could not release total phosphorus greater than that approved at the Holland Landing Lagoons (i.e. 124kg/yr). In keeping with the intent of Lake Simcoe Protection Plan, the IEA report included the committed project specific total phosphorus off-set program, which will remove existing phosphorus from stormwater resulting in an overall net benefit to the Lake Simcoe watershed.

The Final Individual Assessment Report was submitted in July 2014 and approval is anticipated in the latter half of 2015. All public, government review agency and First Nations comments received were addressed, including consolidated comments from the MOECC review team. Notice of completion of Ministry Review is still pending.

### **Summary/Lessons Learned**

Involving Provincial Agencies from the initial stages of project development, as well as continuous communication and collaboration on innovative alternatives and emerging issues can assist with the overall goal of achieving project success, given new regulatory policies are constantly evolving and adapting to support successful growth concurrently.

## **BOX 2: ATTRACTING HIGH DENSITY DEVELOPMENT (IMPACT OF THE CONDO BOOM IN TORONTO)**

Low interest rates and high demand have created favourable conditions for condominium development in the GGH over the last decade. In June 2013, a record 251 new condominium projects were being built across the Greater Toronto Area, for a total of 64,670 units. (Torstar, 2013). The City of Toronto has been the epicenter of this condominium boom in the GGH .

While market conditions have been favourable to all, within the GGH, there is great competition amongst municipalities in attracting higher density development amongst the limited number of developers in the high rise residential market. Municipal planning officials were asked whether the boom in condominium development in the City of Toronto made it more difficult, or easier to attract high density development. The issue is considered significant as the Toronto condo boom could either be seen to have contributed to increased residential densities beyond Toronto, or to have adversely affected a municipality's ability to reach higher levels of density.

Peel Region officials felt that it has benefitted from the condo boom, although in much smaller numbers than Toronto.

York Region peaked at 36 condominium projects in mid-2014, boosting its density rate in York Region Centres & Corridors. There remain twenty five projects under construction. York is seen to have benefited from the GTA-wide condo boom.

Durham Region has seen little condominium development, but officials felt that this was likely due to a lack of transit options rather than competition with Toronto.

Market and demand in the GTA has resulted in a number of condominium developments in Halton.

The City of Hamilton has seen several thousand condo units built in its downtown core. Officials did not believe that Hamilton is in direct competition with Toronto in attracting developers given the lower price point in Hamilton.

Waterloo Region has also seen some condominium developments, but at a smaller scale than those projects attracting GTA-wide developers.

Niagara Region has seen some lower rise condominium development in the Grimsby area, but it does not believe it is in competition with Toronto in attracting high density developers.

Based on this informal survey of municipal planning officials, it is clear that a number of municipalities have seen a growth in condominium development over the last ten years. Most planning officials in surrounding regions were of the opinion that they benefited from favourable market conditions and that they were not in direct competition with Toronto developers because their condo developments were smaller or at a different price point.

These results are not definitive. A more thorough survey of condominium developers would be needed to determine the actual motivations and market conditions that attract them to different municipalities.

## 2.2 Bringing Official Plans into Conformity with the Growth Plan

Upper tier and single tier municipalities were required to adopt policies and strategies to meet Growth Plan forecasts and targets through amendments to their Official Plans by 2009.

Of the eight municipalities considered in this report, all had their Official Plan amendments to the Growth Plan appealed. Peel Region's Regional Official Plan Amendment came into effect in 2012, followed by Durham Region's and the City of Hamilton's, in 2013. The O.P. amendments of five municipalities, the City of Toronto, Halton Region, York Region, Niagara Region and Waterloo Region, remain under appeal. The appeals process has been drawn out over years and at enormous cost to the municipalities.

The case study of the Region of Waterloo's experience illustrates the delays, costs, and frustration associated with municipal efforts to have their conforming O.P.s adopted.

There is agreement amongst municipal officials that clearer provincial direction and more provincial involvement in defending O.P. amendments at the OMB are needed.

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### CASE STUDY #2: WATERLOO'S EXPERIENCE BRINGING ITS OFFICIAL PLAN INTO CONFORMITY WITH THE GROWTH PLAN

The Region of Waterloo is well-known for its collaborative community culture. Consequently, it is not surprising that the Region began a community conversation in 2001 to develop a new Regional Growth Management Strategy (RGMS). The RGMS was carefully assembled over a two-year period as the desired vision for accommodating and shaping the community's future growth and change. Key elements of the RGMS were more compact development, greater focus on design excellence, the protection of extensive environmental systems, farmland preservation, greater reliance on public transit, and a better range of opportunities for business expansion and new investment. The Region of Waterloo continues to be a major driver of Provincial and National-scale economic growth.

A key document that was subsequently based on the RGMS was a new Regional Official Plan (ROP). Following Regional Council's adoption of the RGMS, an intentional connection was made to translating this vision into a new Regional Official Plan starting in 2005. Since official plans are legal documents, which among other things, convey development rights, the new ROP also needed to be founded on sound technical and financial considerations. It should also be noted that the Region of Waterloo is one of the most groundwater-dependent communities in Canada, accessing about 80% of its water supply needs from local aquifers. This dependence provided yet another key element to the due diligence needed to prepare a new ROP.

Despite having extensively engaged the community during the preparation of the RGMS, Regional Council renewed its community engagement for the ROP, extending well beyond its statutory obligations. In addition, the new ROP was briefly put on hold to ensure it would be properly aligned with the Provincial Growth Plan (approved by the Province in 2006). Ultimately, the ROP became a blend of the RGMS vision and Growth Plan conformity, both of which are closely aligned in intent. New features were also built into the ROP, particularly a Countryside Line, a Protected Countryside designation and a Regional Recharge designation, all designed to better contain and shape growth.

As the accompanying time line shows, the ROP was ultimately adopted by Regional Council in 2009 after a 5-year preparation and consultation process. Unfortunately, this has been followed by a four-year process involving appeals to both the Ontario Municipal Board and Divisional Court. To date, the ROP remains under appeal in its entirety.

The five-year appeal and litigation process is also shown on the accompanying time line. However, the following aspects are particularly worthy of note:

- **Number of appellants** – 26, the majority of which are appellants with properties or property interests outside of the proposed development boundaries. A number of these appellants also appealed the ROP in its entirety. To date, the OMB has not scoped these “blanket” appeals, and as a consequence, no parts of the new ROP are in force and affect;
- **Time taken for first OMB hearing to occur** – three years from date of Council adoption;

- **Nature of the first major OMB decision** – preference for the appellants’ land budget, representing a much larger quantum of new development land (1053 hectares) to be added than asserted by Region Council (80 hectares);
- **Regional Council response to OMB decision** – one application for leave to appeal before Divisional Court, alleging errors in law (i.e. the OMB mis-interpreted the Growth Plan), one application for judicial review alleging apprehension of bias, and one related motion for leave to appeal the OMB’s decision on its motion regarding the apprehension of bias issue;
- **Reaction of the OMB** – refusal of a section 43 request under the Ontario Municipal Board Act and a subsequent active respondent against the Region in Divisional Court. The Board also held its own hearing to self-determine whether it was biased. The Board subsequently issued a decision that it was not biased;
- **Reaction of the Province** – Submission and representation in Divisional Court supporting the Region’s assertion that the OMB misinterpreted the Growth Plan; and
- **Costs to all parties** – millions of dollars and more than five years of no resolution.

Over the course of 2014, the Region of Waterloo has continued its legal actions, which have moved at a slow pace. In the spirit of collaboration however, the Region and the appellants began discussions in 2014 in an attempt to achieve a resolution. The outcome remains unknown, but all parties agree the time, money and uncertainty associated with the OMB and litigation are extreme.

As a result of this situation, the Region of Waterloo developed the following recommendations relative to the Growth Plan. Many of these recommendations are shared by stakeholders across the Province, and have been forwarded to the Provincial government as it considers planning reform:

### 1. Short Term (Now) for the Region of Waterloo

- a) The Province actively participate as a respondent to support the Region’s Divisional Court Motion. (Note: the Province has subsequently participated).
- b) The Province actively participate in any future OMB hearing phases to support the Regional Official Plan.
- c) The Province consider declaring the ROP as a matter of Provincial interest, and exercise its authority accordingly.

### 2. Short Term (Now) for All Municipalities in the Greater Golden Horseshoe (GGH)

- a) The Province actively attend OMB hearings to support municipalities and the Plans that they have approved, including the support of all municipal land budget methodologies that address the Growth Plan requirements. (The Province did this during the York Region ROP OMB hearing).
- b) The Province issue clear and unambiguous “directives” in properly applying the Growth Plan, including the development of a land budget methodology.

### 3. Medium Term (Within 1 Year) for All Municipalities in the GGH

The Province amend the Growth Plan to remove any ambiguities in its content and implementation.

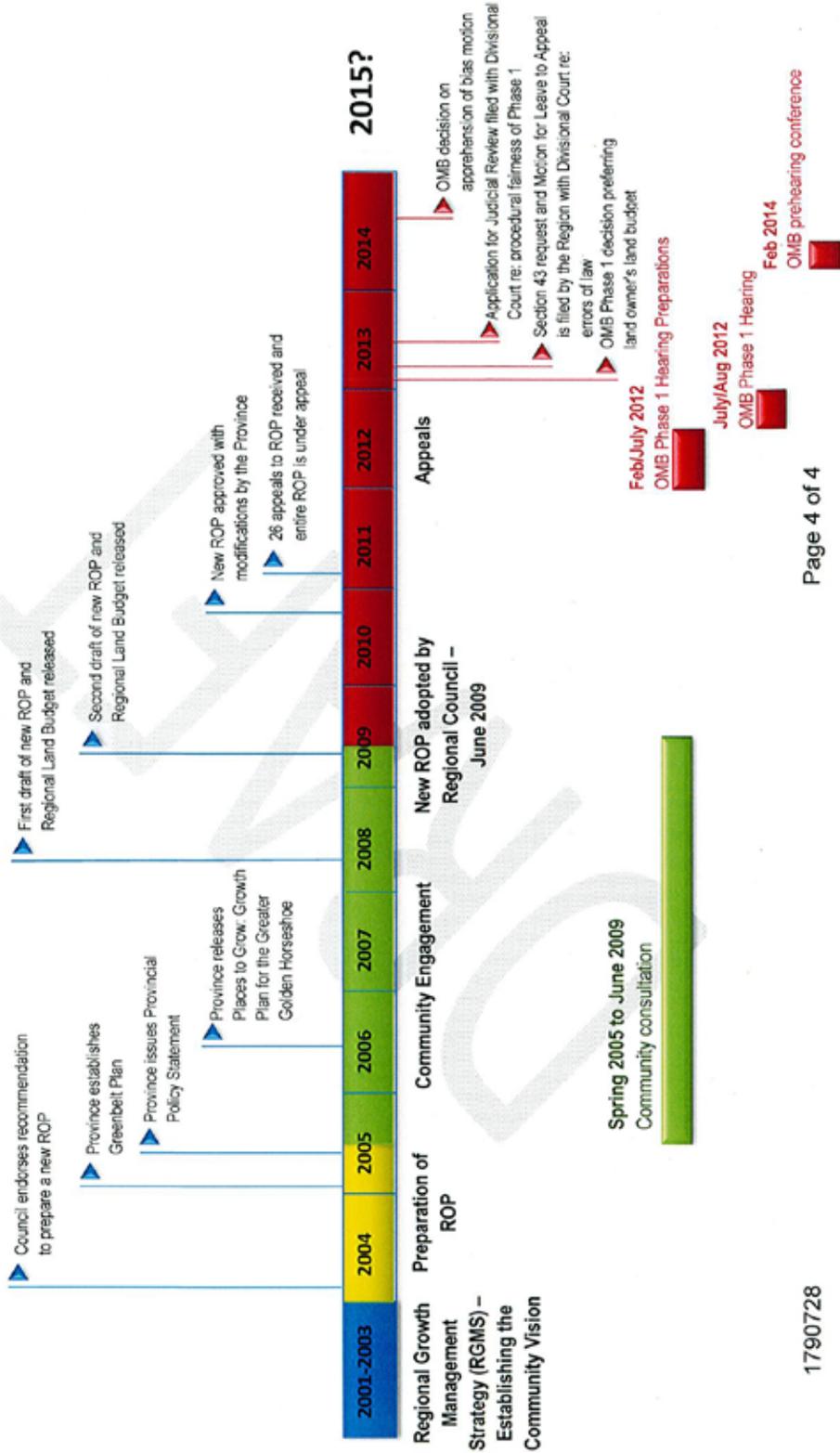
### 4. Longer Term for All Municipalities in Ontario (requires additional discussion)

The Province amend the Planning Act to make updates to Official Plans, which implement changes in other Provincial policies (e.g. Growth Plan, Provincial Policy Statement, Greenbelt Plan) unappealable where such updates are directly approved by the Province. This provision should not extend to restrict municipalities from appealing decisions of the Province that conflict with the decision of the municipal council (i.e. the Council adopted OP).

A related issue is the appeal of land budgets. During the land budget phase of the Region of Waterloo’s Official Plan hearing, a considerable amount of evidence was put before the Ontario Municipal Board relating to various land budget methodologies and inputs accepted by the Province in other jurisdictions. The submissions represented wide variations in, and in some cases conflicting, interpretations of the Growth Plan. Unfortunately, the conflicting nature of these interpretations was also reflected in decisions by the Board relating to these matters. An example of this conflict relates to the use of market demand based methodologies to justify expansions to urban areas. In its decision relating to the Port Hope Official Plan hearing, the Board rejected a market demand argument, stating, “... the Board finds that the market demand argument is more appropriately a challenge to the intent and authority of the GP [Growth Plan]”, whereas in its decision in the Region of Waterloo Hearing, the Board “preferred” the market demand methodology espoused by the appellants. Similar conflicts were apparent in approvals by both the Province and the Board relating to the range of takeouts permitted in the calculation on densities within designated greenfield areas.

Figure 5: Milestones in the Development of the Region of Waterloo's Regional Official Plan Amendment (Ropa)

**Milestones in the Development of a new Regional Official Plan (ROP) for the Region of Waterloo**



A uniform methodology for determining both residential and employment land budgets would settle these types of conflicting interpretations of land budgets and would standardize the types of assumptions that should be built into them. For example, different assumptions related to the vacancy factor in employment lands, or persons per unit in residential lands can result in a very different outcome.

### **BOX 3: CHANGES TO THE *PLANNING ACT* PROPOSED IN BILL 73**

In March, 2015, the Ontario Government tabled Bill 73, the *Smart Growth for our Communities Act*. (MAH, 2014C) The changes proposed would go some way to address lengthy delays in passing conforming O.P.s due to appeals.

If passed, the Act would amend the Planning Act to:

- Allow a 10-year review cycle for Official Plans and zoning by-laws
- Impose restrictions on appeals of Official Plans, zoning by-laws and minor variances for site specific zoning bylaws for 2 years
- Bar appeals of whole O.P.s.
- Bar partial OP appeals related to specifically approved provincial matters, like boundaries of source water protection zones, with respect to the Lake Simcoe Watershed, with respect to Greenbelt areas, and forecasted population and employment growth in the Growth Plan

The intent of these amendments is to permit a municipality the opportunity to establish a policy framework and be given a period of time to implement it without facing appeals to circumvent the policies before it can be demonstrated that they are working. This can take up to five years, particularly where changes to local OPs are required for them to take effect. The two year 'grace' period proposed in Bill 73 is welcomed, provided the municipality can continue to make adjustments during the two year period, although a longer period is preferred.

The 'no appeals of entire plans' provision proposed under Bill 73 is also welcomed, In the case of Waterloo Region, with almost 10 appellants appealing the entire O.P., this would have significantly simplified its settlement discussions.

### **\*Recommendation #6**

The Provincial Government should provide a uniform methodology for determining land budgets, developed in consultation with municipalities.

# 3. FINANCING GROWTH AND INTENSIFICATION IN THE GGH

## Key Points

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- The current *Development Charges Act* restricts the ability of municipalities to fully recover the cost of growth, leaving the remaining growth costs to be paid by existing taxpayers.
  - The shortfall in development charge revenue, the risk inherent in paying in advance for large scale infrastructure, and the lag in payback for these major investments, are all contributing to the burden that municipalities, and property taxpayers, are bearing in paying for growth.
  - As development charges are proving to be inadequate for paying for growth in intensified urban developments, municipalities are deferring growth related capital projects, and some are turning to alternative financial instruments to fill the gap.
  - New transit systems to support intensification are proving to be the greatest financial burden and the most difficult to pay for under the current *Development Charges Act* limitations.
  - The gap to fully cover growth-related costs needs to be filled through changes to the *Development Charges Act*.
- 

## 3.1 Shortfall, Risk and Lag: The Transition Years

In multiple studies, intensification is credited with reducing infrastructure costs, moving people and goods more efficiently, increasing assessment, and creating concentrated labour pools that promote the knowledge economy, thus providing a more financially sustainable model for municipalities compared with less intensified suburban growth. (CMHC, 2001; Marohn, 2011, Badger, 2012, Chatman, 2013)

Notwithstanding this positive financial picture of mature cities, municipalities at the beginning stages of intensification are finding that during the transition towards more intensified growth, costs are actually escalating, and will likely continue to escalate for 10-20 years until greater intensification and densities are achieved. That is due to a unique set of financial stresses created when preparing for intensified growth before it has arrived. Municipalities are having to adjust their financing strategies to this new reality. (see 3.2, below)

As the scales gradually tip away from greenfield development, towards intensification as the predominant form of development, the financing of growth fundamentally changes. Development charges, as currently conceived, favour a fast and near complete return on infrastructure costs associated with greenfield development. In the case of preparing for intensified development,

- the **upfront capital costs are higher**; significant large infrastructure investments are required to lay the necessary ground work to attract intensified growth before it arrives, including transit and water and wastewater treatment plants. Much of the cost associated with this ‘front end loading’ for intensification is borne by the regions and single tier municipalities.
- There is often a **significant delay in payback**; resulting in costs that are carried by the municipality over a longer period of time.
- the **recovery of costs is fragmented** between existing beneficiaries and the new development.
- the investments, based on growth that is anticipated but not guaranteed, carry **greater risk**.
- Finally, and most importantly, there **is a significant shortfall** in recovering growth related costs because the *Development Charges Act* restricts the ability of municipalities to fund the cost of growth. Even if the percentage of costs that are not ‘DC-eligible’ is low in most cases, given the large size of these capital investments, the total quantum of these costs is high, and is compounded year after year as repayments are pushed out further into the future.

The net effect is that growth does not pay for growth, with the shortfall, being made up through the existing tax base. Without changes to the DCA, this trend is expected to worsen as intensification proceeds. Already it is having the effect of slowing down planned infrastructure investments that are needed to support future growth envisioned in the Growth Plan.

Even once municipalities takes on a highly intensified form like Toronto, as well as parts of Peel Region and Hamilton, they are able to recoup a significantly smaller portion of the actual growth-related expenditures through development charges compared with greenfield development. The City of Toronto estimates that of its \$5.4 billion in growth related

costs (net of grants and subsidies) over the next 10 years, only about \$3 billion, or 55% of its growth costs will be paid for through DCs. About \$1 billion in debt may be needed to fund growth-related infrastructure as a result of the development charges funding shortfall.

This section outlines three key challenges in financing intensified growth, i) legislated limitations in recovering growth costs through development charges, ii) the risk inherent in upfront financing of large capital projects in anticipation of growth, and iii) the lag in payment of DCs. It explains how municipalities are adjusting their growth financing strategies to cope with these three challenges. And it outlines recommendations on further support needed to bridge the growing gap between growth related costs and revenues.

