



**GTA
West**

GTA West Corridor
Environmental Assessment



**GTA West Corridor
Environmental Assessment**

Revised Draft
**Overview of Transportation &
Economic Conditions**

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**McCORMICK RANKIN
CORPORATION**
A member of  **MMM GROUP**



PREFACE

The draft GTA West Overview of Transportation and Economic Conditions Report (July 2008) is one of several interim reports which depicts the study process culminating in the Transportation Development Strategy. The draft GTA West Overview of Transportation and Economic Conditions Report (July 2008) was made available publicly to solicit comments and receive input on the information contained herein. A summary of input received on the draft document is provided in the table contained in Appendix A – Part 1, Summary of Comments; and a summary of the proposed revisions to the draft document is provided in Appendix A – Part 2, Summary of Revisions.

Part 1 has been organized categorically to identify the author of comments, specific section of the document on which the comment is based, the responses and proposed actions planned/taken. Part 2 summarizes the proposed revisions to specific sections of the draft document and has been organized by chapter. The proposed revisions to the draft document have not been incorporated into the revised draft report material therefore Appendix A – Part 2 should be consulted when reading the report.

Overview of Study Process

The GTA West Corridor Environmental Assessment is being undertaken in accordance with the Ontario Environmental Assessment Act (OEAA), the Canadian Environmental Assessment Act (CEAA), and the GTA West Corridor Environmental Assessment Terms of Reference (June 2007 as amended July 2007).

The EA is being conducted in two stages, consistent with the process outlined in the ToR. These two stages are shown in **Exhibit O-1** and **Exhibit O-2**.

Exhibit O-1 GTA West Corridor EA – Stage 1

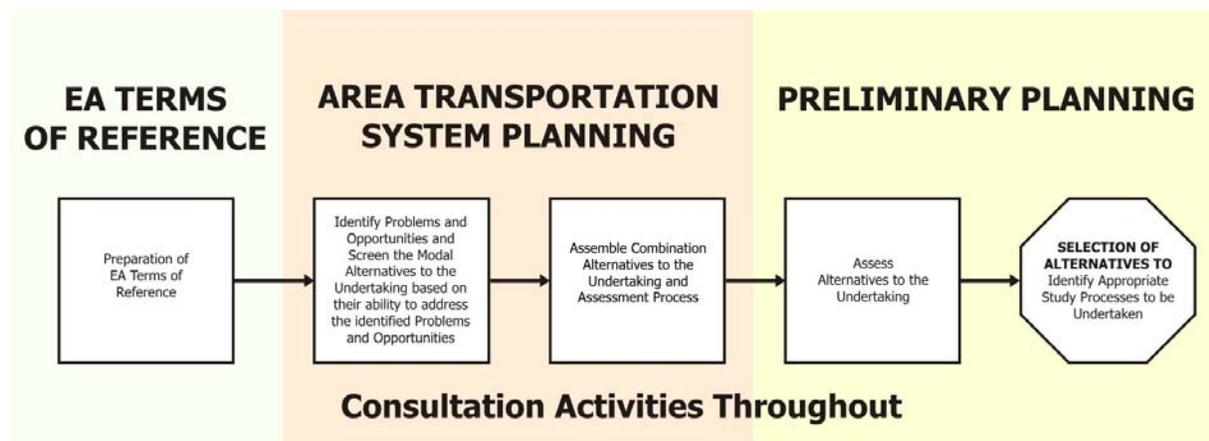
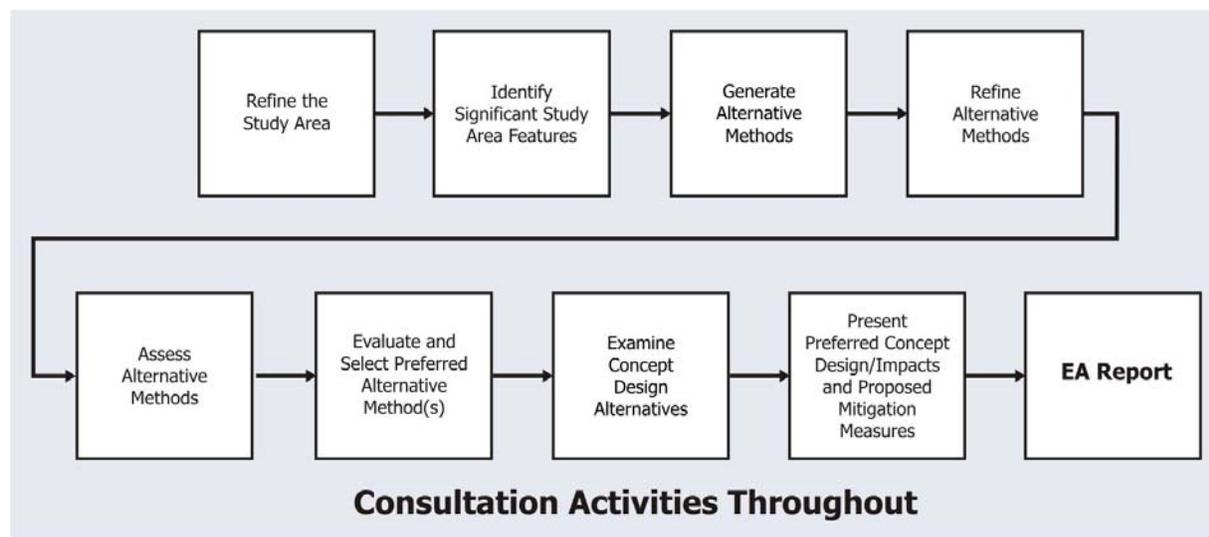
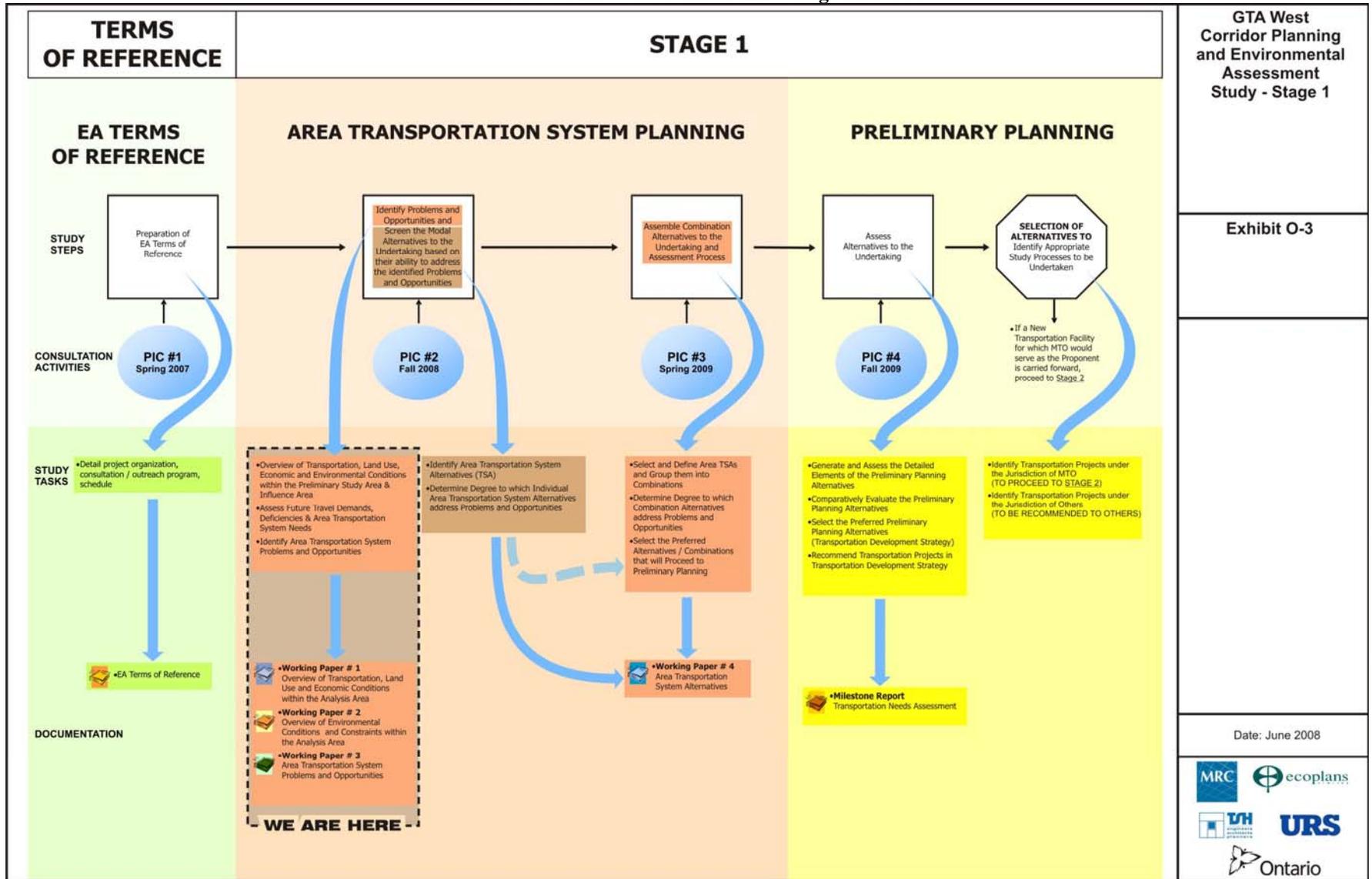


Exhibit O-2 GTA West Corridor EA – Stage 2



Stage 1 of the GTA West EA, as illustrated in **Exhibit O-3**, consists of three phases: the EA Terms of Reference; the Area Transportation System Planning; and the Preliminary Planning. Also shown in the exhibit are the study steps, the technical work required, the consultation milestones, the documentation and an indication of the study progress within Stage 1 of the EA process. These are described as follows:

Exhibit O-3 GTA West Corridor EA – Stage 1 Process



EA TERMS OF REFERENCE

The EA Terms of Reference, along with the Consultation Record, has been completed and was approved by the Minister of Environment in March 2008. It details the project organization, the consultation and outreach program and the project schedule.

AREA TRANSPORTATION SYSTEM PLANNING

The Area Transportation System Planning contains two key steps: (1) Identify Problems and Opportunities and Screen the Modal Alternatives to the Undertaking; and (2) Assemble Combination Alternatives to the Undertaking and Assessment Process.