### 3.1.1 High Upfront Costs of Intensified Growth

Intensified growth in the GGH region requires long term planning, and large ‘superstructure’ capital investments, that are largely borne by upper tiers and single tiers. Since 2006, this planning and these investments have been guided by the vision articulated in the Ontario Government’s Greater Golden Horseshoe Growth Plan.

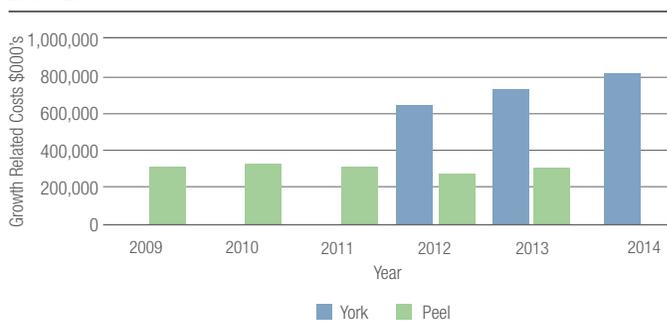
Research has shown that in terms of cost efficiency, the fewer feet of linear infrastructure needed to service per household or per capita will result in lower costs. A case study by the Canadian Mortgage and Housing Corporation (CMHC) estimated a cost savings of 20%, when comparing servicing for urban intensified development to equivalent infrastructure to service a greenfield development (CMHC, 2001). The Peel Case Study, below, offers further evidence of efficiencies from intensified growth.

Cost savings can also be realized through economies of scale for some large vertical infrastructure such as water and sewage treatment plants. More households and businesses located closer to, and served by, one larger plant is in most cases more cost effective than fewer people served by multiple smaller water or sewer treatment plants spread out over a large area.

Notwithstanding the positive comparative cost analysis of intensified growth vs greenfield development, the research conducted on cost savings of more intensified growth tends to focus on costs at the outcome stage, that is, once higher densities are achieved.

In the GGH, most of the region, with the exception of Toronto and parts of Hamilton, York and Peel regions, is in the preliminary or transition stage towards intensification. Some municipal officials predict that their municipalities have another 10-20 years of growth before realizing greater density. This transition period has implications for the financing of that growth, even if costs will be lower in the long run when full lifecycle costs of the assets are taken into account. The costs associated with introducing new transit for intensified growth alone are proving to overwhelm any savings from intensification.

Figure 6: Actual Growth Related Costs, Select GGH Municipalities, 2009-2014



For rapidly growing municipalities in transition towards intensification, growth related costs are high and escalating. The Region of Peel’s actual growth costs averaged \$307 million over the period 2009-2014. York Region’s growth costs averaged \$730 million over the period 2012-14.

While some of the services provided today to support intensification, such as transit, may not receive sufficient revenues from fares to cover operating, maintenance and replacement costs for 10-20 years, the initial capital investments and ongoing operating costs must be paid now to attract more intensified development. This means operating these services at a loss for a protracted period of time. Municipalities find themselves in a Catch-22 situation.

To attract home buyers to an area where they can use public transit to get to work (transit-oriented development), public transit with a convenient level of service has to be in place before the ridership revenue pays for the service. The municipality responsible for transit is then paying the upfront costs and subsidizing the operations of that transit service for 10-20 years. The long term operating subsidy is covered by the existing taxpayers and cannot be recovered through development charges.

### 3.1.2 Shortfall in Growth Related Cost Recovery

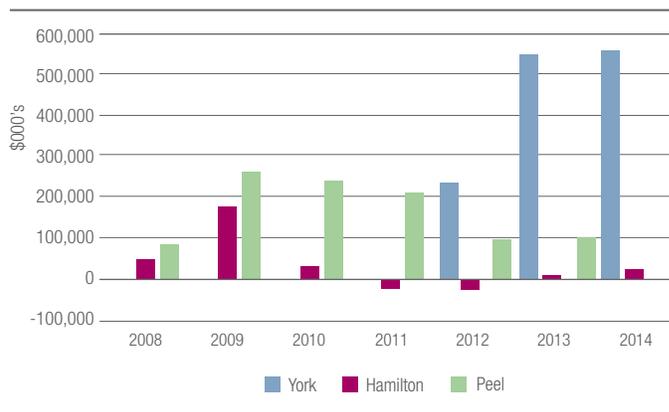
A major challenge in paying for growth is that the *Development Charges Act* restricts the ability of municipalities to recover the cost of investments made to support growth. Where costs exceed DC eligible revenues, large growth related infrastructure is either paid by existing residents through property taxes or user fees.

Changes to the *Development Charges Act* in 1997 introduced limitations to DC-eligible costs, including:

- Exclusion of computer equipment (s.s.5(3)4(ii))
- Exclusion of short life rolling stock (s.s.5(3)4(i))
- Exclusion of works beyond 10 year average service level (s.s.5(1)4)
- 10% deduction for non Water, Wastewater, Roads and Police Services (s.s.5(1)8)
- Exclusion of the Waste Management Service (s.s.2(4)5)
- Exclusion of Hospital contributions (s.s.2(4)4)
- Exclusion of General Admin. HQ service (s.s.2(4)6)
- 50% industrial expansion exemption (s.s.4)
- Exemption of 1-2 residential unit enlargements (s.s.3(3))
- Require stricter benefit to existing development deduction (s.s.2(5)6)
- Exclusion of museums, tourism and related services (s.s.2(4)1&2)

Legislated limitations to DC-eligible costs have had a significant impact on growth-related revenues. In Halton Region alone, the 1997 revisions to the *Development Charges Act* have resulted in an estimated \$10.6 million annual DC funding shortfall, or a total of over \$148.4 million of growth-related infrastructure not funded from DCs as a result of DCA changes. (Halton Region, 2013)

Figure 7: Actual Growth Related Costs, Select GGH Municipalities, 2009-2014



The graph above illustrates the enormous gap between actual growth costs and collected DCs, with York Region providing the starkest example. Of York Region's \$14.4 B in growth-related capital costs identified in its 2012 DC Background Study, only half that amount can be recovered through development charges. It should be noted that York Region received \$3.4 billion in funding from the federal and Ontario governments, and \$1.6 billion was deemed to benefit existing development.

In addition to limitations in the DCA, the shortfall in the recovery of growth costs can be a result of forecasting higher DC revenues than are actually received and allowing for exemptions from DC-eligible expenditures.

Peel Region has seen a dramatic DC revenue shortfall over the last five years, resulting in \$1.3 billion in growth-related costs that have been debt financed by the municipality since 2009. This was a result of the combined effect of limitations in the DCA, employment DC revenue forecasts that did not bear out, the impact of the 2008 recession, and allowing for exemptions for DC-eligible costs. By adjusting its DC by-laws, Peel Region has now narrowed the amount of growth costs that are not recovered by DCs to 7%. However, the absolute increase in growth costs and the compounding effect of accumulated debt means that the share of debt-financed growth as a percentage of Peel Region's annual repayment limit is growing. As can be seen in Figure 8, below, it has grown from 0% to 5.4% over five years, and based on internal forecasts, could grow to as much as 17% through to 2020.

Figure 8: Peel Region Growth Debt vs. Debt Capacity, 2008-2013

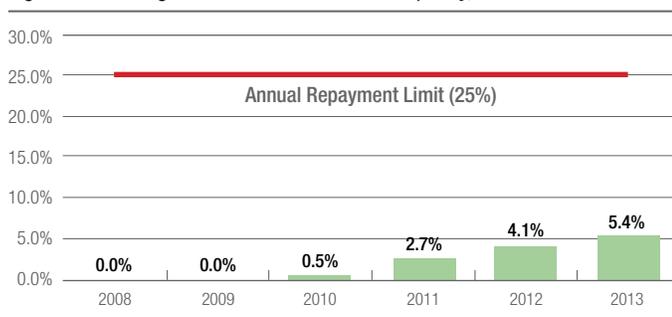
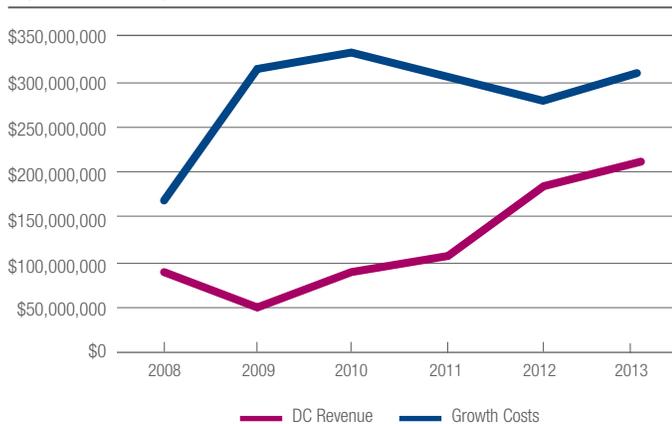
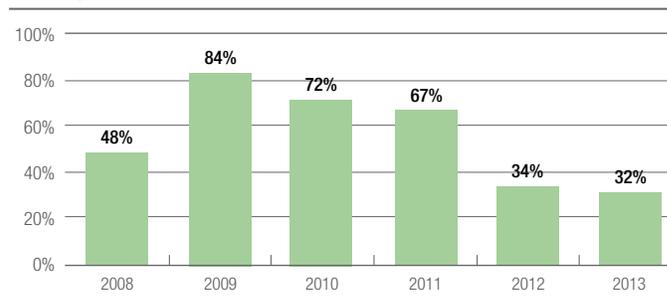


Figure 9: Peel Region DC Revenue vs. Growth Costs, 2008-2013



Note: DC Rates were increased approximately 100% in 2012; Transition rules delayed increase for employment related development until December 2013.

Figure 10: Percentage of Growth Costs Paid By Debt, 2008-2013, Peel Region

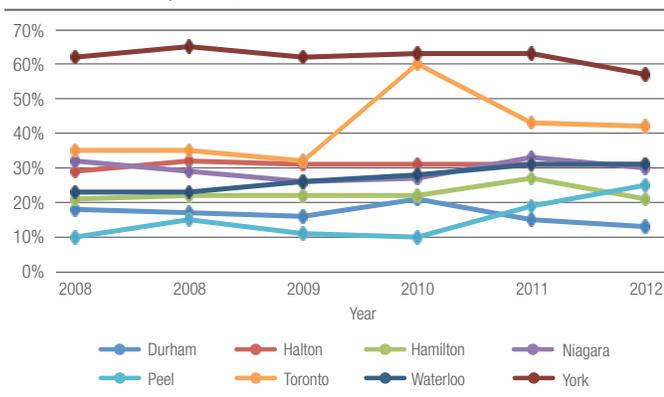


In the City of Toronto, that is assuming \$1 billion in growth related debt over the next ten years, the annual debt financing costs associated with growth-related infrastructure (\$60 million) represents about 11% of the City's annual debt capacity. While this may not seem like a large percentage, it still has the effect of limiting the use of that debt capacity for existing infrastructure costs.

These examples illustrate that debt levels are rising in some municipalities as a result of inadequate revenues to pay for growth-related expenditures. As a result, existing taxpayers are paying an increasing share of growth related costs.

There is real concern amongst some GGH municipalities over the increasing share of growth related costs being paid for through debt. As Figure 11 shows, the inner ring regional and single tier municipalities and Niagara and Waterloo are already carrying a significant amount of debt. Of the eight municipalities, 5 are averaging over 25% of allowable ARL over the six year post-recession period, representing 10 cents to every dollar of own source revenue going towards servicing debt. A sixth municipality, Peel Region, reached 25% of its ARL in 2014. (Note Toronto does not have a provincially-imposed ARL and York Region is allowed to factor in a share of DC revenues into its ARL) These municipalities do not want to see growth related debt further 'crowding out' debt issued for existing capital projects. This increase in the debt burden related to growth could become more worrisome if interest rates were to significantly increase, further crowding out debt room in a municipality's annual repayment limit. (York Region, 2014)

**Figure 11: Percentage 25% Annual Repayment Limit (Ar) used, Select GGH Municipalities, 2007-2012**



\*Note that for comparative purposes, a standard calculation is used to determine % ARL across all municipalities, based on the provincial ARL limit of 25%. This provincial limit is not applied to the City of Toronto, which determine's its own ARL (currently 15% of its property tax levy), and York Region's ARL limit, which includes 25% ARL and an added 80% of its average DC revenues over three years. These different thresholds are not reflected in this chart. These figures are presented in the year that the debt was incurred, rather than the year that the provincial ARL was calculated, two years later.

### CASE STUDY #3: TORONTO WATER'S DEVELOPMENT CHARGES

The City of Toronto's Development Charges (DCs) were last reviewed in 2013. The DC revenue source profile is two-thirds (66.6%) from residential developments and one-third (33.4%) from non-residential developments, typically commercial.

For mixed-use buildings, non-residential DCs are calculated based only on the amount of non-residential gross floor area which is located on the ground floor, which means that the DCs collected may not be enough

to fund the remaining development-related infrastructure pressure. Any funding shortfalls would have to come from the City's general revenue and, for Toronto Water, from water rates.

The City currently exempts industrial sites, schools, hospitals and places of worship from DCs.

Prior to the 2013 DC background study, the City had only charged a portion (40-60%) of the required funding. The City is now phasing in the full DCs identified in the study, and by February 1, 2016, growth-related upgrades will be fully funded by DCs, with the possible exception of a few projects that need upgrading due to incremental development that had occurred over a long period of time.

The DCs identified in the 2013 background study cover growth-related costs for the 10-year period from 2013 to 2022. Projects that have design capacity to accommodate future growth beyond the funding period can obtain partial funding. In order for these projects to move forward, however, the City needs to provide up-front funding until such time that the shortfall is recouped through the collection of future DCs. Table 1, populated with figures from the 2013 background study and its addendum, shows that more than \$607 million in upgrades will benefit growth beyond 2022, but most of these costs will have to be covered by Toronto Water before that time. Securing the up-front funding may have a negative financial impact on our capital and operational cash flows.

The unallocated portion of the DC funding (approximately 12%) is an allowance for those projects that are eligible for DC funding but were not identified in the background study because they did not yet exist, were on hold or needed additional study.

**Table 5: Growth-related costs for Toronto Water, 2013-2022. All figures in \$000s.**

	1. Gross Costs	2. Grants, Subsidies, Etc.	3. Net Costs	4. Replacement Benefit to Existing Shares	5. DC Reserves	6. Post-2022 Benefit	7. Total Eligible DC
Water	1,620,020.9	207,343.5	1,412,677.4	734,128.7	63,855.0	235,120.3	379,573.4
Sanitary	2,483,844.0	20,676.2	2,463,167.8	1,954,927.1	76,827.4	145,104.4	286,308.9
Stormwater Mgmt	766,805.4	162,800.3	604,005.1	284,112.2	14,920.9	227,175.3	77,796.7
<b>Total</b>	<b>4,870,670.3</b>	<b>390,820.0</b>	<b>4,479,850.3</b>	<b>2,973,168.0</b>	<b>155,603.3</b>	<b>607,400.0</b>	<b>743,679.0</b>

Notes:

Column 1 shows the gross costs associated with growth-related projects.

Column 2 shows all grants and subsidies (e.g., from other orders of government) related to these projects.

Column 3 equals column 1 minus column 2.

Column 4 indicates the proportion of the costs of the projects that will benefit existing users, which will therefore be paid with revenue from water rates.

Column 5 shows the amounts available in existing DC reserves.

Column 6 shows the proportion of the costs of the projects that will benefit new users beyond 2022. These costs (\$607 million) should be paid by future DCs, but a large proportion of these costs will need to be paid up-front through water rates.

Column 7 equals column 3 minus columns 4, 5 and 6, and shows the amount of DCs that can be raised for these growth-related projects during the period from 2013 to 2022.

## Transit-Related Investments in transition period hardest hit

Legislated limitations on DC eligible costs are particularly punishing for municipalities in the intensification transition period when introducing new transit options as they approach densities that can support transit. While it is commonly accepted that transit is a prerequisite to attract and service more intensified growth as envisioned in the GGH Growth, the DC Act actually penalizes those municipalities that do not have a 10-year transit track record due to the 10-year historic average service level limitation.

The *Development Charges Act* requires a service level cap that is tied to a ten-year historical average. DC-eligible capital costs for a service like transit cannot exceed those associated with a service level greater than the 10-year historical average. This is meant to ensure that new residents and businesses do not receive a service level greater than that provided to existing ones. As a result, where there was little or no public transit previously, costs related to new transit to support intensified growth are not DC-eligible.

For example, Durham Region's 2012 Regional Transit Development Charge Study identified that only \$41 million of the 10-year growth capital forecast of \$207 million would be eligible for development charge funding. The Region also received \$83 million in provincial grants.

Waterloo Region is caught in the same transition period transit-financing trap. Its investments to expand the Region's public transit system, including adapted Bus Rapid Transit (aBRT) and Light Rail Transit (LRT) lines, are an integral and essential part of its strategy to promote intensified growth. With no 10-year historic service standard to draw upon, the Region's investment in higher-order transit (i.e. LRT) is not eligible for funding from DCs. Despite financial contributions from the Federal (\$265 million) and Provincial (\$300 million) governments, regional taxpayers must fund the balance of capital costs (\$253 million), along with all operational and maintenance costs. In addition, the 10 year historic service standard and mandatory 10% discount mean that only 20% of Waterloo Region's growth related capital costs for its conventional bus transit network over the next 10 years are eligible to be recovered from DCs.

The impact of such limitations on transit investments can be further illustrated by comparing total recoverable transit DC revenues to road-related DC revenues in Ontario. As Pamela Blais has documented,

'...in 2011, \$546 million of funds raised through development charges in Ontario municipalities was spent on roads, compared to just \$85 million on transit – more than 6 times as much on roads as transit. If the City of Toronto, where much transit investment is taking place, is taken out of the equation, the numbers are \$536 million spent on roads versus \$71 million on transit, that is, almost 8 times as much on roads as on transit.' (Blais, 2013)

(Note: the reference to Toronto transit costs, above, excludes the Toronto-York-Spadina Subway Extension, which would make the difference \$28 million, rather than \$14 million)

It is difficult to see how such a differential in DC revenue from transit vs. roads can translate into the transit-supported vision of the Growth Plan.

Without the ability for municipalities to recover transit costs at start-up, municipalities will either delay establishing transit lines, or will put more pressure on the Province to provide necessary funding.

### BOX 4: PROPOSED CHANGES TO THE *DEVELOPMENT CHARGES ACT* IN BILL 73

In March 2015, the Ontario Government introduced Bill 73, the *Smart Growth for Our Communities Act*, in the Legislature that, if passed, would result in changes to the *Development Charges Act* that would go some way in addressing the legislated limitations to costs that are eligible for recovery through development charges.

These changes include:

- Removing the 10% discount for transit
- Creating regulatory authority to identify services for which planned service level calculation would replace the 10 year average
- Including waste diversion services and facilities as DC eligible costs
- Creating authority to change ineligible services by regulation rather than legislative amendment
- Preventing municipalities from collecting voluntary fees from developers outside of the DCA
- Requiring municipalities to consider use of area-rated levies, and create authority to mandate their use.

- Requiring detailed reporting for Section 37 density fees and parkland fees

The Province has also indicated that it will continue discussions on a limited number of issues not yet addressed under the DC Act, including planner service levels for transit and removal of 10% discount for other services.