Identify Problems and Opportunities and Screen the Modal Alternatives to the Undertaking

The process of “Identifying Problems and Opportunities” includes an overview of transportation, land use, economic and environmental conditions; an assessment of future travel demands, deficiencies and area transportation system needs; and an identification of Area Transportation System Problems and Opportunities. The outcome of these study tasks will be two overview reports (Working Papers #1 and #2) and the Area Transportation System Problems and Opportunities Report (Working Paper #3). In preparing the final reports for these working papers, public consultation including PIC #2 will take place (scheduled for Fall 2008) to provide members of the public an opportunity to review and comment on the draft reports.

The screening of the modal Alternatives to the Undertaking requires identifying Area Transportation System Alternatives (TSA) (e.g. Local/Inter-Regional Transit, Municipal Roads and Provincial Highways/Transitways) and determining the degree to which these individual TSAs address Problems and Opportunities. The individual TSAs that do address the Problems and Opportunities will proceed to further consideration along with combined TSAs that are described below. The individual TSAs that fail to address the Problems and Opportunities will be set aside but may be considered as a part of combined alternatives. The process and results will be documented in Working Paper #4: Area Transportation System Alternatives. The outcome of this process will also be presented for public input through the PIC #2 process.

Assemble Combination Alternatives to the Undertaking and Assessment Process

The process of assembling the “Combination Alternatives to the Undertaking” and assessment process begins by selecting and defining the individual TSAs identified in the previous study task and assembling them into Combination Alternatives to the Undertaking (e.g. combining New / Expanded Non-Road Infrastructure with Optimizing the Network). Similar to the consideration of individual TSAs, the degree to which the Combination Alternatives address the Problems and Opportunities will be assessed and will be the basis for the selection of the Preferred Alternative / Combination that will proceed to Preliminary Planning. The outcome of these study tasks will be Working Paper #4: Area Transportation System Alternatives. In preparing the final working paper, public consultation including PIC #3 will take place (scheduled for Spring 2009) to provide members of the public an opportunity to review and comment on the draft report.

PRELIMINARY PLANNING

Following the Area Transportation System Planning, Preliminary Planning will begin with an assessment of the Alternatives to the Undertaking (Area Transportation System Alternatives). The detailed elements of the alternatives will be generated and an evaluation of the alternatives will provide a basis to the selection of the Preferred Preliminary Planning Alternatives. The implementation of these will be collectively known as the Transportation Development Strategy. This will lead to the recommendation of specific transportation projects in the Transportation Development Strategy and will be documented in the Transportation Needs Assessment Report. In preparing the final report, public consultation including PIC #4 will take place (scheduled for Fall 2009) to provide members of the public an opportunity to review and comment on the draft report.

The final study task in this stage of the EA, Selection of Alternatives To, involves identifying transportation projects that fall under the jurisdiction of MTO which can proceed to Stage 2 of the EA; and identifying projects that fall outside the jurisdiction of MTO which will be referred to the appropriate agency or jurisdiction for further review and action.

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APPENDICES

- Appendix A – Exhibit
- Appendix B – Part 1: Summary of Comments
– Part 2: Summary of Revisions

1. INTRODUCTION

1.1 BACKGROUND

The purpose of this report is to establish baseline transportation and socio-economic data for undertaking the GTA West Environmental Assessment Study. The report focuses on the documentation of the historical transportation and socio-economic conditions and trends in the Preliminary Study Area. Following this review of background conditions, historical trends will be applied to the existing conditions as part of an investigation of the “Area Transportation System” needs as demonstrated in the Study Process discussion. The application of these trends will facilitate the scoping of the remaining technical and consultation requirements of the Study.

Phase 2 of this Environmental Assessment Study will include the use of these results in the development of the Problem and Opportunity statement.