### 3.1.3 Financial and Regulatory Risk Associated with Long Transition Period

In all areas outside of the City of Toronto and Peel Region, it is anticipated that there will be a long transition period to change development patterns from predominantly greenfield or suburban development to more intensified growth. That transition period carries with it financial and regulatory risk for municipalities that are carrying forward enormous capital costs. Paying for those early, large capital investments to encourage and facilitate intensified growth is contingent on the growth materializing when anticipated. That growth may also be contingent on promised provincial transit commitments. And finally, the ability of the municipality to successfully recover anticipated DC revenues at a future date is contingent on regulatory certainty that any changes to the DC Act over the 20-30 year period do not have an adverse impact on those revenues.

Predicting market demand and development twenty years in advance is fraught with difficulties. Cyclical economic downturns, rising interest rates, fierce competition amongst municipalities within the GTA, and changing provincial policy all have the effect of changing demand on the ground, sometimes very suddenly. Within this constantly changing environment, municipal staff must make multi-million dollar assumptions about infrastructure that, once in the ground, cannot be changed quickly.

For example, in preparation for anticipated growth, Waterloo Region will invest close to \$400 million in wastewater infrastructure at its Waterloo and Kitchener treatment plants. As this capacity must be in place in order for growth to occur, the growth related portion has to a great extent been funded through the issuance of 20 year debt, in advance

of recovering any DC revenue. The municipality bears the entire financial risk associated with the resulting debt servicing costs, which must be paid regardless of the timing or quantum of DC collections.

This financial risk or exposure is increased when dependent on certain provincial decisions, in particular Growth Plan population projections to which municipalities must conform (see section 2.1, above).

Provincial investment in transit and major roadways is another critical aspect of provincial decision making that is a key driver of growth representing either great promise or great risk to municipal infrastructure investments.

The Province has made good progress in articulating its vision of transit for the GTA area through Metrolinx' 'Big Move' GTA regional transit strategy. It has also made important funding announcements that have allowed municipalities to better evaluate likely growth scenarios.

There remain, however, significant transit and roadway decisions that will have a direct bearing on the timing of infrastructure decisions of regions and single tiers.

For example, in Durham Region, the extension of Highway 407 is expected to result in urban growth, including significant employment growth along the Highway 407 corridor in the north portions of Pickering, Whitby and Oshawa. (Durham Region, 2008) While this is welcome, the Region has estimated that it will need to finance in excess of \$80 million in intersection improvements over the next 10 years to accommodate Phase 1 and Phase 2 of the Highway 407 expansion project.

In York Region, the extension of the Yonge subway line is critical to the growth of the Richmond Hill/Langstaff Gateway Urban Growth Centre, one of the most important emerging intensification and transit nodes in the GTA. The Regional Centre is centrally located at the intersection of Yonge Street and Highway 7, at the convergence of five modes of transit. (York Region, 2011).

Certainty around provincial investments that have a direct impact on municipal infrastructure investments is critical to share the risk inherent in large capital outlays to support intensification. (see Section 1.5, and Recommendation 1. above).

### 3.1.4 Lag in DC Payment

Another challenge for those projects costs that are eligible for development charge (DC) recovery, is the lag between the capital investments needed for growth and the payment of DCs.

These types of cash flow issues are most common with intensified development. Intensified development often involves residential building developments which are financed differently than greenfield development. High density developments typically have a longer development process than that of lower density units, which results in a longer cash flow period to finance the project. As a result developments like condominiums do not have the ability to provide DC financing upfront. This is why DC collection is often delayed to the building permit stage. This lag in DC collection must be managed through a financing plan as it further exacerbates the funding gap between DCs received and the timing required for capital funding.

The short timeframe for DCs is also a contributing factor. A municipality that is replacing infrastructure to accommodate more intensified development may take the opportunity to oversize the infrastructure for growth that will occur beyond 2031. That oversizing cost may not be included in the existing DC but can be recovered in future DCs with interest. In the interim, however, it is either financed through debt, which uses up scarce debt capacity, or it can be financed through inter-fund borrowing.

The lag is costly. Peel Region calculated that it could save \$80-130 million in borrowing costs over 20 years by collecting at the subdivision approval stage rather than at the building permit stage.

Some municipalities are less concerned with this lag, as municipalities are permitted to recover the interest paid on debt through their next DC. Even if the interest is recovered from development charges, this is a cost to future residents that some municipalities would like to avoid. It also has the potential to make future development more expensive, which might lead to pressure from developers on the Province to remove interest payments from development charges.

## 3.2 Financial Strategies to Pay for Growth

In light of concern over risk exposure, limitations in growth related financing through DCs, and the long lead time for growth related investments, municipalities are each developing strategies to finance growth in the context of the Growth Plan. A considerable amount of analysis on financing options for growth is currently underway in GGH municipalities. York Region, Peel Region, Waterloo Region and the City of Hamilton are each undertaking comprehensive reviews of their financial strategies for growth. The results of these reviews will be made available over the next 1-3 years.

In the meantime, current financing strategies range from limiting the amount of growth-related infrastructure being financed through debt by deferring capital investments through a phasing strategy, and negotiating front-end agreements with developers either within or outside of the *Development Charges Act*.

### 3.2.1 Reducing Debt Financing by Deferring Growth-Related Infrastructure Projects

All municipalities, except Halton Region (see section 3.2.2, and Case Study #4, below), indicated that an increasing share of growth related costs are being financed through taxpayer-financed debt. A number of municipalities have initiated measures to reduce this growth-related debt, in large part by deferring infrastructure projects.

York Region's 2014 Long Term Debt Management Plan outlines a strategy to develop a more balanced approach to funding long term capital expenditures by reducing its reliance on debt. This is being done by deferring some significant DC-related capital expenditures, as well as by reducing tax levy-related debt by using reserves. York Region is building up its non-growth reserves by steadily increasing its annual reserve contributions. Reserves have been increasing by an increment equal to 1 per cent of the prior year's tax levy since 2006. In 2013, that was increased

by 0.2 percentage point, and will continue to increase by 0.2 percentage point each subsequent year, until it reaches 2 per cent of the prior year's tax levy. (York Region, 2014)

The City of Hamilton is also reviewing its capital investment plan to delay major works to reduce growth-related costs that it is incurring. For example, it has readjusted the timing of its wastewater treatment plant upgrades and expansion as a result of slowed growth following the 2008 recession.

### 3.2.2 Front Ending Agreements and other Financing Approaches

Halton Region has been the most active at employing front end financing approaches to pay for growth. A key principle of Halton Regional Council is that its development financing plan will not require the Region to exceed its own debt capacity levels and that the debt charges be fully recoverable from collection of DCs to ensure a zero net impact to taxpayers.

In 2005, Halton Region introduced negotiated voluntary payments by developers for the first time, in addition to development charges. Some developers disputed whether Halton Region had the authority under the *Municipal Act* to impose such surcharges. Since then, Halton has modified its approach to its front end surcharges.

The case study below describes the evolution of front-end financial agreements in Halton Region.

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#### CASE STUDY #4: HALTON REGION'S USE OF FRONT-END AGREEMENTS

The Region of Halton has had a long standing principle that an acceptable financing plan needs to be approved by Council prior to growth proceeding to protect the Region's tax and rate payers from impacts related to financing growth-related infrastructure.

This approach requires an approved DC by-law in place to ensure that all growth-related costs that can be recovered from growth under the DC By-law will be recovered, an approved capital plan to show Council's intent on proceeding with growth-related infrastructure and an approved financing plan to ensure Halton's tax and rate payers are protected from impacts related to such costs.

Halton's Development Financing Plan involves the following:

- (i) Once a DCs by-law is in place with an approved capital forecast which includes the capital forecast in the DC Background Study, the Region develops its allocation program that identifies how many units within the growth forecast would proceed to develop within a certain period of time.
- (ii) The Region then identifies the growth-related water and wastewater projects in the Council approved capital forecast that are required to service development for this Allocation Agreement. The total cost of these projects has two main components: a residential development funding share and non-residential development funding share.
- (iii) Finally, a financing plan is prepared to determine whether the prepayment of residential water and wastewater DCs prior to subdivision agreement is sufficient to fund the residential share of the water and wastewater growth-related infrastructure needed to service the development.
- (iv) The non-residential share would be interim funded by the Region from the Regional Revolving Fund reserve and debt, which would be recovered from future non-residential DCs.
- (v) This Revolving Fund reserve was established in the early 1990s to enable the internal borrowing from reserve and limit external debt to protect the tax and rate payers in the Region. The financing plan recognized that residential-led development would result in timing differences between the financing of non-residential cost share and when non-residential DCs would be collected as the residential development drives timing of the infrastructure.
- (vi) Once approved by Council, the Allocation Program would be implemented whereby residential developers would enter into a development agreement (under Section 27 of the DCA, 1997) to prepay their water and wastewater DCs.

For the most part up until 2004, each allocation program generated sufficient residential water and wastewater DCs from the early payment of water and wastewater DCs to fund the residential share of the required infrastructure costs.

Starting in 2005, circumstances changed as more significant and costly infrastructure was required to service growth in the allocation programs, associated largely with a new water treatment plant, a second feeder main, an accelerated road capital plan, a deep sewer and expansion of a wastewater treatment plant. This resulted in a funding gap between the residential funding share and the residential DC revenues generated from the prepayment of DCs for water and wastewater services.

It was at this stage that the Region of Halton began negotiating agreements with developers to pay infrastructure costs upfront, over and above DCs. Under these arrangements, development does not proceed until the Financial/Allocation agreements are executed and securities are received to the satisfaction of the Commissioner of Corporate Services and Regional Treasurer.

This began in 2005 with a voluntary payment of \$1,650 per unit in the 2005 allocation program authorized under the *Municipal Act*.

**Table 6: Increase In Front End Funding of Residential Development in Halton Region, 2008-2012**

SDE= Single Detached Dwelling Equivalent)	2008/09 Allocation	2012 Allocation	% Change
Development Charge per SDE	\$29,647	\$33,627	13.4%
Front End Funding per SDE	\$7,888	\$27,516	248.8%

During the 2008/2009 Allocation Program proposals were made by the Region to provide funding under the *Municipal Act*, some of which would be flowed back in subsequent Allocation Programs. However, the Building, Industry and Land Development Association (BILD) requested during Phase 2 of the 2008/2009 Allocation Program that any payment in addition to the prepayment of water and wastewater DCs was to be made under the DCA to ensure recovery of the payment. Accordingly, the Early Payment of Future DCs of \$7,888 made under the 2008/2009 allocation will be flowed back over the next 10 years through the 2012 DC Recovery Bylaw.

The Development Financing Plan for the 2012 Allocation Program proposed a similar early DC payment of \$27,516 per SDE that will be flowed back to the developers. Although the original structure included a recovery similar to the 2008/2009 allocation program, after further discussion, BILD insisted that this time the recovery be made under the Front-End provision of the DCA to ensure certainty of recovery.

**Table 7: Halton Region 2012 Allocation Program: Infrastructure to Support Growth Between 2012-2016**

Funding (\$million's)	Water & Wastewater	Roads	Total
<b>Developer Funding:</b>			
DC's	<b>\$310.4</b>	<b>\$266.1</b>	<b>\$576.5</b>
Front-ending	<b>\$340.0</b>	<b>\$45.2</b>	<b>\$385.2</b>
Sub-total	\$650.4	\$311.3	\$961.7
<b>Region Funding</b>	\$269.2	\$212.6	\$481.8
Total	\$919.6	\$523.9	\$1,443.5

In order to support the \$1.4 billion required to provide water, wastewater and roads for the 2012 Allocation Program and to address the funding gap, a total of \$961.7 million is needed from the development community which includes \$576.5 million in DC revenues to be collected from 2012 to 2016 under Halton Region's DC by-law. \$385.2 million will be provided from the participating residential developers under a front-ending agreement, above and beyond their share of DCs, which will be recovered from benefiting developers. The remaining \$481.1 million will be funded by the Region to support the state of good repair and to provide interim financing to support non-residential development and economic development.

GGH municipalities have been closely following the evolution of Halton's alternative financing and allocation model for growth. A number of municipalities are actively looking at alternative financing and front-end loading agreements as a means to reduce the debt burden of growth related projects. Peel Region in particular has expressed an interest in finding an alternative financing model that would help reduce its growth-related debt.

It should be noted that if passed, Bill 73, the *Smart Growth for our Communities Act* would prevent municipalities from collecting voluntary fees from developers outside of the DCA.

### 3.2.3 More Financing Strategies

**The City of Toronto** has employed several growth related financing strategies, including optimizing its DCs after a review showed that it was not recovering all the costs that were eligible.

In its DC by-law review, the City estimated \$3.2 billion in net growth related costs over ten years. The City's previous development charges by-law resulted in collection of about \$100 million per year. The new by-law adopted in 2014 increases development charge rates by about 70% for residential development (based on a two-bedroom apartment unit) and 25% for eligible ground level commercial (typically retail) development. These new rates are anticipated to increase development charge revenues to between \$170 to \$250 million annually over the five-year term of the by-law (actual revenues may differ from those forecast depending on the amount, type and timing of land development occurring in the City). At the time of the 2013 development charges bylaw review, it was estimated that approximately 60-70% of eligible growth-related costs would be recovered through development charges, based on the policies and rates adopted. (City of Toronto, 2013A)

Another significant change in the City of Toronto's growth financing strategy has been to increase the issuance of long term debt, to 30 years, from the usual 10 years.

**Durham Region** pays for its growth-related linear infrastructure, pumping stations or reservoirs on a cash basis, drawing from DC revenues and utility fees. It will only turn to debenture financing for large infrastructure projects. Durham is exploring the use of front ending agreements. Durham has often had to fund the lack of industrial DC revenue (that are due to market condition and not DCA restrictions) from its water and sewer user revenue and property taxes for transportation projects.

Part of **York Region's** debt financing strategy involves mitigating against fluctuating DC revenues, given its permitted growth related supplement towards its annual repayment limit (80% of a 3-year rolling average of its DC revenue). A decrease in DC revenues in any given year can result in less money available to service the debt. To mitigate this, the Region has adopted a policy to maintain DC reserve

balances that are at least equal to the next year's estimated DC-related principal and interest obligations. The Region also uses its reserves (non-DC) to fund DC-related projects and expenditures on an interim basis if necessary. (York Region, 2014)

Another approach, used by the **City of Hamilton**, is to have developers install the servicing, using best efforts agreements. In cases where the developer is installing infrastructure, best efforts agreements allow the City to recover infrastructure costs incurred by the developer when infrastructure is constructed that benefits someone else's land. The City collects the full amount at the time the initial land developer comes forward with a development application. The developer pays the up-front cost to construct the infrastructure. The City collects the share of the cost benefitting the adjacent land owner when the adjacent land owner wants to connect to the sewer or watermain, or when they apply for a development application. The City then reimburses the original land owner for that amount.

The **City of Toronto** has used Section 37 of the *Planning Act*, which allows a 'density for benefit' agreement that facilitates an additional payment or in-kind contribution from the developer in exchange for exceeding existing height or density limits. Between 2007-2011, it is estimated that the City of Toronto earned \$136 million in section 37 contributions from developers. (Moore, 2013) There has been some criticism of the way that municipalities have applied section 37, which has been considered 'ad hoc' and 'arbitrary' in some cases. (CBC, 2013) This can be addressed by creating protocols and policies around Section 37 that provides transparency and accountability and creates an established framework within which to negotiate density bonusing.

**Intensification incentives** in areas where there will be assessment uplift is another way to incent infill development. The City of Hamilton applies two development incentive programs to its downtown core- the Hamilton Downtown Multi-Residential Property Investment Program and the Hamilton Tax Increment Grant Program. In part in response

to the incentive programs, Hamilton saw an 11% property tax increase in its UGC area between 2008-2012. (City of Hamilton, 2013) The City is currently undertaking a review of its development incentive programs to determine areas where the highest assessment uplift would be anticipated with a view to targeting its programs more specifically to those areas, for example around the GO station.

Tax increment equivalent grants (TIEGs) are also used by municipalities including the City of Toronto. The TIEG serves as a subsidy from the municipality to the developer to offset remediation and redevelopment costs. Under Section 28 of the *Planning Act*, a municipality may forgive the tax increment arising from development over a period of years, e.g. 10, to stimulate development.

Other forms of uplift have also been advocated. Most recently urban design experts have been suggesting that the City of Toronto should follow New York City's lead in leasing the right to develop the empty space above a property, so called 'air rights'. This could be applied to development above transit sites such as train tracks. (Nursall, 2014)

One way to more closely align actual capital costs with DC rates is through area rated development charges whereby development charges are based on capital costs for a specific area rather than based on the average for the entire municipality. The use of area rating has been limited amongst upper tier GGH municipalities. Most consider the complexity involved in area rating to be overly burdensome. **Halton Region** has used **area rating** to differentiate its rates based on capital costs to service growth in specific areas. In 2012, Halton lowered its DCs in the intensification area, compared to the rates applicable to the Greenfield growth areas. Some lower tier municipalities have applied area rated DCs. Markham, in York Region, had up to 31 area specific charges, but has reduced these to 19, due to the administrative burden involved in maintaining them. Bill 73, the *Smart Growth for Our Communities Act*, will require municipalities to consider the use of area-rated levies, and create authority to mandate their use.

## 3.3 Bridging the Growth-Financing gap

### 3.3.1 Revisions to the *Development Charges Act*

There are at least seven ways identified by municipalities that the DC Act could be changed to make growth pay for growth.

#### i) Eliminate the 10-year historic average service level:

Municipalities that do not have a ten year average on which to base a calculation to recover DCs from new transit investments must not be penalized. The amendments to the DCA, 1997 for the Toronto and York Region subway including a forward looking service level average and removal of the 10% discount should be applied to all municipalities.

#### ii) Eliminate the 10% discount

The 10% discount is meant to reflect that existing residents and businesses benefit from new growth, so they should have to shoulder 10% of the burden. In reality, it simply puts 10% of growth costs onto the shoulders of taxpayers and provides developers with a 10% discount on DCs. This is contrary to the principle of growth paying for growth.

#### iii) Eliminate excluded services and exempted costs

There are a number of exclusions or exemptions in the DCA that municipalities are currently paying for and that they consider legitimate growth related infrastructure and services for which they should be able to recover costs. These include waste management service, hospital contributions, computer equipment, short life rolling stock, general Admin. HQ service, 1-2 residential unit enlargements, museums, tourism and related services, and the 50% industrial expansion exemption.

Waste services were included right up to the last round of changes to the DCA in 1997, and were removed because they were not considered an immediate priority for new developments. In light of the importance now placed on waste reduction, waste services must be included as a DC eligible cost. Many larger municipalities are investing in capital intensive waste management infrastructure driven

in part by the need to service growth in an environmentally acceptable way (e.g. blue box processing facilities, organics processing facilities, energy-from-waste plants).

**iv) Remove DCA clause that prohibits developers from losing financially as a result of an OMB appeal**

Section 16(4) prohibits municipalities from gaining, or developers from losing financially as a result of an OMB appeal. This serves as an incentive for developers to appeal municipal decisions. This limitation should be removed.

**v) Changes to the authority for Metrolinx to levy charges**

There is currently a process whereby Metrolinx invoices municipalities for expenses associated with its capital expenditures related to growth that then show as a liability on municipal balance sheets. Metrolinx has called on the Province to amend the *Development Charges Act* to create a GTHA-wide development charge to fund \$100 million per year of Metrolinx' regional transit investments. (Metrolinx, 2014) Commissioners are not in favour of the Province or its agencies, including Metrolinx, charging development charges, nor should Metrolinx be invoicing municipalities for costs incurred. These costs should be covered by the Province.