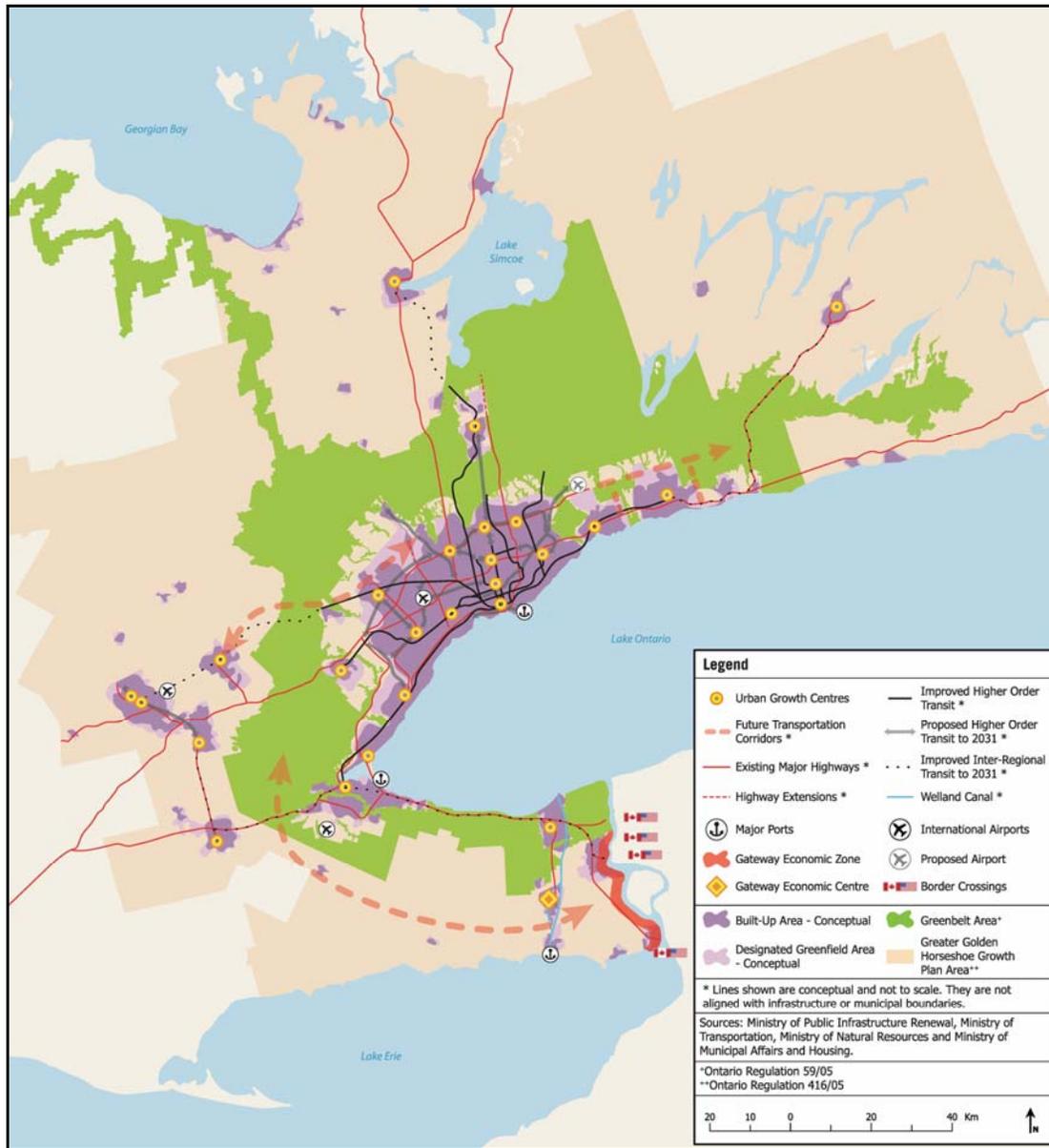
Over the last several decades Central Ontario has evolved from a Toronto based employment centre to a large regional geographic metropolis with many centres of economic activity, employment and population. Travel demand is now more dispersed with travel occurring between many employment and residential areas within and outside the Greater Toronto Area (GTA). Future population and employment growth in major urban centres will result in an increase in travel demand for both people and goods movement between these centres, which are spread across the Greater Golden Horseshoe (GGH).

Growth Plan

The Minister of Public Infrastructure Renewal released the Growth Plan for the Greater Golden Horseshoe (the Growth Plan) in June 2006. The Growth Plan represents a “planning vision” for the Province of Ontario and outlines a set of policies for managing growth and developing and guiding planning decisions in the Greater Golden Horseshoe over the next 30 years. The Places to Grow Act (2005) requires that planning decisions made by the Province, municipalities and other authorities conform to the policies contained in the Growth Plan. The Growth Plan is illustrated in **Exhibit 1.1** and discussed further in Section 2.3.2.

Prior to approval of the Province’s Growth Plan for the Greater Golden Horseshoe (February 2006), a number of studies, including the Ontario Ministry of Transportation’s (MTO) Central Ontario Strategic Transportation Directions (Draft 2002) indicated that MTO should examine the long-term transportation needs to address a number of areas including future growth in the GTA from Highway 400 westerly to the Guelph area. The GTA West Corridor, identified in the Growth Plan as a “Future Transportation Corridor”, represents a strategic link between the Urban Growth Centres in GTA West such as the Vaughan Corporate Centre, the Brampton City Centre, Downtown Milton and Downtown Guelph.

Exhibit 1.1: Growth Plan



Source: Ministry of Public Infrastructure Renewal, Growth Plan for the Greater Golden Horseshoe, 2006

The concentration of population and employment in the Guelph - Kitchener/Waterloo - Cambridge Tri-City area results in unique transportation challenges in the western portion of the Greater Golden Horseshoe. The transportation linkage between these economic centres is unique because of distinct, urban communities in close proximity, separated by rural landscape and culture. This is true not only for the continuing needs of commuters who provide the economic workforce, but also for the increasing needs of goods movement between these centres.

The Province also established the Greenbelt Plan (2005) through the Greenbelt Act 2005. Together, the Greenbelt Plan and the Growth Plan provide clarity and certainty about urban structure, where and how future growth should be accommodated and what must be protected for current and future generations in the Greater Golden Horseshoe area.

Greenbelt Plan

The Greenbelt Plan identifies where urbanization should not occur in order to protect the agricultural land base and the ecological features and functions occurring on this landscape. The Greenbelt Plan includes lands within, and builds upon the ecological protections provided by, the Niagara Escarpment Plan (NEP) and the Oak Ridges Moraine Conservation Plan (ORMCP). The Greenbelt Plan also supports infrastructure which achieves the social and economic aims of the Greenbelt and Growth Plans while seeking to minimize environmental effects. The Greenbelt Plan is described further in **Section 2.3.3**.

Support and Implementation of Growth Plan and Greenbelt Plan

The application of the Growth Plan requires that a comprehensive and long-term approach in planning for future transportation infrastructure be undertaken by MTO. The transportation infrastructure study reflects the government policy objectives as outlined in the Growth Plan. These policy objectives call for a transportation network that links Urban Growth Centres through an integrated system of transportation modes characterized by efficient public transit, rail and a highway system for moving people and goods with improved access to inter-modal facilities, international gateways (e.g. airports, border crossings, etc.), and transit hubs. As identified in the Growth Plan, the Urban Growth Centres within the GTA West Corridor Preliminary Study Area include Downtown Guelph, Downtown Milton, Brampton City Centre and the Vaughan Corporate Centre (see **Exhibit 1.1**).

To proceed with implementing the Growth Plan's policy directions, MTO has commenced the study of people and goods movement in the GTA West Corridor Preliminary Study Area through the Provincial Individual Environmental Assessment (EA) process. The EA process will identify and validate the transportation problems and opportunities and evaluate a variety of alternatives to address them. MTO will coordinate its planning with other major transportation initiatives being carried out in the study area such as the Metrolinx (formerly the Greater Toronto Transportation Authority) Regional Transportation Plan for the Greater Toronto and Hamilton area; as well as with other ministries and municipalities as the EA study moves forward. Given the role of Metrolinx in developing a seamless, integrated transportation network in the GTHA it will be very important to involve Metrolinx in all stages of the EA process.

The Greenbelt Plan recognizes the need to balance the goals of the Greenbelt with the long-term infrastructure needs to support growth. Infrastructure development is a vital component for fostering vibrant rural communities in the Golden Horseshoe. The Greenbelt Plan includes goals, objectives and policies to guide the planning, design and construction for infrastructure projects. The GTA West Planning and EA Study will be carried out in accordance to these goals, objectives and policy requirements of the Greenbelt Plan.

Economic

The Ministry of Finance forecasts for Ontario¹ indicate a positive long-term economic outlook. Parts of the region are currently enjoying significant economic growth and job

¹ Ministry of Finance, *Toward 2025, Assessing Ontario's Long Term Outlook, 2006*.

creation and according to population and employment projections for the Preliminary Study Area, the region is projected to experience substantial growth over the next 30 years. Consistent with such growth, one can expect significant challenges on the transportation network across the region, with greater goods movement, commuter, tourist and recreational travel. One of the key challenges is to ensure that the future transportation system in the Preliminary Study Area supports economic growth potential and does not encourage increased sprawl.

The Highway 401 corridor, which traverses the south limit of the Preliminary Study Area, is perhaps the most important trade corridor in Eastern Canada and is critical to the local, regional, provincial and national economies. The Highway 401 corridor also provides access to Lester B Pearson International Airport (LBPIA) and adjacent lands referred to as the Airport Supernode. Therefore, it is essential that appropriate consideration is given to ensure that the transportation network, in this corridor, has sufficient capacity to support future economic growth within the Preliminary Study Area.

Over 750,000 job opportunities are anticipated over the next 25 years within the County of Wellington and the Regions of Waterloo, Halton, Peel and York and these new job opportunities will have significant impacts on the GTA West Preliminary Study Area travel patterns and infrastructure requirements. The major employment growth areas are projected to be wholesale trade, business service, retail trade, education, finance, health and transportation-warehousing. The wholesale, retail and transportation-warehousing trade growth areas will require infrastructure to accommodate commercial vehicles, whereas the remaining growth areas require balanced transportation network infrastructure.

Overall, the real GDP growth over the next 25 years is forecast to decrease from 3% per annum to less than 2.5% per annum. Specific to employment sectors, the wholesale trade sector is anticipated to grow by over 250% while the transportation/warehousing sector is expected to more than double.

Key economic outlooks for Ontario include the following:

- Forecasts indicate continued concentration of growth in the Golden Horseshoe over the next 20 years, stressing the need to provide infrastructure that will enable growth while sustaining a high quality of life.
- The real GDP per capita is anticipated to maintain a steady rate of increase resulting in a corresponding increase in the real income received by individuals.
- Ministry of Finance projections identify an increase in real GDP per capita to about \$52,000 (constant 1997 dollars) by 2025 compared to \$38,000 in 2004.

1.2 PRELIMINARY STUDY AREA AND AREA OF INFLUENCE

The Preliminary Study Area is illustrated in **Exhibit 1.2**. This Preliminary Study Area will be refined as the Environmental Assessment process evolves and is not intended to be a fixed area at this time. As such, the area boundaries are approximate and subject to refinement as the issues, problems and opportunities are identified. The Preliminary Study Area was modified slightly during the consultation undertaken to prepare the EA Terms of Reference (TOR) to address comments related to potential constraints in the

north-west and north-east sections. **Exhibit 1.3** presents the Preliminary Study Area in the context of the regional and local municipalities in which it is located.