**vi) Simplify DCs**

DCs need to be made more responsive and flexible in face of changes. Some municipalities make changes to their background studies within the usual 5 year DC period. The complexity of DC background studies and bylaw makes such interim adjustments burdensome.

A simplified amendment process would allow municipalities to adjust their DC bylaw when it becomes apparent that costs will far exceed projections in the original DC background study. (see Case Study # 1). As growth costs escalate as a result of successful OMB challenges to its Official Plan, the City needs a more 'nimble', simplified method to adjust its DC background study to the new reality on the ground.

**vii) Longer Benefiting Period for Current DC By-law**

The infrastructure that municipalities deliver to accommodate growth has a service life of 60-100 years, yet the benefit period allowed extends only to 2031. As

the Growth Plan covers a period through to 2041, and cities like Toronto are now able to negotiate 30-year loan terms, a longer benefit period is needed. At a minimum, the benefit period could be extended to match the Growth Plan to 2041.

**\*Recommendation #7**

To ensure that growth pays for growth, the Province should amend the *Development Charges Act* as follows:

- removal of the 10% discount (Sec. 5.(1) 8.)
- removal of service level cap based on 10 –year historical average (Sec. 5.(1) 4.)
- removal of all other service exemptions such as waste facilities, parks.
- removal of 50% industrial expansion exemption (4. (2))
- removal of clause in the DCA that prohibits municipalities from gaining, or developers from losing financially as a result of an OMB appeal. (16. (4))
- Metrolinx should not be given authority to charge DCs for growth related infrastructure and should no longer be permitted to invoice municipalities for costs associated with Metrolinx assets.

### 3.3.2 New Municipal Taxation Powers

It has long been argued that large municipalities are the engine of the Canadian economy, but are treated like the poor cousin of the country, receiving on 11 cents to every tax dollar collected by the three levels of government.

Under the *Toronto Act* (2006), Toronto was granted new permissive taxation authority. Most notably, in 2008, Toronto enacted its new authority to introduce two new taxes, a vehicle registration tax and a municipal land transfer tax. The former tax was revoked by a new administration. The municipal land transfer tax (MLTT) currently injects over \$400 million annually in municipal revenue. While this revenue does not finance growth related projects directly, it does have the effect of freeing up considerable debt capacity for growth.

### 3.3.3 Federal and Provincial Funding Commitment

As highlighted in section 1.4, above, infrastructure funding commitments from the federal and provincial governments, particularly for transit, are critical to support growth in the GGH both from a servicing and an economic perspective. Traditionally these have been one-off funding programs, with no predictability or stability for municipalities. This has begun to change, with the introduction of permanent federal and provincial gas tax programs.

The lack of dedicated funding for transit is the greatest impediment to reaching intensification targets outlined in the Growth Plan. New sources of dedicated funding could include:

#### *i) Federal-Provincial Grant Programs and Gas Tax*

While these grants have assisted municipalities in financing important capital projects, municipalities are mindful of the reliability of such transfers and grants. At any time, facing budget constraints of their own, federal and provincial grants may be reduced. A case in point- so far the 2015 allocation of the Building Canada Program has almost exclusively gone to provincial projects, not municipal ones.

Many municipalities have benefited from existing federal and provincial infrastructure grant programs, such as the Building Canada Program. The importance of these programs cannot be overstated. Transfers from federal and provincial governments represent between 20-30% of municipal revenue, although much of this is due to cost sharing of social services rather than infrastructure grants.

An extremely important development over the last four years is the introduction of a gas tax sharing arrangement between municipalities and the Federal governments that became permanent in 2013. The federal gas tax program is a broad

based program that provides funding for 17 eligible project categories, including transit. It is distributed on a per-capita basis to all 444 municipalities in Ontario. Between 2005 and 2013 municipalities in Ontario received almost \$4.9B under the federal gas tax program, with an additional \$3.8B expected between 2014 and 2018.

The Ontario Government has also introduced a gas tax sharing arrangement with Ontario municipalities to share 2 cents per litre of gas tax. The program became permanent in 2013. The Ontario program is focused exclusively on improving and expanding public transit. Since its inception, more than \$2.7 billion in Gas Tax funding has been committed to Ontario municipalities.

Providing a greater share of gas tax revenues to municipalities dedicated to transit would further assist municipalities in meeting their public transit obligations and supporting the Growth Plan.

#### *ii) Permanent, stable federal and provincial funding for transit over and above the gas tax.*

The Toronto Board of Trade called on the Federal Government to introduce a \$1.8 billion permanent national transit fund in 2009. In its 2015 budget, the Federal Government announced its intention to introduce a permanent public transit fund of \$250 million beginning in 2017. By 2019 this fund would make \$1 billion available annually to large municipalities through PPP Canada Inc. to promote P3s and other financing mechanisms involving the private sector. Although there are few details provided in the Budget, it is expected that this will be a lending mechanism rather than a grant mechanism. Although the amount falls short of what the FCM and Board of Trade have been calling for, it is a step in the right direction.

(see Recommendations #1 and #2, under Section 1.5, above)

### 3.3.4 Increasing the Revenue Side of Planning

While there is much focus on the cost of financing growth related infrastructure, there is less attention paid to the revenues that can be accrued by evaluating the revenue side of development decisions. Municipal planners should be aware of and take the cost/revenue characteristics of different types of development (i.e. based on location, density) into account as part of the planning process.

*i) Evaluate the assessment value of development before planning decisions are made*

A case study in North Carolina showed how a downtown mixed used development brings in ten times the property tax revenue and uses a fraction of the land area compared to a suburban big box store. (Minicozzi, 2012) Explicitly calculating the property tax revenue from planning in advance of decisions being taken could result in enormous dividends for municipalities.

*ii) Land Value Capture*

To increase revenues from new urban development, some municipalities are exploring land value capture like air rights and auctioning uplift. A land value capture mechanism can come in the form of tax increment financing, a special transit DC charge, a benefiting area tax, or a Current Value Assessment (CVA) uplift charge (OneCityTransitPlan, 2012). The revenue may be collected in a dedicated transit fund. There was not consensus amongst participating municipalities on the use of land value capture (LVC) mechanisms. Particularly among two tiered municipalities, there was concern that the application of LVC would have financial sustainability consequences as the upper and/or lower tier municipality would be at risk of losing out on future assessment growth to fund municipal services to support a growing community.

Air rights, that is, high rise development situated over major transitways, has been advocated by urban design professor David Lieberman for areas like the rail yards around Union Station in downtown Toronto. (Nursall, 2014)

The UK Government is testing land value auctions on developments. (Ricketts, 2011) These are already in use in Colombia. Land auctions seek to capture a greater share of the land value uplift created by the granting of planning permission than would otherwise be captured without an auction. The difference between the price set by the landowner and the auctioned price is captured by the municipality that runs the auction.

These and other land value capture mechanisms could be considered in urban growth centres.

However, the revenue may be collected in a dedicated transit fund. There was not consensus amongst participating municipalities on the use of land value capture (LVC) mechanisms. Particularly among two tiered municipalities, there was concern that the application of LVC would have financial sustainability consequences as the upper and/or lower tier municipality would be at risk of losing out on future assessment growth to fund municipal services to support a growing community.

# 4. INFRASTRUCTURE EFFICIENCY AND APPROPRIATENESS

## Key Points

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- To get a full picture of the financial impact of infrastructure decisions, all costs should be taken into consideration, including upfront capital costs, ongoing operations and maintenance costs and replacement costs.
  - In addition to costs, evaluating the benefits and risks associated with infrastructure decisions provides more complete information on which to build efficient and appropriate infrastructure.
  - Integrating consideration of infrastructure needs and different options at the beginning of the land use planning process can contribute to greater efficiencies.
  - Ontario Municipal Board decisions that overturn municipal Officials Plans have enormous infrastructure cost implications.
  - The length and complexity of provincial approvals for municipal infrastructure undertakings can result in delays that in turn add to costs.
- 

## 4.1 Infrastructure and Growth Costs

The deployment of infrastructure for growth is costly, risky and, once built, difficult to retrofit or reverse. Consideration of the efficiency and appropriateness of infrastructure being deployed to support growth should be an essential step in any municipal growth plan, with a view to reducing costs, minimizing risk exposure, and calculating benefits or return on investment. Without such a step in the infrastructure planning process, municipalities are at risk of making decisions that result in inefficient, inappropriate infrastructure with hefty operations and maintenance and end of lifecycle costs.

The days of significant provincial grants for municipal infrastructure, particularly water and wastewater, resulted in some fairly inefficient and inappropriate infrastructure, like servicing a hamlet that the tax base and user fees could never support. The financial legacy of these decisions are still being felt today. Now that municipalities pay for their infrastructure largely through user rates, they are held more accountable for how infrastructure money is spent. However the sophistication with which municipalities measure efficiency and appropriateness of infrastructure before decisions are made varies. One participating municipality,

Peel Region, has undertaken a multi-year exercise in evaluating the efficiency and appropriateness of its growth infrastructure through to 2041, a process that is ongoing. A product of this evaluation, a comparison of the costs of servicing areas of Peel at different densities, can be found in the Peel Case Study, below.

In addition to internal assessments of costs, risks and return on investment, there are external factors that can also have the effect of increasing infrastructure costs. For instance, OMB decisions that go against Official Plans that have the effect of drastically increasing or decreasing densities, can have an enormous impact on infrastructure costs. Likewise, the time and complexity of provincial approvals processes also add to delays and cost overruns.

## 4.2 Infrastructure Efficiency

The measurement of how efficiently the capacity of infrastructure is used is one way to maximize benefit and reduce costs associated with growth-related infrastructure. The measurement of efficiency is more established in the area of transit and transportation infrastructure, which lend themselves more easily to standardized measurement. There are some standardized metrics to measure water, wastewater and stormwater infrastructure efficiency, but the differences in systems make easy cross comparison of such metrics less reliable.

Nevertheless, some sectors and jurisdictions have developed evaluation methodologies to measure the efficiency of different types of infrastructure, as outlined below.

### What is meant by Infrastructure Efficiency?

From a cost perspective, efficiency is generally defined as the optimization of services at the lowest possible cost.

However, as infrastructure must perform a number of functions, measurement of efficiency cannot be reduced to cost alone. In addition to cost efficiency, the operational efficiency, the environmental and energy efficiency, as well as the social or human aspects of efficiency (e.g. service levels) must be factored in. It is also important to note that infrastructure must also build in capacity for redundancy.

What is needed, therefore, is a metric that incorporates a variety of data and variables (Sullivan, et al, 2010). Such an efficiency metric or index could serve to reduce costs and improve service delivery.

Transportation and transit planners use multi-functional efficiency metrics. Transit and transportation efficiency is typically measured by factoring in capacity utilization (maximizing load of a system or vehicle), emissions reduction, land use improvement, and operational and modal coordination. With these standardized measurements, planners are then able to increase roadway capacity and flow rate or transit vehicle utilization and decrease travel time through improved planning and the application of new 'smart' technologies. (Xin, et al, 2006).

Importantly, the relationship between more intensified land use planning and transit and transportation efficiency has been well established (Sullivan, et al, 2010). This is particularly true of transit, which is dependent on specific densities to be financially viable. While the relationship to land use planning is acknowledged, it is not integrated in a methodical or rigorous way as transit in determining water and wastewater infrastructure delivery.

Comparing the efficiency of water and wastewater projects tends to be determined by the length and cost of linear infrastructure. There have been multiple site-specific studies that show that using less linear infrastructure reduces costs in more intensified growth. However, linear infrastructure is only part of the picture. It is important to take other factors into account when comparing different urban forms and the efficient use of infrastructure.

In particular, it is important to recognize that there are trade-offs with respect to intensified development vs. greenfield development. For instance, on the positive side, a more compact urban form usually results in less water usage (Western Resource Advocates, 2003) and as a result less sewage, freeing up treatment capacity. At the same time, more compact development may create a larger problem with respect to stormwater runoff due to more paved surfaces and the lack of space for stormwater management systems.

The location of so called 'vertical' infrastructure, including pumping stations and treatment plants, as well as rights of way must also be factored in to an efficiency calculation. In a region as developed as the Greater Golden Horseshoe, most of these assets are already located, so efficiencies that could have been gained through a more efficient configuration of these assets, for example along watershed lines instead of municipal boundaries, are largely now out of the question.

#### **BOX 5: DIMINISHING RETURNS OF INTENSIFICATION WITHIN EXISTING ESTABLISHED AREAS**

It is often assumed that in the City of Toronto it is more efficient to build, operate and maintain infrastructure through intensification compared with other types of development. While that may be true to some extent, there are diminishing returns to intensification. For the City of Toronto's downtown core, the underground space is often congested with existing municipal water systems, a plethora of other utilities and telecommunication lines, and in some cases underground pathways. These other services make access to deeper lines, such as sanitary sewers, more difficult.

Unlike green field developments, work in established areas must take into account the disturbance to existing residents and business. Accommodation to existing uses limits the work time and construction methods which can result in longer construction times and higher costs.

Additionally, developments that drain into combined sewers (which cover 25% of the City of Toronto, including the downtown core) face another restriction because the Ministry of Environment and Climate Change (MOECC) do not allow increased flows into the combined sewers.

Calculating specific numbers associated with the diminishing efficiency of intensification is a worthwhile task, but would take time and resources that are unavailable at Toronto Water.

There are few large-scale comparisons of infrastructure costs. However, one such comparison was undertaken for the GTA region. In 1992, the Ontario Government and the seventeen area municipalities of the GTA worked to reach a consensus on a future vision of the GTA. As part of this exercise, a report from the Office of the GTA undertook a comparative analysis of infrastructure costs associated with different GTA urban structure concepts, from more concentrated intensification (central) to less intensified (nodal) and even less intensified (spread) (Office of the GTA, 1992).

Figure 12: GTA Urban Structure Concept

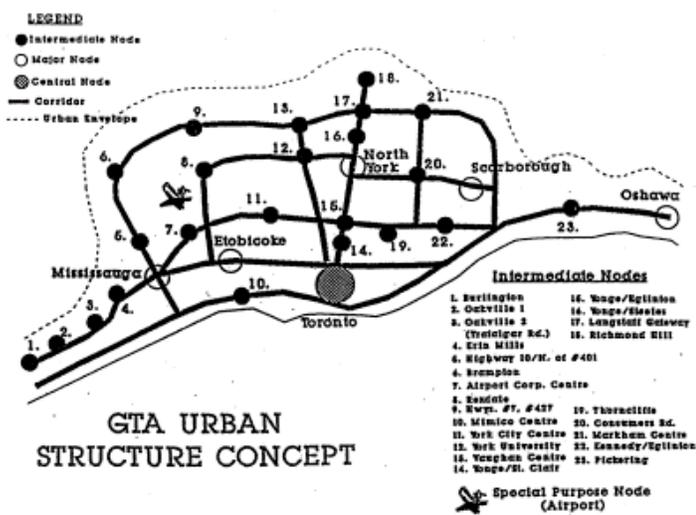


Table 8: GTA Urban Structure Concept 1990 (Office of GTA, 1992)

	Spread	Central	Nodal
Urbanized Area (km <sup>2</sup> )	2,430	1,870	2,110
Total % Urbanized	34%	26%	29%

Table 9: GTA Urban Structure Concept Estimated Capital Costs (\$Billion) (1990) (Office of GTA, 1992)

	Spread	Central	Nodal
<b>Transportation</b>			
Transit	7.2	14.4	11.6
Roads	19.9	13.2	17
Hard Services	19.5	12.7	14.7
Environment	3.1	3.1-8	3.1-6.7
Human Services	29.6	30.4	28.8
Total	79.3	73-8-78.7	75.2-78.8

This type of analysis of the relative efficiency of one development scenario over another is useful at the municipal scale to determine where development should proceed next. The Region of Peel has undertaken such an assessment of the relationship between urban form and infrastructure efficiency at a more local level. This type of analysis has been undertaken to help the Region determine where it should focus growth. The case study below explores costs associated with both urban land form and construction processes to arrive at a comparative cost analysis of infrastructure in different types of development. It concludes that more intensified growth in these particular geographic circumstances uses infrastructure more efficiently and is less costly. Interestingly, it also notes that construction costs are on average twice as much in more intensified development as a result of traffic concerns, relocation, tunneling, and the slower speed of installation.

### CASE STUDY #5: ASSESSING GROWTH INFRASTRUCTURE FINANCING AND IMPACTS WITH A VIEW TO DETERMINING WHERE MOST GROWTH SHOULD OCCUR IN PEEL REGION

Historically, the Region of Peel has generally experienced residential growth by way of low density, Greenfield expansion towards the north, northeast/west in Mississauga, Brampton and Caledon with some infill/intensification on a case-by-case basis. This Greenfield growth has extended outward from the existing water and sewer systems, requiring

local and trunk extensions to the water and wastewater infrastructure. Once the demand and flow from growth exceeded the trunk infrastructure capacity, major twinning of water feeder mains and trunk sewers was required.

As the Greenfield growth continues to extend to the northern limits of the Region of Peel systems, the extension and expansion of the trunk conveyance systems is becoming more substantial and costly. As part of Places to Grow, and also based on development opportunities in the Region of Peel, more growth and intensification is being seen in existing built areas. As such, the Region of Peel investigated the long term cost impacts of residential growth that is focused within either:

- Intensification Areas – currently contain existing water and wastewater servicing and are generally further south; closer proximity to the trunk infrastructure including the Water and Wastewater Treatment Facilities
- Greenfield areas – require new local servicing as well as potentially additional facilities (reservoir water/wastewater pumping stations), water transmission mains and trunk sewer conveyance infrastructure.

This Case Study provides the relationship between infrastructure needs and population density within Peel and relative cost-effectiveness of infrastructure construction. This information is intended to support growth management and future planning discussions.

### Infrastructure Density Analysis

The first step in the Intensification vs Greenfield analysis was to determine the total quantity of infrastructure required for the different types of growth. The approach, developed by GM BluePlan, was based on using actual data and conditions within the Region of Peel.

Three existing Region of Peel sample areas were used for the Infrastructure Density Analysis; two Greenfield Areas (Greenfield 1 and Greenfield 2) and one existing Intensification Area, identified in Figure 13. These areas were selected based on being representative of a range of densities.

Figure 13: Peel Region Density Sample Areas



For each Service Area, the following information was extracted from the Region's GIS and land use shapefiles:

- Existing (2013) Population & Employees based on Region of Peel Best Planning Estimates
- Approximate Gross Area (ha)
- km of local and sub-trunk watermain
- km of local and sub-trunk sewer
- Population Density (calculated)

The three service areas selected were representative areas of approximately 200 ha with varying population/employment density. The Population Density was calculated for each area from the Existing Population, Employment and Approximate Gross Area.

Next, the gross land area required for a sample population of 50,000 people was calculated based on the three Service Area Densities. In addition, the total km of watermain and sewer were calculated that would be required to service the 50,000 people within each Service Area Density. This information is summarized in Table 1

Table 10 demonstrates the potential range of land and infrastructure needs to support growth of 50,000 people. This also shows the sensitivity of three different population densities and the length of watermain and sewer required to service the same number of people within areas of varying population density.

This information, used as a representative Infrastructure density, can then be extrapolated to determine an approximate amount of infrastructure length to support any given long term growth estimate within either Greenfield or Intensification Areas.

This concept of Area Density and land need to support the 50,000 people sample size is depicted graphically in Figure 13. The three squares on Figure 13 show the actual area required (~1,163 ha, ~667 ha and ~397 ha respectively for Greenfield 1, Greenfield 2 and Intensification) for each density to accommodate 50,000 people.