Exhibit 1.2: Preliminary Study Area

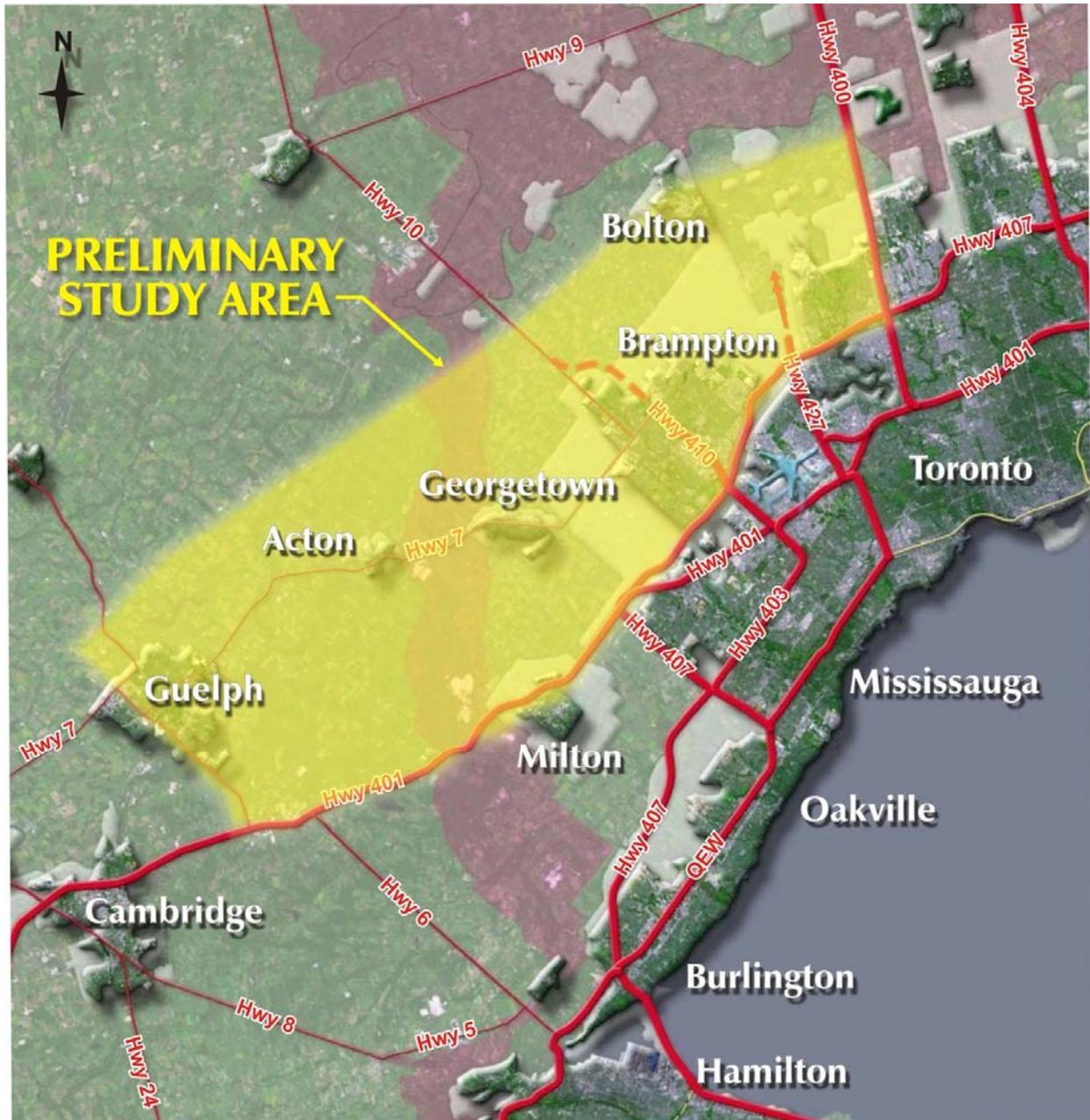
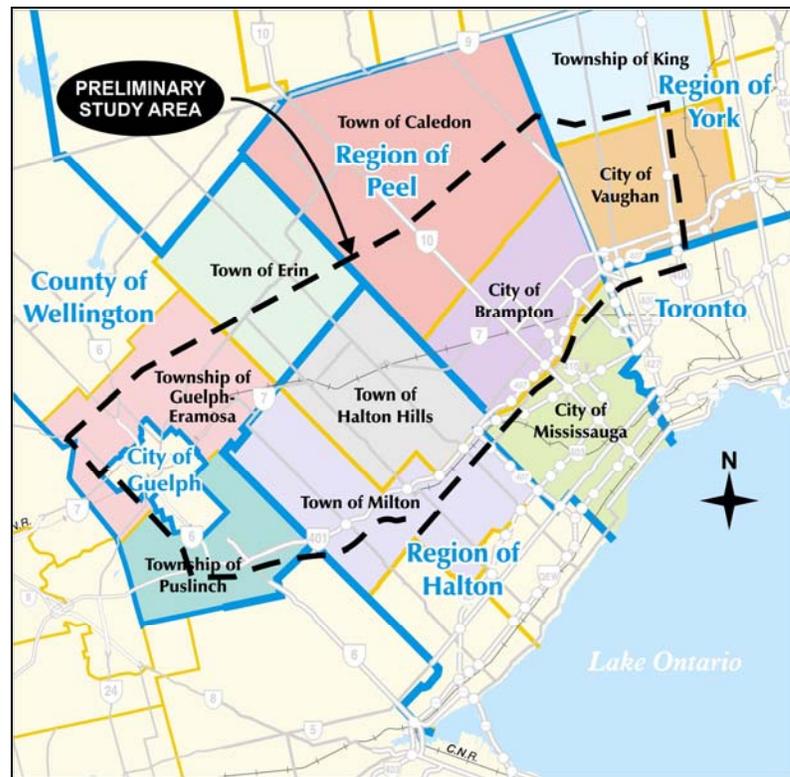
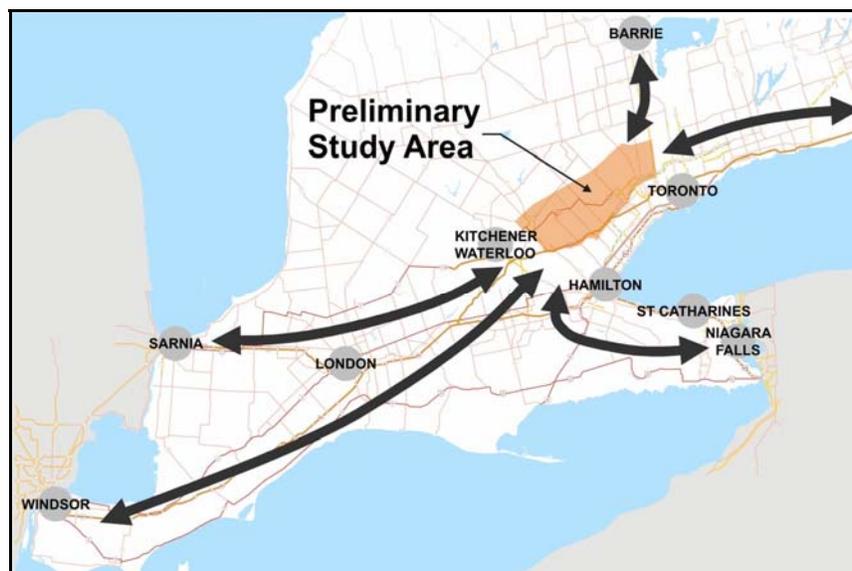


Exhibit 1.3: Area Municipalities



It is recognized that transportation issues in the Preliminary Study Area are related to and influenced by a much broader area. Therefore, travel demand analysis will be carried out in a much broader context including the consideration of major transportation infrastructure in proximity to the Preliminary Study Area and linkages to/from other transportation regional hubs and gateways. **Exhibit 1.4** highlights this relationship. The limits of the Preliminary Study Area are subject to change pending the findings of the transportation analysis.

Exhibit 1.4: Influence Area



1.3 STUDY PURPOSE

The Ontario Ministry of Transportation is working to provide for the efficient movement of people and goods within the context of the Province's Growth Plan for the Greater Golden Horseshoe that was released by the Ministry of Public Infrastructure Renewal in February 2006. To support policy directions in the Growth Plan, MTO has commenced a planning study and the formal EA process for the GTA West Corridor

The purpose of this study is to examine long-term transportation problems and opportunities and consider alternative solutions to provide better linkages between Urban Growth Centres in the GTA West Corridor Preliminary Study Area. The focus will be on developing an integrated, multi-modal transportation system that offers choices for the efficient movement of people and goods.

The linkage between the GTA north-western economic centres and those in the Golden Triangle of the Guelph - Kitchener/Waterloo - Cambridge area continue to become more important and will require efficient transportation infrastructure to provide for inter-regional travel and goods movement. Given the importance of this linkage to the local, regional, provincial and national economies, there is a requirement that responsible steps be undertaken to ensure that the transportation network in this area operates well in the future and supports the growth that is intended.

The purpose of this report is to provide baseline transportation and socio-economic data upon which the Environmental Assessment Study will be built. The key focus of the report is to document the historical transportation and socio-economic conditions in the Preliminary Study Area. Following this historical look, the importance of the existing conditions and patterns will be applied to investigate the "Area Transportation System" needs in order to allow the appropriate scoping of the remaining technical and consultation requirements of the Study.

Phase 1 of this Environmental Assessment Study will apply the knowledge gained in this report to the Problem and Opportunity statement.

2. OVERVIEW OF RELEVANT FEDERAL, PROVINCIAL AND MUNICIPAL POLICIES

2.1 POLICY CONTEXT

In reviewing and assessing the existing and future infrastructure requirements of the Preliminary Study Area, it is essential to establish a policy context for infrastructure expansion, considering both growth and sustainability objectives. Establishing a policy framework is the first step in developing a consistent vision and consistent approach to addressing regional transportation and socio-economic issues, with the goal of sustaining and improving the quality of life of area residents as well as broader regional, provincial and national economic interests. The assessment and evaluation of the Preliminary Study Area problems and opportunities are carried out with due consideration to the policy framework in order to ensure that the ultimate improvement plan is consistent with the policies and objectives of the various levels of government. A discussion of specific federal, provincial and municipal policies is summarized in the following sections with a focus on the application to transportation infrastructure in the GTA West Preliminary Study Area.

2.2 FEDERAL POLICY

2.2.1 "Straight Ahead – A Vision for Transportation in Canada"

“Straight Ahead – A Vision for Transportation in Canada” is the culmination of a year long dialogue with Canadians including the 1998-99 *Climate Change Table on Transportation*, the *Millennium Transportation Conference* in 2000, and the report of the *Canada Transportation Act Review Panel* in 2001. In June 2001, the Minister of Transportation issued a report, *Creating a Transportation Blueprint for the Next Decade and Beyond: Defining the Challenges*, to open a discussion with stakeholders about key policy challenges facing transportation. This report indicated that realization of the vision will be demonstrated by achieving a proper balance in all our key decisions between the social, economic and environmental elements of a sustainable transportation system. This will mean continual, steady progress towards our goals, environmental responsibility, access, accessibility, and the removal of major obstacles and barriers to efficiency, safety and security.