### Capital Costs – Local

The next step in the Intensification vs Greenfield Growth Analysis was to determine the long term cost impacts of growth at the various densities. These densities are representative of the potential capital investment required by the Region of Peel to support growth to 2051 and beyond.

In order to determine the approximate servicing costs for each Service Area type, a unit cost rate was applied to the length of watermains and sewers for the local and sub-trunk lengths required for servicing. The unit cost rate ranged from approximately \$700-1,200/m for Greenfield Areas. This unit rate was uplifted by a factor of two for Intensification Areas. This uplift factor is intended to be a high level assumption to capture the additional costs for construction within built up areas. These uplift costs include additional utility relocation, traffic management, restoration, access, approvals, etc. Actual intensification projects may have variable results for each uplift component. As such, an assumed conservative factor of two was used for this analysis.

Based on the unit rate calculation plus Engineering and Contingency, the Total Capital Investment for water and wastewater servicing of 50,000 people assuming Greenfield 1, Greenfield 2 and Intensification Area densities is shown in Table 11.

Table 10: Peel Region Density Impacts on Water and Sewer

Service Area	Population	Density <sup>1</sup>	Land Required <sup>2</sup>	Watermain Length <sup>3</sup>	Sewer Length <sup>3</sup>
Greenfield 1	50,000	43	1,163 ha	152 km	109 km
Greenfield 2	50,000	75	667 ha	102 km	84 km
Intensification	50,000	126	397 ha	36 km	28 km

1. Calculated density is approximate based on ~200 ha sample areas and 2013 population and employment. Additional sample areas may yield slightly different densities depending on site specific factors
2. Land required is approximate gross land area only. Variations based on natural features, road ROW requirements, etc will affect land needs.
3. Watermain and Sewer Lengths are for local and sub-trunk infrastructure only (≤450 mm watermain, ≤525 mm sewer)

Table 11: Peel Region Intensification vs Greenfield Preliminary Costing

Service Area	WATER – PRELIMINARY ESTIMATES				
	All Watermains	SOGR Watermains	Total Capital Investment	Developer/Rate Share	DC Share
Greenfield 1	\$160M	\$14M	\$174M	\$119M	\$55M
Greenfield 2	\$110M	\$14M	\$124M	\$74M	\$50M
Intensification	\$100M	(\$14M)	\$86M	\$56M	\$30M

\*SOGR=state of good repair

Service Area	SEWER – PRELIMINARY ESTIMATES				
	All Watermains	SOGR Watermains	Total Capital Investment	Developer/Rate Share	DC Share
Greenfield 1	\$95M	\$8M	\$103M	\$78M	\$25M
Greenfield 2	\$70M	\$8M	\$78M	\$58M	\$20M
Intensification	\$55M	(\$8M)	\$47M	\$32M	\$15M

*Servicing Costs are for local and sub-trunk infrastructure only*

\*SOGR=state of good repair

Figure 14: Greenfield vs. Intensification

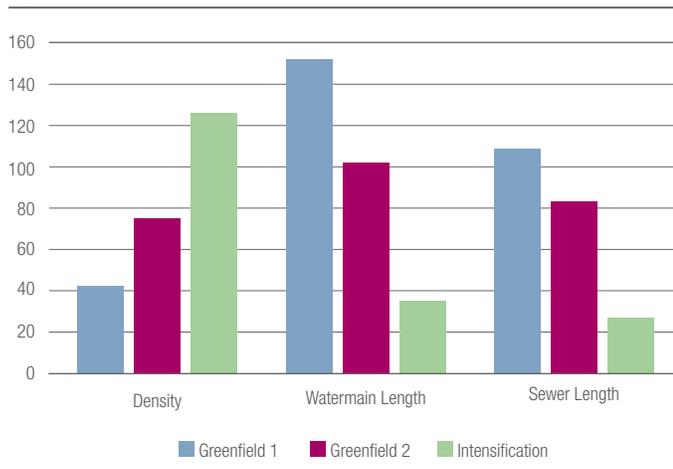
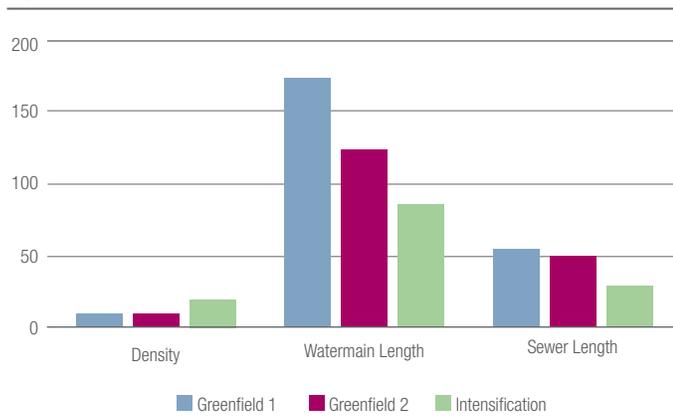


Figure 15: Greenfield vs. Intensification



A principal basis for the analysis is to recognize that during implementation of growth-related infrastructure, the Region of Peel must continue to maintain and invest in existing water and wastewater systems. This asset management concept and non-growth related infrastructure is referred to as State of Good Repair (SOGR). Even if Greenfield growth proceeds, existing systems must be maintained and upgraded over time. With respect to intensification, there is opportunity to efficiently combine the SOGR program with the growth related program.

In addition to the base construction cost of the infrastructure (“All Watermains”, “All Sewers”), a State of Good Repair (SOGR) component must be considered within the full life cycle analysis of the Greenfield vs Intensification options.

In the case of new development within Intensification Areas, it is anticipated that the new/upgraded watermains and sewers that are triggered by growth will also provide a benefit to existing users. These new linear works will be replacing some existing infrastructure that, in some cases, is approaching the end of its useful life. The negative cost in the SOGR Watermains and SOGR Sewer columns represents a baseline savings/benefit of construction of new intensification infrastructure, whereas the costs added to Greenfield 1 and Greenfield 2 represent the additional cost for the SOGR replacement of watermains/sewers that will still be required.

In other words, it is assumed that the replacement/upsizing of existing infrastructure within intensification areas will replace some pipes that would have needed replacement under the State of Good Repair Program, thus providing a net cost benefit. If the new infrastructure is being built in Greenfield areas as opposed to within Intensification areas, the SOGR program still needs to be implemented for the existing pipes and will need to be funded, thus the cost addition to Greenfield scenarios.

The analysis in Table 11 and related graphs depicted above are further summarized as follows:

- The “All Watermains/Sewers” costs represent the cost of servicing for the length of pipe within each growth area category. Lower density results in more land result in more pipe and corresponding more costs.
- “SOGR” represents the asset management program being undertaken within the sample area within the built boundary. It was estimated assuming 1.5% yearly capital replacement of the value of infrastructure in the sample area over a 20 year period and at only 50% of the total program.
- The “Developer/Rate Share” costs represent the cost for infrastructure for sizes below the Development Charges threshold (ie: less than 400 mm diameter watermains, less than 375 mm sewers) that would be the responsibility of the developer through installing local services or through the rate-supported budget.
- The “DC share” costs are the remaining costs for larger diameter infrastructure financed through the Development Charges.
- The Greenfield 1 category (lower density) is considered to be the least efficient use of infrastructure as it generally requires the largest amount linear infrastructure per person serviced. Over and above this infrastructure, the SOGR program would need to be implemented. Of the total local and subtrunk infrastructure, only approximately 25% would be attributed to development charges. As such the bulk of costs would be attributed to the developer.

The Greenfield 2 category (higher density) requires less length of pipe than Greenfield 1. Over and above this infrastructure, the SOGR program would also need to be implemented. Of the total local and subtrunk infrastructure, only approximately 25% would be attributed to development charges. As such the bulk of costs would be attributed to the developer.

The intensification category is considered to be the most efficient use of infrastructure as it generally requires the smallest amount of linear infrastructure per person serviced, however the unit cost of this pipe would be more than Greenfield. The SOGR program would be combined with the new infrastructure creating a credit to the overall program. Given the local nature of the infrastructure, the bulk of the costs would be attributed to either the developer or the rate budget.

When reviewing and comparing the overall benefits, constraints, advantages and disadvantages of intensification vs greenfield growth, there are varying impacts across the local systems, trunk systems, costs and overall implementation. A preliminary analysis of this review is presented below in Table 12.

Overall, the Local Infrastructure Analysis shows the preliminary construction and life cycle costs for the local water and sewer infrastructure within sample areas of the Region of Peel. These costs demonstrate the range of Capital Investment for servicing growth within new Greenfield Growth Areas vs built up Intensification Areas. The analysis has also presented comparative benefits and constraints of servicing intensification or Greenfield.

There are many other factors that should also be considered including lifecycle operations and maintenance costs, coordination with other utility programs, coordination with other community initiatives as well as coordination with other transportation/transit programs such as LRT.

Notwithstanding, the Region of Peel sample area analysis approach indicates that there is benefit from both an infrastructure program implementation perspective as well as a cost perspective for considering intensification growth.

Table 12: Intensification Vs Greenfield Preliminary Comparison

	Intensification	Greenfield
<b>Local Systems</b>	<ul style="list-style-type: none"> <li>Maximize use of existing infrastructure</li> <li>May require capacity upgrades</li> <li>Upgrades may be combined with asset management (state of good repair) work</li> <li>Range of impacts depending on location of intensification</li> </ul>	<ul style="list-style-type: none"> <li>All new local systems required</li> </ul>
<b>Trunk System Impact</b>	<ul style="list-style-type: none"> <li>Will trigger treatment plant and intake/outfall upgrades</li> <li>Impact primarily to south truck systems</li> </ul>	<ul style="list-style-type: none"> <li>Will trigger treatment plant and intake/outfall upgrades</li> <li>Impact to south trunk systems</li> <li>Impact also to north trunk systems including pipes, pumping stations and storage facilities</li> </ul>
<b>Servicing Costs</b>	<ul style="list-style-type: none"> <li>Generally higher unit costs due to urban working conditions, traffic management, restoration, utility coordination, etc.</li> <li>Costs may offset asset management (state of good repair) related costs</li> <li>Long term operating and maintenance costs not significantly increased (same level of infrastructure)</li> </ul>	<ul style="list-style-type: none"> <li>Generally lower unit costs due to unobstructed construction and flexible installation timing</li> <li>No offset for asset management (state of good repair) program</li> <li>Long term operating and maintenance costs increased (increased level of infrastructure)</li> </ul>
<b>DC Costing Review</b>	<ul style="list-style-type: none"> <li>Intensification infrastructure costs should be considered growth servicing and DC eligible</li> <li>Balance for benefit to existing development will be required</li> </ul>	<ul style="list-style-type: none"> <li>Only trunk infrastructure costs are DC eligible</li> </ul>
<b>Overall Coordination</b>	<ul style="list-style-type: none"> <li>Continued need to protect for infrastructure alignments and facility sites</li> </ul>	<ul style="list-style-type: none"> <li>Continued need to protect for infrastructure alignments and facility sites</li> </ul>

## 4.2 Impediments to Infrastructure Efficiency

There are a number of impediments to achieving greater infrastructure efficiency, including the sequence of decision making within a municipality, the dynamic between upper and lower tier municipalities within regions, the authority of the Ontario Municipal Board to overturn Official Plan direction, lengthy approvals processes, the geographic location of municipalities, and legacy issues related to infrastructure decisions of the past, that all contribute to the efficiency, and cost, of infrastructure.

### 4.2.1 Planning Decisions Come Before Infrastructure Decisions

The sequence of decision making in growth related approvals begins with a concept, as articulated in the Official Plan. The costs and configuration of infrastructure are generally worked out in an infrastructure master plan, which is prepared after the Official Plan is approved by Council. More granular assessments of infrastructure costs are done at the infrastructure master planning stage and the DC background study stage.

This sequence of decision-making that puts land use planning well before infrastructure planning means that the opportunity to find infrastructure efficiencies through land use decisions is largely lost. The basic assumptions about the land use form are already taken by the time infrastructure considerations are factored in.

In the words of one public works commissioner, “We are told what to build, and we build it”.

Assessment of existing infrastructure capacities and related servicing cost should be factored into planning upfront. Municipalities should know the costs of accommodating development in different locations, including existing urban areas, and include this information in the planning process.

Consideration of infrastructure costs earlier in the land use planning process should include not only upfront costs, but operating and maintenance and full lifecycle costs. Even at

the secondary plan stage, there is rarely an analysis of the lifecycle costs of the infrastructure that is needed to support the development.

As explained in a brief on ‘Managing Urban Sprawl’, by Sustainable Prosperity,

‘Little consideration is given to the requirements of a particular type of urban form in terms of the future financial impacts... Policy makers need to be aware of the immense lifecycle costs of maintaining the infrastructure and services necessitated by inefficient growth patterns.’  
(Sustainable Prosperity 2012)

These future financial impacts, if unassessed in advance, weigh heavily on future tax payers for generations.

### 4.2.2 Municipal Governance

The dynamic between upper tier and lower tier municipalities is another factor that can impede greater scrutiny of decisions that affect the efficient use of infrastructure. Outside of the City of Toronto and the City of Hamilton, development occurs in a two tier governance structure in the six regional municipalities that make up the Greater Golden Horseshoe. Each regional structure has its own dynamic, but a common thread across all regional governments is a reluctance to interfere in what are planning decisions of local area municipalities.

Political pressure from lower tiers can be a significant factor. As one planning commissioner commented, “The political reality is that we have multiple lower tiers that want to grow”. However, the cumulative effect of lower tier land use planning decisions that are misaligned with the regional growth plan is a growing disconnect between the longer term vision of growth and the reality on the ground. This can result in inefficient deployment of regional infrastructure.

Managing all areas where growth is set to occur and aligning master plans with future and real ‘on the ground’ numbers is something of a challenge for regional governments.

### 4.2.3 OMB Decisions Overturn O.P. Direction

Even when municipalities have undertaken a major assessment of infrastructure needs and costs over the long term, assessing capacity constraints and needs in the O.P., these best laid plans can be overturned almost as soon as the O.P. is printed. In the case of the City of Toronto, the downtown area planned in its latest O.P. was challenged repeatedly at the Ontario Municipal Board (OMB). As a result of OMB decisions, density in the downtown will reach four times what was planned for in Toronto's O.P. The City of Toronto must now reconsider its entire infrastructure plan and reopen its environmental assessment, adding to the cost of the infrastructure.

As was discussed in Section 2.2, above, provisions limiting appeals of O.P.s in Bill 73, if passed, will go some way in addressing this issue.

#### **Recommendation #8**

The Province should limit appeals of Growth Plan-related OPs with significant infrastructure cost implications through amendments to the Planning Act and/or the Places to Grow Act.

### 4.2.4 Lengthy Approvals Processes

Another contributor to infrastructure costs is lengthy provincial approval requirements for growth-related infrastructure.

In particular, municipalities have encountered challenges when fulfilling their obligations under the Ontario *Environmental Assessment Act* (EAA). The Municipal Class Environmental Assessment (MCEA) planning process has been the mechanism by which municipalities have historically fulfilled their *Environmental Assessment Act* requirements, but the process has become cumbersome.

The MCEA planning process is intended to be an opportunity to compare and contrast options and alternatives for addressing a problem in the context of the full definition of the environment (technical, social and natural environment). It is intended to be a high level review. However, over time, it has become a vehicle for the public to air grievances through Part II order requests, in some cases

where they have not been successful in defeating earlier decisions about development. For example, infrastructure projects have encountered Part II order requests for water and/or wastewater treatment plant expansions and the requester's issue is dissatisfaction with the level of growth in the community.

In response to these requests, review agencies are requiring more detailed engineering design work than what was previously required in the MCEA. Members of the public have used the MCEA planning process as a mechanism to halt or delay development.

These Part II Orders, that must be evaluated for its merits by Ministry of Environment and Climate Change staff and ruled on by the Minister of the Environment and Climate Change, caused average delays of 300 days per request in 2013, even though each one of them was ultimately denied.

There is consensus across the industry that the lack of a timely response by the MOECC to Part II Order requests is significantly delaying delivery of needed infrastructure projects, and adding to infrastructure costs and staff time.

The RPWCO has proposed to MOECC and other relevant ministries that a regulation that mirrors Ontario Regional 355/11: Transit Projects and Metrolinx Undertakings, the Transit Projects Regulation) be enacted to expedite growth-related water, wastewater and road infrastructure projects. Regulation 355 recognizes timely delivery of transit infrastructure as a priority for the Province and provides a streamlined process to fulfill EA requirements limited to six months. A 30-day review period is required, however, if there is an objection to the proposed project, the Minister must provide notice to the proponent within 65 days indicating whether the project may proceed, and whether any further conditions must be fulfilled.

Addressing Part II Order requests in an expeditious manner is needed to ensure delivery of growth-related infrastructure in a timely manner and to reduce costs.

#### **\*Recommendation #9**

The Province should introduce reasonable fixed timeframes for provincial decision points in the environmental assessment process, including Part II bump-up requests.

## 4.2.5 Legacy Costs Contributing to Infrastructure Inefficiency: State of Good Repair, Historical Infrastructure Decisions

The legacy of poorly maintained infrastructure and inefficient planning decisions that resulted in low density development contribute to growth-related infrastructure costs.

The importance of maintaining infrastructure in a 'state of good repair' is now well established amongst GGH municipalities, and each has established 'state of good repair' reserves to continuously improve the state of their infrastructure. Nevertheless, for many years, infrastructure, particularly pipes in the ground, were not adequately maintained. This has a direct bearing on the cost of growth-related infrastructure where existing infrastructure is upgraded and its capacity increased to support new growth. Although the City of Ottawa is outside of the GGH, its recognition of this fact explains the point well.

*'A strategy for allocating capacity for growth... must recognize the interconnection between its objectives and the city's infrastructure rehabilitation program where in certain locations or under certain conditions, lack sufficient capacity and which may be in need of major rehabilitation due to physical deterioration.'* (City of Ottawa, 2008)

The City of Hamilton identified this challenge in relation to intensified development along its waterfront. The City is already working with the Ontario Ministry of the Environment and Climate Change to address water quality issues in Hamilton Harbor related to urban stormwater. The addition of the waterfront development will create a 'bottleneck' at its combined sewage interceptors. The City is negotiating with the developer to install servicing to address this bottleneck using a 'best efforts' agreement.

Durham Region has also identified its limited sanitary sewage capacity in two of its urban growth centres, downtown Oshawa and downtown Pickering, as a major cost and impediment in achieving Growth Plan density targets.

These examples illustrate the importance of recognizing the close interlinkages and associated costs between servicing new growth and maintaining existing infrastructure in the

context of intensified growth in urban areas. By maintaining its existing infrastructure in a 'state of good repair', a municipality can reduce its growth-related infrastructure costs for infill development.

A second 'legacy' cost that contributes to growth-related infrastructure costs is inefficient planning decisions in support of low density communities that resulted in the inefficient use of infrastructure. For instance, decisions to service isolated communities in the past come back to haunt municipalities when new development in these communities require the replacement or twinning/expansion of long tracks of linear infrastructure to increase servicing capacity.

## 4.2.6 Geography and its Influence on Infrastructure Efficiency

A municipality's geographic location can have a significant impact on its infrastructure efficiency. The GGH region has an enormous advantage over many regions given its close proximity to the Great Lakes. This provides a plentiful water source from which to draw drinking water and in which to discharge treated effluent. Of the eight Growth Plan upper and single tier municipalities, six of them are on the shoreline of one of the Great Lakes and draw their water directly from the Great Lakes and discharge into them or their tributaries. This provides a distinct advantage with respect to the length and cost of linear water and wastewater infrastructure. Two municipalities, York Region and Waterloo Region, do not share this advantage. This is reflected in both the configuration and resulting cost of their water and wastewater systems.

Another key difference is the degree of urbanization vs rural settlements within the municipality, and the amount of land that is captured by provincial preservation policies like the Oak Ridges Moraine Plan and the Greenbelt Plan. Municipalities with more rural settlements such as Niagara Region have higher per household servicing costs for roads, bridges, and water and sewage infrastructure.

## 4.3 Measures to Promote Greater Infrastructure Efficiency and Appropriateness

There are a number of ways that municipalities and other agencies have engaged in more integrated decision making and adopted more sophisticated analysis at an earlier phase in the land use planning cycle to ensure that infrastructure is deployed more efficiently and appropriately to reduce costs, minimize risk, and anticipate benefits, in balance with other operational, environmental and societal objectives.

### 4.3.1 Integrating Planning and Public Infrastructure Planning

Integration of land use and public infrastructure planning early in the decision making process can result in decisions that use infrastructure more efficiently. Sustainable Halton and Hamilton's GRIDS system serve as examples that illustrate early integration of planning and infrastructure considerations.

Sustainable Halton, completed in 2008, is Halton Region's growth management and land use response to the Growth Plan, the Provincial Policy Statement and the Greenbelt Plan. It provides an example of infrastructure master plan considerations being integrated at the front end of a municipality's land use and growth planning. It evaluates three growth scenarios and selects urban growth areas to 2031. It identifies what land will be reserved for business and residential use, and what land will be preserved for wildlife, green space, and farmland. Importantly, it considers in detail the infrastructure needs to meet this vision, including specific water and water capital projects needed through to 2016, transportation infrastructure needs, as well as waste management facilities.

Similarly, the Growth Related Integrated Development Strategy (GRIDS) system, adopted in 2003, is the City of Hamilton's long range strategic planning initiative to identify a broad land use structure, associated infrastructure, an economic development strategy, and financial implications for growth options for the next 30 years. All transportation, water, wastewater and stormwater planning falls under the GRIDS process. As explained in the GRIDS Growth Report,

Three comprehensive infrastructure master plans (transportation, water & wastewater, and stormwater) were undertaken as part of the GRIDS process, with infrastructure teams providing critical input into GRIDS identification and evaluation of growth options so that the infrastructure requirements, costs and impacts associated with growth can be fully understood and considered in the GRIDS process. (City of Hamilton, 2006)

These two initiatives demonstrate the value of integrating infrastructure costs and plans much earlier in land use development planning.

### Recommendation #10

Relevant provincial legislation (*Places to Grow Act*, *Planning Act*, proposed *Infrastructure for Jobs and Prosperity Act* (Bill 6) and policies (Provincial Policy Statement) should be amended to facilitate and encourage municipalities to:

- a) further integrate land use planning, infrastructure and financing considerations at the beginning of the land use planning process;
- b) standardize the practice of making all lifecycle costs (ongoing operations and maintenance, replacement costs) transparent when considering costs of new growth related infrastructure;
- c) undertake business case assessments of major infrastructure works like transit, large water and wastewater treatment facility expansions, that includes consideration of costs, benefits and return on investment.

### 4.3.2 Making the Business Case: Integrating Economic and Infrastructure Considerations

In some jurisdictions and in some government agencies here in Ontario, progress has been made in introducing a more methodical assessment of infrastructure projects, or the infrastructure component of a broader development project. These include the UK Government's Major Schemes evaluation framework, ARUP's Integrate Resource Management Model, and Metrolinx' evolving Business Case methodology. These methodologies could be adopted at the municipal level to add rigour to the evaluation of infrastructure efficiency/ appropriateness and costs before land use planning decisions are taken. These methodologies differ from traditional cost assessments in that they also

factor in how the infrastructure fits into the broader public policy objectives, and also assesses the benefits accrued from the infrastructure, which can be expressed in a variety of ways, such as as ‘value for money’, or ‘return on investment’.

### The UK’s Major Schemes evaluation framework

As the UK moves towards devolving subnational transport infrastructure to local authorities and encourages more private involvement in major infrastructure delivery, its evaluative methods in determining which projects receive national funding have become more rigorous through its Major Schemes evaluation framework. In its guide to municipalities, the Department for Transportation explains the importance of demonstrating ‘good value for money’ through evidence-based decision making under the Major Schemes framework,

‘Evaluation is an integral element in understanding how well National and Local Government are delivering services and investing public finances. In the context of Local Authority Major Schemes, demonstrating delivery of transport improvements that are good value for money and drive economic growth, whilst balancing the need for sustainability, will be vital to securing future funding. Learning about which schemes are the most effective in achieving these objectives and responding to local transport issues will build the evidence base to support future decision making and share lessons about delivery of best practice.’(DfT 2012)

The Major Schemes evidence-based framework must show whether schemes are supported by a 5 part-business case (DfT, 2013):

- i) **a strategic case**, that the project fits into public policy objectives, including the case for change – that is, a clear rationale for making the investment; and strategic fit, how an investment will further the aims and objectives of the organization;
- ii) **an economic case**, that it demonstrates value for money, including an assessment of options to identify all their impacts, and the resulting value for money, to fulfil the UK Treasury’s requirements for appraisal and demonstrating value for money in the use of taxpayers’ money;
- iii) **a commercial case**, that it is commercially viable, that sets out the proposed payment mechanisms that will be negotiated with the providers e.g. linked to performance and availability, providing incentives for alternative revenue streams;
- iv) **a financial case**, that it is financially affordable , including the expected whole life costs, when they will occur, and a breakdown and profile of costs by those parties on whom they fall and any risk allowance that may be needed;
- v) **a management case**, that it is achievable, including project planning, governance structure, risk management, communications and stakeholder management, benefits realisation and assurance.

In addition to being a thorough and rigorous assessment of the value of major transport projects to assist the UK Government in its funding allocation, the Major Schemes evaluation framework has been credited with reducing political influence in the awarding of funding due to its evidence-based approach.

### ARUP and the Clinton Initiative’s Integrated Resource Management (IRM) Model

ARUP’s Integrated Resource Management model supports the development and evaluation of growth options at the city master plan or project specific level using a lifecycle analysis approach, measuring not only financial efficiency, but a host of sustainability efficiency targets as well. It includes defined indicators and targets developed as part of a sustainability framework. It then allows for a performance assessment based on the chosen key performance indicators of a sustainable design against competing options or against sustainability targets (Grange, 2014).

The ARUP IRM is being applied in parts of the City of Toronto’s waterfront development. It is also being championed by the Clinton Climate Initiative as a way to promote growth that reduced the impact on the global climate.



## Metrolinx business case methodology

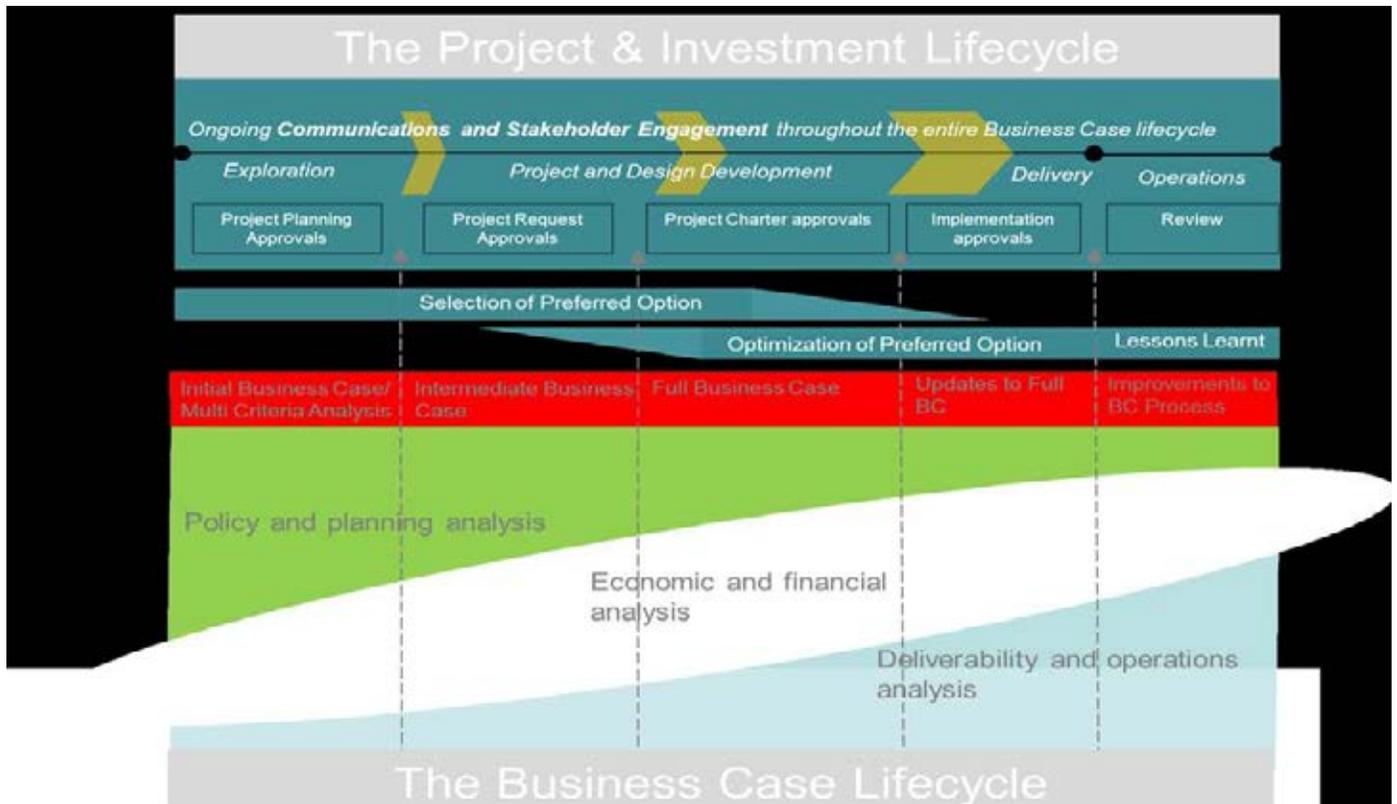
Metrolinx is currently responsible and accountable for delivering \$16 billion in public transit infrastructure with an additional \$34 billion in projects in the pipeline. To ensure accountability and value for money, Metrolinx has been evolving its business case methodology, learning from the experience of the UK, Australia and New Zealand.

The graphic below illustrates how the Metrolinx business case methodology differs from traditional infrastructure investment decision making. In working through from conception to delivery, public policy, financial analysis and deliverability are integrated and overlapping. There are at least three points (see gold chevrons, below) that an increasingly comprehensive business case evaluation is undertaken. At each of these stages, the onus is on staff to demonstrate a compelling business case in order to allow the project to move forward. In the first 'policy and planning analysis' stage, the evaluation must determine

whether the proposed investment is supported by a robust case for change that fits the wider public policy objectives. In the second stage, 'economic and financial analysis', the evaluation must determine whether the investment shows value for money and is financially affordable. This analysis includes lifecycle costs and anticipated revenues. In the third stage, 'deliverability and operations analysis', the most comprehensive business case evaluation must determine whether the investment is viable and achievable, with consideration of the engineering and operational challenges.

While this type of business case methodology may not be cost effective or appropriate for smaller projects, for larger regional infrastructure undertakings, it could serve to integrate a number of considerations at the conceptual stages of a project, and ensure that a thorough economic and financial analysis is conducted so that the full costs, and benefits, are transparent and are factored into decision making.

Figure 17: Metrolinx' Business Case Methodology



## 4.4 Design Standards

In addition to direction in their Official Plan amendments to conform to the Growth Plan, municipalities have also adopted urban design guidelines, standards and policies to facilitate the move from spatially dispersed suburban built form to a more compact urban form. These design standards then form the basis of a design-based approach to development reviews and approvals that encourage intensification. (City of Waterloo)

Due to their localized nature, more detailed design standards to support intensification tend to be introduced at the lower tier or single tier level rather than the regional level. Nevertheless, regions have adopted policies and programs to support local municipal efforts.

York Region introduced its 'Centres and Corridors Strategy and Best Practices Guide' in 2013. (York Region, 2013A&B). The Strategy is informed by the Region's Vision 2051, its long term vision for creating 'strong, safe and caring communities' (York Region 2013B). The Centres and Corridors Strategy focuses on four regional centres, Vaughan Metropolitan Centre, Richmond Hill/Langstaff Gateway Centre, Markham Centre, and Newmarket Centre, and four regional corridors to connect the centres, David Drive, Greenlane, Yonge Street and Highway 7.

The Region's Official Plan directs that secondary plans for these regional centres and development areas along the corridors include design policies and policies related to affordable housing, fine grained street grids that support active transportation, people-oriented urban built form, urban greening targets like tree canopy, among others.

The Region supports the strategy through its own infrastructure and financial planning strategies, and supportive programs like the development of a performance measurement system to track development in the regional centres and corridors. (York Region, 2013A)

Markham, in York Region, is considered a leader in intensification design. It has recently recommended the establishment of an external advisory Design Review Panel to assist city staff in reviewing the design of complex projects through the development approval process.

Pickering has recently released its draft urban design guidelines for Pickering City Centre (City of Pickering, 2014). The guidelines provide direction for intensification to guide buildings and private development, as well as investments in public infrastructure. The guidelines are based on the principles of high walkability, mixed land uses, distinct living options in close proximity to retail, entertainment and work, directing development to major transit corridors, and active transportation. This involves guidelines on

- i) Built form, including guidelines on design, height, and siting of a range of buildings with specific attention to transitions, street edge, and green design;
- ii) Integrated mobility system, including a pedestrian network, street network, transit network, and cycling network;
- iii) Public realm, including parks like Esplanade Park, open spaces, squares and streetscapes.

Similar design guidelines have been adopted by the City of Barrie, Richmond Hill, Kingston, Ottawa, Hamilton, Brantford, among others.

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### CASE STUDY #5: YORK REGION ADAPTING INFRASTRUCTURE DESIGN, CONSTRUCTION & INVESTMENT TO INTENSIFICATION

After 40 years of significant urban expansion, intensification has become the emerging form of growth in York Region. Similar to the "urbanization" that the Region experienced in the past, intensification brings with it both opportunities and challenges that the Region must carefully examine and deal with through planning and servicing policy.

While experiencing rapid growth and urbanizing, the Region benefitted from economies of scale, with more people sharing the cost and use of capital infrastructure. By the turn of the century, most of the Region's key infrastructure has gradually reached capacity. Major projects have been undertaken to align with growth demands, resulting in a significant capital spending increase. In a span of only 5 years, the Region's water and wastewater capital spending increased from \$27 million in 1999 to \$291 million in 2004 and reached \$388 million in 2009.

As the Region transitions from “urbanization” to “intensification” growth strategies, benefits will be realized from economy of scale projects, particularly in the early years of this transition. However, as intensification progresses, additional infrastructure investment is inevitably required to meet future growth demands. One of the many challenges in an urbanized environment is construction cost, as it is typically much higher in an urbanized setting. Heightened public awareness and increasingly stringent regulations regarding environmental protection in recent years only seem to compound the problem. A high level of service is expected in an intensified community; however, there is typically an associated high consequence of service disruption.

Timing of transit funding approval is often lengthy and has a high degree of uncertainty associated with it. In heavily intensified growth centres where rapid transit or subway service is envisioned, planning and delivery corresponding to water and wastewater projects to service growth centres has never been more complex.

To deal with these challenges, the Region has initiated key strategies to align demand for infrastructure servicing with the limited revenue sources available to municipalities. Strategies include:

- Leveraging inflow and infiltration reduction and water conservation efforts to maximize serviceable population with existing infrastructure
- Prioritizing new infrastructure projects within the budget process to ensure that projects can be supported with timely collection of development charges
- Ensuring the preferred “intensification” option within official plan and master plan processes is financially viable
- Heightening coordination among diverse business groups (urban planning, transportation, environmental services and finance) to ensure infrastructure projects are delivered in a synchronized and cost efficient manner
- Working with municipal partners to promote low impact development policies and practices to minimize imperviousness and storm runoff due to intensification, while promoting natural water use which will in turn reduce water use for irrigation

Apart from new infrastructure planning and investment strategies, the Region is implementing new infrastructure design concepts to minimize maintenance costs of built assets as a result of intensification. Costs associated with maintenance, rehabilitation and replacement of existing infrastructure assets are high in an urban environment. In many areas, accessibility to inspect and rehabilitate infrastructure is problematic. Designing new infrastructure requires long term forecasting and should consider full life cycle and replacement costs of assets. Durability is a key factor to consider in asset construction; therefore, cost cutting by using less durable construction materials should be avoided. Provision for access to carry out inspection and/or maintenance works must be carefully planned and incorporated into the design of sewers and water mains, given closed circuit television (CCTV) inspection of sanitary trunk sewers is becoming increasingly difficult in urban areas due to high sewage flows and heavy traffic.

Growth and intensification are mandated by the province, however, municipalities require substantial and sustained funding support to provide large and complex transportation, water and wastewater services needed to service future growth centres.

Funding support and policy amendments from provincial and federal government are paramount for successful municipal implementation of intensification. Municipalities are also facing increasingly stringent regulations and lengthy environmental assessment processes, which in some cases; fail to yield significant environmental benefits. While growth is mandated by the province, the environmental assessment process is often slowed by growth-related opposition. Stronger partnerships between all levels of government is essential to successful mitigation of intensification challenges required to meet our future growth demands.

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# 5. IDENTIFICATION AND PROTECTION OF EMPLOYMENT LANDS IN THE GGH

## Key Points

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- Notwithstanding a strengthened provincial policy framework for the protection of employment lands, some GGH municipalities are under intense pressure to sever or convert employment lands to residential or retail, leaving some areas with insufficient employment lands for the next twenty year period, particularly larger parcels of land.
  - Some key OMB decisions have not been supportive of provincial policy to protect employment lands from conversion and to protect specific types of employment on those lands.
  - In this shifting employment landscape, some developers are challenging municipal assumptions on which their employment land DC calculations are based, calling into question whether the currently accepted methodology to calculate employment DCs needs to be reconsidered.
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## 5.1 Identification and Protection of Employment Lands in the GGH

A principal municipal role in supporting economic development is its responsibility for identifying and designating employment lands to ensure that sufficient space is made available for facilities that will house future businesses.

According to the Provincial Policy Statement (sec. 1.3.2), 'Planning authorities shall plan for, protect and preserve employment areas for current and future uses and ensure that the necessary infrastructure is provided to support current and projected needs' (PPS2014).

The Growth Plan reinforces the PPS, directing municipalities to provide 'an adequate supply of lands providing locations for a variety of appropriate employment uses... to accommodate growth forecasts.' (MOI, 2006)

The Growth Plan directs municipalities to plan their employment lands to correspond with provincial growth forecasts and jobs and people ratios. It also limits municipalities to protecting employment lands through to 2031.

The preservation of employment lands is a complex picture across the GGH. It is important not to generalize about the effects of decreased manufacturing and increased office and services employment resulting in less demand for employment land overall and less separation of employment lands more specifically. While this may be the case as a general trend, different employment profiles are emerging in different areas of the GGH, requiring different types of protection. For example, the City of Toronto has seen increased demand in office space, with higher employment densities and less employment land demand. Peel, Halton and Durham have seen an increase in warehousing space demand, resulting in lower employment density and still requiring separation of employment lands from sensitive uses. At the same time, in areas like Waterloo Region, where hi-tech manufacturing continues to flourish, the preservation of large tracts of employment land and the separation of employment land from sensitive uses continue to be priorities. The provincial employment land protection framework needs to cater to all of these realities.

There is also great concern over the protection of strategic employment lands. These refer to lands adjacent to transportation infrastructure and corridors that are essential for the movement of goods and people, including 400-series highways, border crossings, active ports and harbours, and airports. These lands are at risk of being lost to small retail or residential developments. Given their great strategic importance to the economy of the region, the province, and of the country, special protection of these strategic lands for employment is needed in perpetuity.

Durham Region is satisfied that it has sufficient employment lands for the foreseeable future. As a result of Durham Region's strong tradition dating back to the 1970s for long range planning, it is the only region with 25 years' worth of surplus land that is serviceable. It is anticipated that the Highway 407 extension will unlock the potential of these employment lands.

Notwithstanding York Region's requirements to protect employment lands in its Official Plan, there is concern that it will not be able to protect enough employment lands and attract enough jobs to meet provincial targets. There continues to be pressure from developers in some parts of the GTA for employment land conversions. In some cases (York) lower tier municipal Councils are approving these requests despite strong Regional and lower tier OP policies.

The City of Toronto protects employment lands through its secondary plans and through zoning, based on Growth Plan ratios. Still, there is concern that with forecasts of nearly two million new office employees in 2031, that office space may be insufficient and too concentrated in the downtown area.

Peel Region and its lower tier municipalities protect employment lands. The Region had strategically identified lands along Highway 413 to be protected, but these plans were thwarted by the provincial government as part of the negotiation for its Growth Plan conformity amendment.

Halton Region has approved Strategic Employment lands beyond the 20 year period as a constraint to development. This builds on the Strategic investment and location suited to future employment use. These lands will be protected from uses that would deter from future employment. The lands are not designated for employment within 20 years, but would be considered through Municipal Comprehensive review.

The City of Hamilton used its GRIDS process (see infrastructure efficiency, above) in 2005-06 to help identify employment lands. As a result, the City has been able to land significant employers. The City of Hamilton is protecting larger employment land parcels through development of its airport district. This has required significant investments to build out infrastructure, including tunneling. However, it was believed that this investment was justified to take advantage of the larger employment lands available in the airport lands area.

Waterloo Region identifies, plans and protects employment lands and has a good employment land base. It has put in place policies like permissive zoning along transit corridors to support employment land planning. However, there is still concern with the amount of available shovel-ready lands and the difficulty in identifying and protecting larger parcels of land. There are only a handful of sites of more than 20 acres (although 700 acres of employment lands is coming on line in Cambridge). Relying solely on zoning, the only instrument available to municipalities to protect employment lands, has not been effective in protecting larger sites to attract the types of employers sought by the region, like high tech companies that need larger parcels of land. Regional staff have also expressed frustration with the province's role in thwarting efforts to plan for employment lands beyond 2031. This has resulted in a loss of employment opportunities. In an effort to improve its ability to plan and protect

employment lands, particularly larger land parcels, Waterloo Region is creating a new corporation to hold employment lands where the market has not been effective in doing so.

Niagara Region's urban boundaries have not changed significantly over the last 35 years. In the northern part of the region, there is only about 300 hectares left for employment lands. All large parcels have been used. In the southern part, employment lands are poorly located. This situation has prompted Niagara Region to embrace a coordinated, comprehensive vision, strategy and action plan to attract investment and promote employment growth in strategic locations across the Region, known as the Niagara Gateway. (see case study, below) The Niagara Gateway is comprised of vacant lands in five local municipalities that cover an area of over 2,000 hectares. While the lands are scattered and disconnected from one another, they are concentrated in a number of smaller clusters. Each of these clusters has its unique set of advantages: some of the lands are in close proximity to higher education centres, like Brock University and Niagara College; others are close to strategic transportation networks, like border crossings or access to the Welland Canal, rail lines or one of the Gateway's 400 series highways; others have access to full municipal services and already have detailed secondary plans in-place; and still others are a collection of large, well configured greenfield properties with few constraints. At the same time, the clusters also have challenges: some areas are un-serviced and require upgrades to Regional and local infrastructure; other areas have a limited amount of planning direction and may have issues related to land use compatibility; other lands have environmental constraints. The Niagara Gateway Plan addresses these opportunities and challenges in an integrated and coordinated way.

### **Recommendation #11a**

The Province should articulate criteria in the Growth Plan for identifying strategic employment lands, including but not limited to land adjacent to 400 series highways corridors, airport lands, border crossing areas, active ports and harbours, and strategic transit corridors, and allow for 'generational' protection of these lands, either with no time horizon, or a minimum 30 year horizon.

### **Recommendation #11b**

The Province should limit appeals related to strategic employment lands through amendments to the *Places to Grow Act* and/or the *Planning Act*.

## CASE STUDY #6: NIAGARA REGION'S NIAGARA GATEWAY ECONOMIC ZONE AND CENTRE RELATED CIP

### Introduction

This case study examines the current alignment and performance of the Niagara Gateway Economic Zone and Centre and Related Community Improvement Plan (CIP) to the Provincial Growth Plan in protecting employment lands. The Growth Plan for the Greater Golden Horseshoe has identified lands within Niagara as a Gateway Economic Zone and Centre due to its strategic location for international trade with the United States. The Gateway Economic Zone encompasses Niagara Falls and Fort Erie and the Gateway Centre includes Thorold, Welland and Port Colborne (See Figure 18). Niagara has expended considerable energy to provide a strategic implementation direction for the development of these lands within the Gateway Economic Zone and Centre. Niagara's Gateway Employment Lands Strategy promotes tourism, cross-border trading, and the movement of goods to generate job opportunities and economic growth. With high-level direction from the Province, there have been opportunities for creativity and innovation; however there have also been some significant challenges. This case study will demonstrate:

- 1) The need to be proactive and have a good understanding of land supply and business sectors;
- 2) The need for Provincial support in implementing the Growth Plan's policies; and,
- 3) The importance of understanding the unique needs and constraints of the respective municipalities and the developers in order to achieve the targets.

### Implementing Niagara's Gateway Economic Zone and Centre

In 2011, Niagara Region retained Dillon Consulting to undertake a study to provide foundation information for the planning and development of Niagara's Gateway Economic Zone and Centre. The study examined what it means to be a "gateway" and, through a best practice review of gateway planning in similar areas (e.g. Windsor- Detroit, Sarnia- Port Huron, Rotterdam, Port of Halifax), developed a Niagara-specific plan to develop the employment lands in the Gateway Economic Zone and Centre.

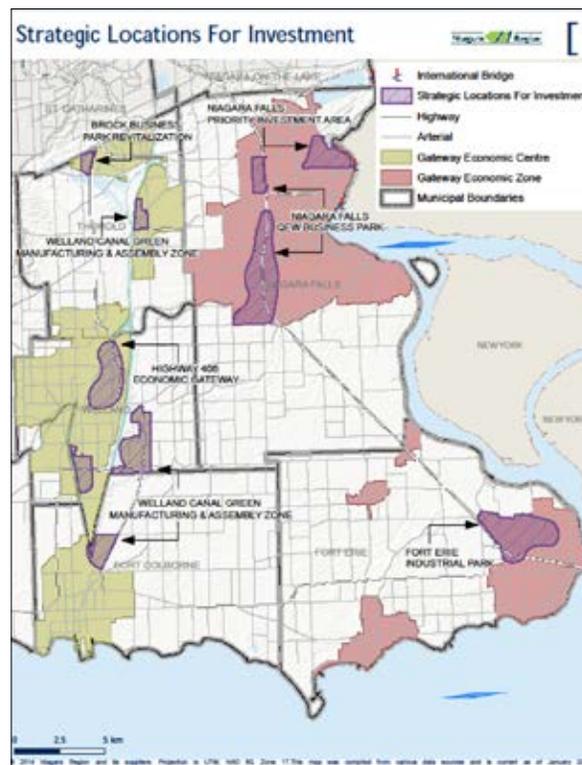
The detailed land supply included in the study identified six strategic locations for infrastructure investment, planning, and marketing (See Figure 19). This study represents a proactive approach taken by the Region to understand the current and emerging economic clusters for which the focus of development within the Gateway's employment lands could be targeted to.

An action plan to implement the findings of the study included developing a Regional Official Plan Amendment and a Regional Community Improvement Plan. The Niagara Gateway Employment Lands Study provided support for the

Figure18: Niagara Gateway Economic Zone and Centre



Figure 19: Strategic Locations for Investment in Niagara's Gateway Economic Zone and Centre



development of Regional Official Plan Amendment 1-2012. Amendment 1-2012 is a strategy that implements the Provincial Growth Plan through land use policy which outlines how Niagara’s vacant Gateway employment lands should be developed, marketed, preserved and protected from conversion in order to support economic development and job creation. It is focused on the strengths of employment lands in each municipality and recognizing that these strengths differ. For example, some municipalities are close to post-secondary institutions; others have access to the Welland Canal; and others are close to the Canada US border.

The development of a Community Improvement Plan (CIP) was identified as the approach to make employment lands in the Gateway Economic Zone and Centre more attractive and accelerate the process of bringing the lands to market. The Gateway CIP provides a comprehensive framework for the introduction and implementation of incentive programs and municipal actions designed to attract investment and development in targeted strategic growth sectors to the Gateway employment lands.

With respect to infrastructure investment, several transportation initiatives are underway to improve connectivity and assist in attracting employment land development within the Region. These include a rail on apron project in Port Colborne, a southeast connection from Highway 140 in Welland to the Queen Elizabeth Way and the development of the Niagara-to-GTA East Corridor. Overall, these land-use, financial and infrastructure initiatives work to ensure that the Gateway lands can be planned, protected and strategically identified for long-term use. Sewer and water infrastructure remains a challenge with less than half the total lands serviced for sewer and water.

### Challenges in Meeting the Growth Plan Targets

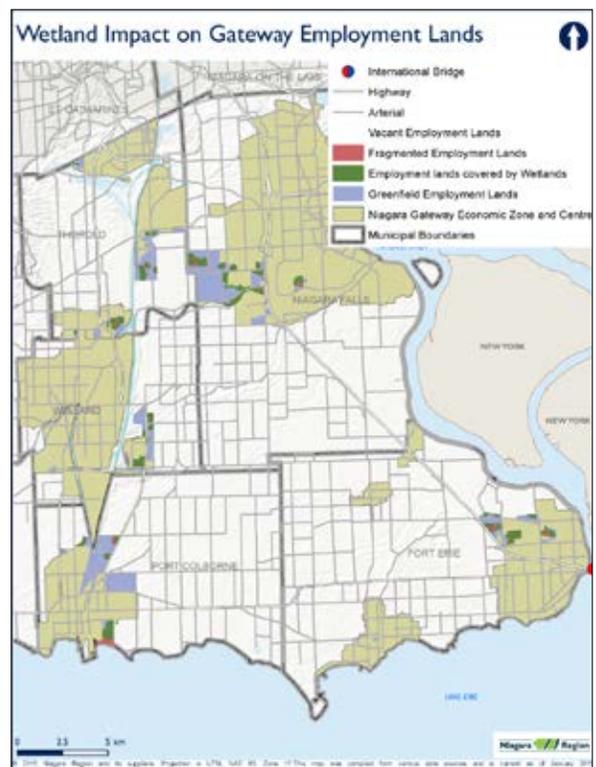
Niagara has encountered several challenges when it comes to the Growth Plan targets for employment lands located within the Gateway. Firstly, the lands are spread throughout five separate municipalities. Although these lands are connected through various forms of infrastructure, there are challenges associated with the coordination between various policy sets and achieving density targets. As each municipality has their own Official Plan, there have been efforts to ensure that the gateway policies are consistent between each of them and the Region’s Official Plan. There are also challenges in meeting targets based on the types of industries that would be most appropriate in each respective municipality. For example, an office building would employ more people than a warehouse or storage facility; however, only certain locations are appropriate for this type of industry.

Secondly, a large portion of the Greenfield land included in the Gateway Employment Lands has been considered non-developable through the update of Provincially Significant Wetlands (PSW) identified by the Ministry of Natural Resources and other environmental features, such as woodlands and fish habitat. When considering any development applications, within or adjacent to a PSW, a

municipality is required to ensure that the PSW is protected from development. (PPS, 2005) Provincially significant wetlands are those wetlands identified by the Province as being most valuable, based on the Ontario Wetlands Evaluation System. Section 2.1 of the Provincial Policy Statement, 2014, under the Ontario Planning Act, precludes development and site alteration within a PSW and imposes limitations on development around other natural heritage features and fish habitat.

Factoring in PSW’s and other natural features has created challenges in meeting density targets by fragmenting lands and creating small parcel sizes, which limits the type and size of industry that can locate there (See Figure 20, below). For example, in Fort Erie nearly 11% of greenfield employment land is fragmented by wetland. A related impact is that many of the lands become uneconomical to service because of the fragmentation. Thirdly, most of the Gateway employment lands are not yet developed. Although this may be beneficial in some respects, it creates challenges and significant costs related to servicing that cannot be feasibly addressed. The cumulative impact of the second and third challenges is a reduction of employment land supply in the Gateway by 60%.

Figure 20: Wetland Impact on Gateway Employment Lands



As discussed above, in response to these challenges, and to help meet density targets, Niagara Region has worked collaboratively with local municipal partners to develop a Community Improvement Plan (CIP). The CIP has been created to help provide incentives for developing the Gateway Lands and position Niagara Region to compete with adjacent communities and other border communities. Regional staff is currently working towards creating a marketing strategy that is intended to highlight to investors some of the incentive programs that have been created.

Although work is being done to overcome some of these challenges, there is still a need for support from the Province in reviewing the wetland policies and the impact that they have on development. The Region is supportive of the protection of the environment and understands the need to balance environmental protection with economic development; however, a land swap approach in addressing some of the challenges that are faced in the Gateway may provide an appropriate balance between these competing interests. This issue has been brought to the attention of the Province in the past.

### **The Role of Provincial Agencies**

A significant benefit of provincial policies that enforce protection of lands in employment areas is that they have provided municipalities with support to ensure that these lands are not being developed for non-employment uses. In some cases, pressures to convert these lands can persuade municipalities into thinking that this is the best use for the land; however, these types of decisions would deter us from our overall, long-term plan and vision. Despite this significant benefit, there are some areas where additional provincial support would be beneficial.

There has been a lack of clear guidance on how to actually implement the Growth Plan designation. When the Gateway Designation was assigned in the Growth Plan, there was no provincial implementation guidance or funding allocated to establish and support the development of the Gateway. This has allowed for some flexibility, but has also created some challenges to ensuring that Niagara Region is what the Province would like to see. Secondly, some of the policies from the Growth Plan conflict with other pieces of legislation. The Provincial Policy Statement and the Growth Plan both have environmental policies and policies related to employment lands. The Growth Plan highlights the need to protect and develop employment lands while the PPS has policies that do not permit the development of Provincially Significant Wetlands. This has caused considerable challenges when trying to address these competing interests in the Gateway lands. The need to ensure conformity with other legislation, primarily the *Greenbelt Act* and the *Niagara Escarpment Planning and Development Act*, strains the ability to develop employment lands in areas located outside of the Gateway.

This, in turn, places pressure to rely on the Gateway employment lands to meet density targets. As a result, difficulty arises due to the impact of environmental features (wetlands) within the Gateway.

Thirdly, when the Gateway designation was identified by the Province there was limited consultation. As mentioned above, finding the right solution for the various lands across five municipalities took significant work. It was challenging for the Region to balance Provincial direction and local decision making. Ultimately this was achieved. However a clearer goal statement with objectives would have benefitted both the Province and the Region. Finally, there has been a lack of flexibility to address policies that may actually be hindering Niagara's ability to achieve the Province's targets for growth. An example of this is the identification of provincially significant wetlands. Further efforts to work together to address these challenges would be beneficial for Niagara.

### **Conclusion**

The Region has been proactive in promoting growth for the Gateway by developing a Niagara-specific plan to address the development of employment lands, which includes an incentive program and marketing strategy. This provided Niagara with an opportunity for some creativity to address the local context, while ensuring the protection of lands. Further back-end collaboration with the Province and municipalities is necessary to overcome the locally specific challenges that Niagara is facing in achieving Growth Plan targets. With support from the Province on reviewing policies and continued collaboration with local municipalities, density targets could be met. While Niagara will continue to work towards achieving these targets, there are also opportunities to better align various provincial policies and the needs at the local level.

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### **\*Recommendation #12**

The Ministry of Municipal Affairs should launch Growth Plan training and specific implementation guidance for provincial ministries, boards and agencies whose policies may infringe or conflict with a municipality's efforts to protect employment lands.

### **Recommendation #13**

The Growth Plan should establish a process to negotiate 'land swaps' between municipalities and the Province to allow for the protection of consolidated employment lands where provincial policy, e.g. provincially significant wetlands, has the effect of severing employment lands; where this involves the Greenbelt or Oak Ridges Moraine plans, the swap of equivalent land parcels to protect employment lands should result in 'no net loss' to the territory delineated in these Provincial plans.

## 5.2 Pressures to Convert Employment Lands to Residential

Pressure to convert employment lands is driven by the greater profitability, lower risk, and high demand for residential and commercial development compared to employment development. Existing industrial facilities are feeling the squeeze in some areas as residential and commercial development are approved and built along the periphery of existing industrial lands. Speculative developers also buy and hold designated employment lands with the intention of converting them to residential further down the road. This contributes to the amount of designated employment land that remains undeveloped. As explained by Larry Bourne, professor of planning at the University of Toronto, “It’s quite a challenge in a booming metropolitan area with high land values. The key is, in virtually every case, residential uses can outbid industrial uses.” (Alamenciak, 2012)

In an effort to address the need for greater employment land protection, the provincial government introduced a 5-year municipal comprehensive review (MCR) in the 2005 Provincial Policy Statement. The first round of 5-year MCRs were undertaken in 2008. Under Section 1.3.2.2, the PPS stipulates that:

‘Planning authorities may permit conversion of lands within employment areas to non-employment uses through a comprehensive review, only where it has been demonstrated that the land is not required for employment purposes over the long term and that there is a need for the conversion’. (MAH, 2014B)

This policy was expanded upon under Policy 2.2.6.5 of the Growth Plan, which itemizes a series of criteria that must be met before a municipality may approve a conversion (MAH, 2008). Under the MCR criteria, municipalities must demonstrate that:

- a) There is a need for the conversion
- b) The municipality will meet the employment forecasts allocated to the municipality pursuant to the Growth Plan
- c) The conversion will not adversely affect the overall viability of the employment area, and achievement of the intensification target, density targets, and other policies of the Growth Plan

- d) There is existing or planned infrastructure to accommodate the proposed conversion
- e) The lands are not required over the long term for the employment purposes for which they are designated
- f) Cross-jurisdictional issues have been considered.

Most recently, the PPS 2014 added section 1.2.6 which calls for municipalities to ‘enhance the protection for major industries and facilities from new and incompatible uses that can impact their ability to continue or expand.’ (PPS, 2014)

The combination of the Provincial Government’s Provincial Policy Statement and Growth Plan has created what one leading GTA employment lands consultant characterized as the ‘most robust employment land protection policy framework in North America.’ (Browning, 2014)

Nevertheless, intense pressure to convert lands continues. Given recent OMB decisions that have gone against municipal decisions with respect to conversions, there are mixed reviews on whether the current provincial policy framework provides the right kind of direction.

Escalating land values and low interest rates over the last decade have made residential development even more profitable, further intensifying pressure on municipal councils to approve conversion applications. The City of Toronto is currently facing 148 conversion appeals, while another 40-50 potential applications were ‘dissuaded’. As chief planner for the City of Toronto, Jennifer Keesmat, commented in 2012, “There’s a real risk that the city faces at this moment. We are struggling with it, because we could see a wholesale transition and loss of our employment lands.” (Alamenciak, 2012) The challenge is daunting. The City of Toronto alone is expected to need an additional 20.5 million square feet of office space by 2031 to accommodate an anticipated increase of between 1.64-1.9 million new office employees. (Baldassi, 2012)

The City of Mississauga is currently undertaking its second comprehensive review. Mississauga has the second highest level of conversion challenges after Toronto. Both the City of Mississauga and Peel Region have policies in their OPs about employment lands and conversion.

Conversion pressure can create tensions in two tier municipalities. For example, local municipalities in York Region feel intense pressure from developers to convert employment lands to residential. The Region has tried to resist this conversion pressure.

Regions in the outer GGH ring have felt less conversion pressure. Waterloo Region has had challenges but it has been aided by a clear policy on when to allow conversion in certain circumstances.

Niagara Region did not see any conversion in its first round of its comprehensive review, but it does expect to see some pressure in round 2.

The interpretation of whether creating general jobs vs. specific types of jobs fulfils provincial policy has become a central issue as a result of recent OMB decisions. While development proposals and OMB decisions may not themselves prevent municipalities from reaching their overall Growth Plan employment forecasts, they do impact a municipality's efforts to diversify their economic development by attracting certain types of employment. (Cogliano, 2012)

Notwithstanding clear policy direction in Section 2.2.6.1 of the Growth Plan that directs municipalities to provide 'an adequate supply of lands providing locations for a variety of appropriate employment uses... to accommodate growth forecasts; as well as regional employment forecasts identifying land requirements by sector type, several decisions by the OMB have ruled against the right of municipalities to deny a conversion request on the basis that it would change the type of employment on the land.

In a 2006 OMB decision (*St. Johns McNicoll Centre v. City of Toronto (2006)*), the Board ruled in favour of a conversion, *'due to the fact that there would be over 200 jobs created on the site for doctors, nurses, maintenance staff, and other service workers associated with the development (Ontario Municipal Board, 2007). Moreover, the Board member also explicitly identified that, as a matter of public policy, the*

*nature and value of employment types are not to be judged. In regards to this specific case, the Board member identified that the predominately service-sector jobs to be created as a result of this development should, in no way, be considered less valuable than the manufacturing and office jobs predominant in the surrounding area (Ontario Municipal Board, 2007).* (Cogliano, 2012)

Similarly, in a 2009 OMB case (*SmartCentres and Toronto Film Studios v. City of Toronto (2009)*), the Board ruled against the City of Toronto's efforts to restrict retail infiltration into a designated employment land area. In the judgement, a board member commented, "retail jobs are recognized as economic development and as jobs counting toward the fulfillment of employment targets mandated by provincial policy". (Cogliano, 2012)

These OMB decisions are putting pressure on municipalities to be more explicit in their own policies about employment land designations. Until recently, the City of Toronto did not have a conversion policy. In 2012, it undertook a process to review and revise its employment land policy to make it more robust in the face of OMB challenges. In its Official Plan Amendment 231, adopted by Toronto City Council in December 2013, new policies and designations for employment lands are outlined, and three types of employment land categories are created,

- i) core employment lands, including manufacturing, warehousing, office, research and development facilities, distribution of goods, utilities, media facilities, post-secondary business and trade training facilities, arts training facilities and studios, and vertical agriculture.
- ii) General employment areas; and
- iii) Retail areas.

The City's new employment lands framework makes explicit that all types of employment are not considered equal. Its 'Conversion and Removal Policies for Employment Areas' policy, calls for an MCR even between classes of employment.

9. The redesignation of land from an Employment Area designation to any other designation, by way of an Official Plan Amendment, or the introduction of a use that is otherwise not permitted in an Employment Area is a conversion of land within an Employment Area and is also a removal of land from an Employment Area, and may only be permitted by way of a Municipal Comprehensive Review. *The introduction of a use that may be permitted in a General Employment Area into a Core Employment Area is a conversion and may only be permitted by way of a Municipal Comprehensive Review. (emphasis added)* (City of Toronto, 2013B)

It is intended that the above policy strengthens the City's hand in justifying its employment land conversion decisions on the basis of the type of employment created on the employment lands. It has yet to be used in an OMB challenge.

Consideration of the proper balance to protect employment lands opens up a broader debate on the challenge of mixed use zoning in intensified urban development. Traditionally, municipalities have used single use zoning to separate different types of development. Growth Plan policy and trends towards smart growth explicitly challenge this type of separation, but the underlying tensions amongst different types of development persist. Developers are concerned that rigid single-use zoning and 5-year Municipal Comprehensive Review cycles do not provide the flexibility needed to respond to market opportunities in a dynamic urban environment. Urban industrial facilities are being encroached by residential developments whose residents find the industrial activity unsightly. At the same time, municipal planners have expressed frustration that 'mixed use' developments often result in no more than a residential highrise with ground level retail.

One solution to this dilemma in urban areas in transition is to move towards 'performance' or 'form based' zoning. This was used in the much acclaimed 'Kings Regeneration' Initiative, which involved two former industrial areas in

downtown Toronto at King and Parliament and King and Spadina. (CMHC, 2013) Planning and zoning requirements were relaxed to allow for mixed used development. With 'performance zoning', the focus is on built form and site standards rather than densities or permitted land use.

The new planning adopted for the Kings Regeneration Initiative included:

- as-of-right development permission within general height limits;
- maximum flexibility in land use policies to permit new buildings and conversions of existing buildings to almost any use;
- the removal of density restrictions;
- new built form regulations focusing on building height, massing and light, view and privacy standards;
- the relaxation of a number of general bylaw standards regarding parking and loading for new buildings, with exemptions being given to existing and heritage buildings.

Although this approach is only valuable where there is demonstrated marketability, it does offer a way to encourage a genuine mix of uses, including employment, that could reduce the pressure for conversion in other parts of a municipality that are not ready to transition towards mixed use. (Cogliano, 2012)

#### **Recommendation #14**

Where designated employment lands are consistent with the Growth Plan, the Province should make these non-appealable to the OMB through amendments to the *Planning Act* or *Places to Grow Act*. When a municipality has planned for various categories of employment lands in a conformity exercise, appeals should be prohibited OR the scope of the appeal should be limited to population-based employment only.

### 5.3 Calculating Employment Land DCS in a Shifting Employment Environment

Increasingly, GGH municipalities are finding that their actual employment DC collection is falling far short of their forecasted employment DCs. This phenomenon is being felt everywhere from Hamilton to Halton, from Peel to Durham to York Region, with Toronto being the only exception.

As the graph below illustrates, the shortfall in Peel Region between 2008-2013 has been significant, with actual collection falling short of forecasted collection by over \$100 million in 2013. The graph that follows shows that two municipalities, York Region and Peel Region, rarely forecast their employment DC collection within 50% accuracy.

Figure 21: Peel Region Employment DC's Forecasted Collection vs. Actual Collection, 2008-2013

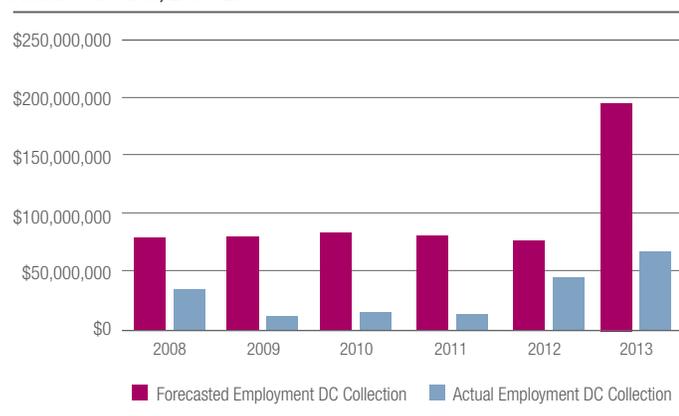
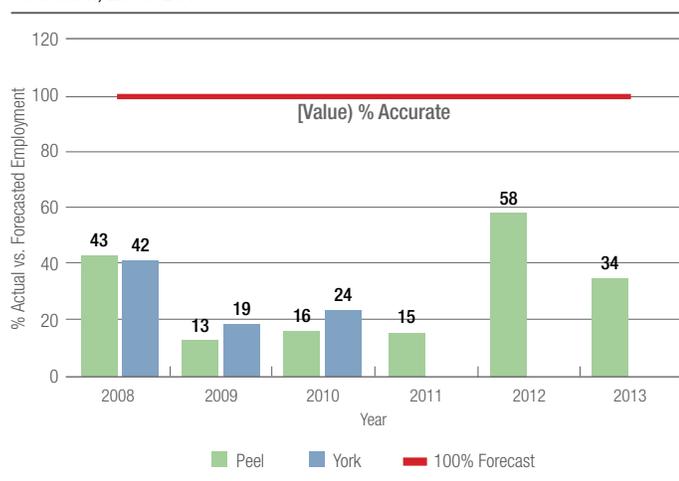


Figure 22: % Actual Employment Collection vs. Forecasted Employment Collection, 2008-2013



This misalignment of forecasted and actual employment DCs can be explained by a combination of the changing economic profile, alignment with Growth Plan projections, and poor employment data on which to base forecasts. Ultimately, however, the fault may be found in the methodology to set employment DC rates.

Both Peel Region and Halton Region have had their employment land DCs challenged by developers in recent years due to differences in assumptions about employment density used in their methodology.

In the case of Peel Region, the development industry took issue with the employment forecasts and industrial floor space assumption of 90 m<sup>2</sup> per worker, used to prepare the development charge rate. The development industry claimed that the shift from manufacturing to warehouse and logistics meant that the floor space per worker (FSW) assumption was too low, and should be closer to 100-110 m<sup>2</sup> per worker, as there was a lower density of workers in warehouses compared to manufacturing facilities. The employment forecast used in Peel Region's 2012 DCs By-law was from the Growth Plan. (Hemson, 2014)

Getting the forecasts and employee densities as close to reality as possible is important as it is these forecasts and densities that are the basis of a municipality's calculation of the amount of built space needed, either for homes or employment facilities, and in turn serve to calculate the development charges to cover the cost of servicing the built space. While calculating the residential housing needed based on an average number of people that will live in the homes is fairly straightforward, the equivalent calculation for the number of employees per square metre or foot of floor space is far more challenging, particularly as these densities are changing with the employment profile of the region.

In order to explore this issue in detail, Peel Region commissioned a report by Hemson Consulting Ltd on employment trends in Peel Region.

The report found significant changes in the employment profile of Peel Region. Between 2006-11, job growth was 6.6% overall, but there was a loss of 19,000 manufacturing jobs over the same period, and a 30% reduction in manufacturing jobs since 2001. The report also noted an unprecedented growth in warehousing and logistics centres in Peel Region.

Interestingly, the report also found a 27% growth in employment in the GTA identified as being 'at no usual place of work'. This includes mobile workers, like construction workers, truckers, and other transportation workers, and does not include 'at home workers'. This means that since 2001, over 115,000 jobs were created with no specific spatial reference. It is particularly important in the warehousing sector, which employs many truckers, where 22% of employees are considered 'at no usual place of work'. (Hemson, 2014)

As the Hemson report concludes, 'At this scale, the jobs with no fixed place of work are too large to ignore in preparing forecasts and Development Charge studies.' (Hemson, 2014)

The Hemson analysis shows that the lower density of workers and larger floor space associated with warehousing in Peel Region makes a material difference in the floor space allocated, and in the costs allocated to service the new facility. Assumptions about densities could have significant impacts.

For example, a 10% increase in the FSW rate (an increase in m<sup>2</sup> per worker) would lead to a 10% increase in the amount of floor space estimated to be built. For a fixed capital cost that is to be recovered through Development Charges, this increase in floor space will result in a reduced charge on a per m<sup>2</sup> basis assuming there are no changes in the capital infrastructure program required to service the increase in floor space that will result.

Furthermore, and perhaps most importantly for municipalities, as the Hemson report concluded, this analysis 'brings into question [standard] planning assumptions about impacts of new development and demand for municipal services' given that the facilities themselves still put a large demand on municipal services even without a higher employment density.' (Hemson, 2014)

Under these circumstances, relying on employee density to determine the appropriate level of municipal service and attribution of cost for these municipal services may not reflect the actual costs of providing those services.

Further work is needed to explore the implications of the accuracy of forecasts, the changing employment densities in the GGH, the significance of the growing number of both 'at home' and 'at no usual place of work' employees, and the actual cost of servicing large facilities with fewer employees. The standard methodology for calculating employment land development charges needs to be reviewed and revised.

#### **\*Recommendation #15**

The Province should support other measures of determining employment land DCs used in other jurisdictions that better reflect actual servicing costs, such as lot size, trip generation (people and distribution).

## 6. CONCLUSIONS AND RECOMMENDATIONS

This report identifies key challenges and opportunities to meet growth and intensification targets contained in the Greater Golden Horseshoe Growth Plan in a way that is financially sustainable, uses infrastructure efficiently, creates livable communities and supports economic prosperity across the region. The findings reflect consensus positions developed amongst the Regional Planning Commissioners of Ontario, the Regional Public Works Commissioners of Ontario, and the Ontario Regional and Single Tier Treasurers.

The 2008 recession and its aftermath have had a dramatic effect on growth patterns and financing growth, due to changes in employment, spatial demands for employment, and revenues from non-residential DCs in some areas of the GGH.

More than ever, coordinated infrastructure investments in support of growth by federal, provincial and municipal governments are needed. This coordinated effort is considered critical by business interests for the GTA and the GGH to compete in a globalized economy.

Growth projections and greenfield targets in the Growth Plan need to be revisited and revised to ensure that municipalities are not compelled to overbuild or build at the wrong time to meet provincially-prescribed targets and growth projections that do not bear out.

Amendments to the current municipal financial framework are needed to enable municipalities to recover the full costs of growth infrastructure in a way that fairly apportions the financial burden of growth to those who benefit, including businesses, residents, and the federal and provincial governments

The cost of new transit, essential to foster more intensified growth, is particularly difficult to finance, especially for those municipalities who are only just starting to invest in large and costly public transit systems as they reach densities that can support transit.

Infrastructure is a primary driver of growth costs. Some municipalities and other public agencies are undertaking more sophisticated analysis to determine how to deploy

infrastructure more efficiently to reduce costs, in balance with other operational, environmental and societal objectives. Better integration of land use and infrastructure decisions can also support planning for infrastructure efficiency.

The Provincial Government could support more cost effective and efficient deployment of municipal growth-related infrastructure by streamlining approvals and limiting the conditions under which an appeal can be launched against a municipal Official Plan.

The strengthened provincial policy framework for the protection of employment lands has helped municipalities in protecting employment lands, but there remains intense pressure to convert these lands to other uses in some areas of the GGH. Further provincial support to protect employment lands, particularly employment lands that are deemed strategic for economic growth, is needed.

### Key Recommendations

Based on the above analysis, the following recommendations were agreed to by the RPWCO, RPCO, and ORSTT Commissioners. Those that are relevant to municipalities outside the GGH have been identified with an asterisk (\*).

### Policy and Economic Context

#### Recommendation #1

The Province's long term infrastructure plan should be required to conform with the Growth Plan over a planning horizon that is compatible with municipal planning horizons, that is, 15 + years, through an amendment to the proposed Infrastructure for *Jobs and Prosperity Act* (Bill 6) currently before the Legislature. The Infrastructure Plan should provide enough detail in terms of timing and specific projects so as to enable coordination with complementary municipal infrastructure investments.

#### \*Recommendation # 2

The Federal Government should make a long term commitment (15 + years) to stable funding for transit, amounting to a minimum of 30% of capital costs.

## Conforming with Growth Projections and Targets

### Recommendation #3

In light of Ministry of Finance projections, Growth Plan population and employment projections should be reviewed and revised. Consideration should be given to building flexibility into the projections, providing a numeric and timing range within which the projected growth is expected to occur.

### Recommendation #4

The Province should continue to prescribe the 40% minimum intensification target for inner ring municipalities but, once the target is achieved, based on the progress towards intensification in more 'mature' regions and cities over time, the Province should, in consultation with municipalities, raise the intensification target.

### Recommendation #5

The Province should amend the combined employment and residential density target for greenfield development to distinguish among the types of employment that are included so that industrial and knowledge-based jobs would be excluded and only population-related jobs would be combined with the residential target.

### \*Recommendation #6

The Provincial Government should provide a uniform methodology for determining land budgets, developed in consultation with municipalities.

## Paying for growth

### \*Recommendation #7

To ensure that growth pays for growth, the Province should amend the *Development Charges Act* (DCA) as follows:

- removal of the 10% discount (Sec. 5.(1) 8.)
- removal of service level cap based on 10-year historical average (Sec. 5.(1) 4.)
- removal of all other service exemptions such as waste facilities, parks.
- removal of 50% industrial expansion exemption (4. (2))
- removal of clause in the DCA that prohibits municipalities from gaining, or developers from losing financially as a result of an OMB appeal. (16. (4))
- Metrolinx should not be given authority to charge DCs for growth related infrastructure and should no longer be permitted to invoice municipalities for costs associated with Metrolinx assets.

## Infrastructure efficiency

### Recommendation #8

The Province should limit appeals of Growth Plan-related OPs with significant infrastructure cost implications through amendments to the *Planning Act* and/or the *Places to Grow Act*.

### \*Recommendation #9

The Province should introduce reasonable fixed timeframes for provincial decision points in the environmental assessment process, including Part II bump-up requests.

### Recommendation #10

Relevant provincial legislation (*Places to Grow Act*, *Planning Act*, proposed *Infrastructure for Jobs and Prosperity Act* (Bill 6) and policies (Provincial Policy Statement) should be amended to facilitate and encourage municipalities to:

- a) further integrate land use planning, infrastructure and financing considerations at the beginning of the land use planning process;
- b) standardize the practice of making all lifecycle costs (ongoing operations and maintenance, replacement costs) transparent when considering costs of new growth related infrastructure;
- c) undertake business case assessments of major infrastructure works like transit, large water and wastewater treatment facility expansions, that includes consideration of costs, benefits and return on investment.

## Employment lands

### Recommendation #11a

The province should articulate criteria in the Growth Plan for identifying strategic employment lands, including but not limited to land adjacent to 400 series highways corridors, airport lands, border crossing areas, active ports and harbours, and strategic transit corridors, and allow for 'generational' protection of these lands, either with no time horizon, or a minimum 30 year horizon.

### Recommendation #11b

The Province should limit appeals related to strategic employment lands through amendments to the *Places to Grow Act* and/or the *Planning Act*.

### **\*Recommendation #12**

The Ministry of Municipal Affairs should launch Growth Plan training and specific implementation guidance for provincial ministries, boards and agencies whose policies may infringe or conflict with a municipality's efforts to protect employment lands.

### **Recommendation #13**

The Growth Plan should establish a process to negotiate 'land swaps' between municipalities and the Province to allow for the protection of consolidated employment lands where provincial policy, e.g. provincially significant wetlands, has the effect of severing employment lands; where this involves the Greenbelt or Oak Ridges Moraine plans, the swap of equivalent land parcels to protect employment lands should result in 'no net loss' to the territory delineated in these Provincial plans.

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