2.3 PROVINCIAL POLICY

The three significant provincial policy/planning initiatives guiding growth and development in the region at the provincial level are:

- The Provincial Policy Statement;
- The Growth Plan for the Greater Golden Horseshoe (Places to Grow); and
- The Greenbelt Plan

2.3.1 Provincial Policy Statement

The Provincial Policy Statement (PPS) was issued under the authority of Section 3 of the Planning Act. It provides direction on matters of provincial interest related to land use planning and development, and promotes the provincial “policy-lead” planning system.

The new Provincial Policy Statement came into effect on March 1, 2005. This aligns with Section 2 of the Strong Communities (Planning Amendment) Act, 2004, which requires that planning decisions on applications that are subject to the new PPS “shall be consistent with” the new policies.

The Provincial Policy Statement recognizes the complex inter-relationships among economic, environmental and social factors in planning and embodies good planning principles. It includes enhanced policies on key issues that affect our communities, such as:

- The efficient use and management of land and infrastructure;
- Protection of the environment and resources; and
- Ensuring appropriate opportunities for employment and residential development, including support for a mix of uses.

The new policies fulfill the government’s commitment to provide strong, clear policy direction on land-use planning to promote strong communities, a clean and healthy environment, and a strong economy.

The PPS also provides the following applicable and guiding infrastructure policies:

- Infrastructure and public service facilities shall be provided in a coordinated, efficient and cost-effective manner to accommodate projected needs;
- Planning for infrastructure and public service facilities shall be integrated with planning for growth so that these are available to meet current and projected needs;
- The use of existing infrastructure and public service facilities should be optimized wherever feasible, before consideration is given to developing new infrastructure and public service facilities;
- Infrastructure and public service facilities should be strategically located to support the effective and efficient delivery of emergency management services; and
- Where feasible, public service facilities should be co-located to promote cost-effectiveness and facilitate service integration.

Transportation Systems

- Specific transportation systems should be provided which are established to be safe, energy efficient, facilitate the movement of people and goods, and are appropriate to address projected needs;
- Efficient use shall be made of existing and planned infrastructure;
- Connectivity within and among transportation systems and modes should be maintained and, where possible, improve connections with cross jurisdictional boundaries; and
- Transportation and land use considerations shall be integrated at all stages of the planning process.

Transportation and Infrastructure Corridors

- Planning authorities shall plan for and protect corridors and rights-of-way for transportation, transit and infrastructure facilities to meet current and projected needs;
- Planning authorities shall not permit development in planned corridors that could preclude or negatively affect the use of the corridor for the purposes for which it was identified;
- The preservation and reuse of abandoned corridors for purposes that maintain the corridor's integrity and continuous linear characteristics should be encouraged wherever feasible; and
- When planning for corridors and rights-of-way for significant transportation and infrastructure facilities, consideration will be given to significant natural heritage resources, water resources, agricultural resources, mineral and petroleum resources, mineral aggregate resources, cultural heritage and archaeology resources.

Long-Term Economic Prosperity

- Long-term economic prosperity should be supported by providing for an efficient, cost-effective, reliable multi-modal transportation system that is integrated with adjacent systems and those of other jurisdictions, and is appropriate to address projected needs.

2.3.2 Growth Plan for the Greater Golden Horseshoe

The Greater Golden Horseshoe (GGH) region of Ontario, which encompasses the GTA and a large part of south central Ontario, including the Preliminary Study Area for the GTA West corridor, is considered one of the fastest growing regions in Canada on the basis of recent Statistics Canada census data. In order to manage this growth the Ontario Government enacted the Places to Grow Act in June 2005. The Places to Grow Act identifies the Province's vision and serves to guide decisions on a wide range of issues including: economic development, land-use planning, urban form, housing, natural heritage and provincial infrastructure planning. Overall, the objective of the Growth Plan is to provide broad-level policies generally applicable throughout the GGH as a framework for sustainable growth.

In order to meet the Growth Plan objectives of reducing urban sprawl and efficient utilization of existing infrastructure, "Urban Growth Centres" (UGC) have been designated within the province (see **Exhibit 1.1**). The Plan guides the future levels of intensification and infill development for each municipality and supports the increased use of transit to reduce congestion on road networks.

One of the key planning objectives of the Growth Plan is to provide a transportation network that links UGC's through an integrated system of transportation modes. The Growth Plan recognizes that Transportation Policies should offer a balance of transportation choices that reduce reliance upon any single mode and promotes transit, cycling and walking, and provides for connectivity among transportation modes for "moving people" and for "moving goods".

According to the Growth Plan, a key policy for moving people and moving goods (that has particular relevance to the development of transportation solutions in the GTA West Corridor) is to ensure that corridors are identified and protected to meet current and projected needs for various travel modes. The Growth Plan identifies that overall transportation planning must support opportunities for multi-modal use where feasible; prioritizing transit and goods movement needs over those of single occupant automobiles. Whereas public transit will be the first priority for transportation infrastructure planning and major transportation investments, the plan underlies the need to consider the separation of modes within corridors, where appropriate. The Growth Plan provides a strategic framework and therefore needs to be supported through appropriate studies such as the EA for the GTA West Corridor.

The Preliminary Study Area includes several Urban Growth Centres identified in the Growth Plan that have significant bearing on the GTA West Corridor and the associated Preliminary Study Area, namely:

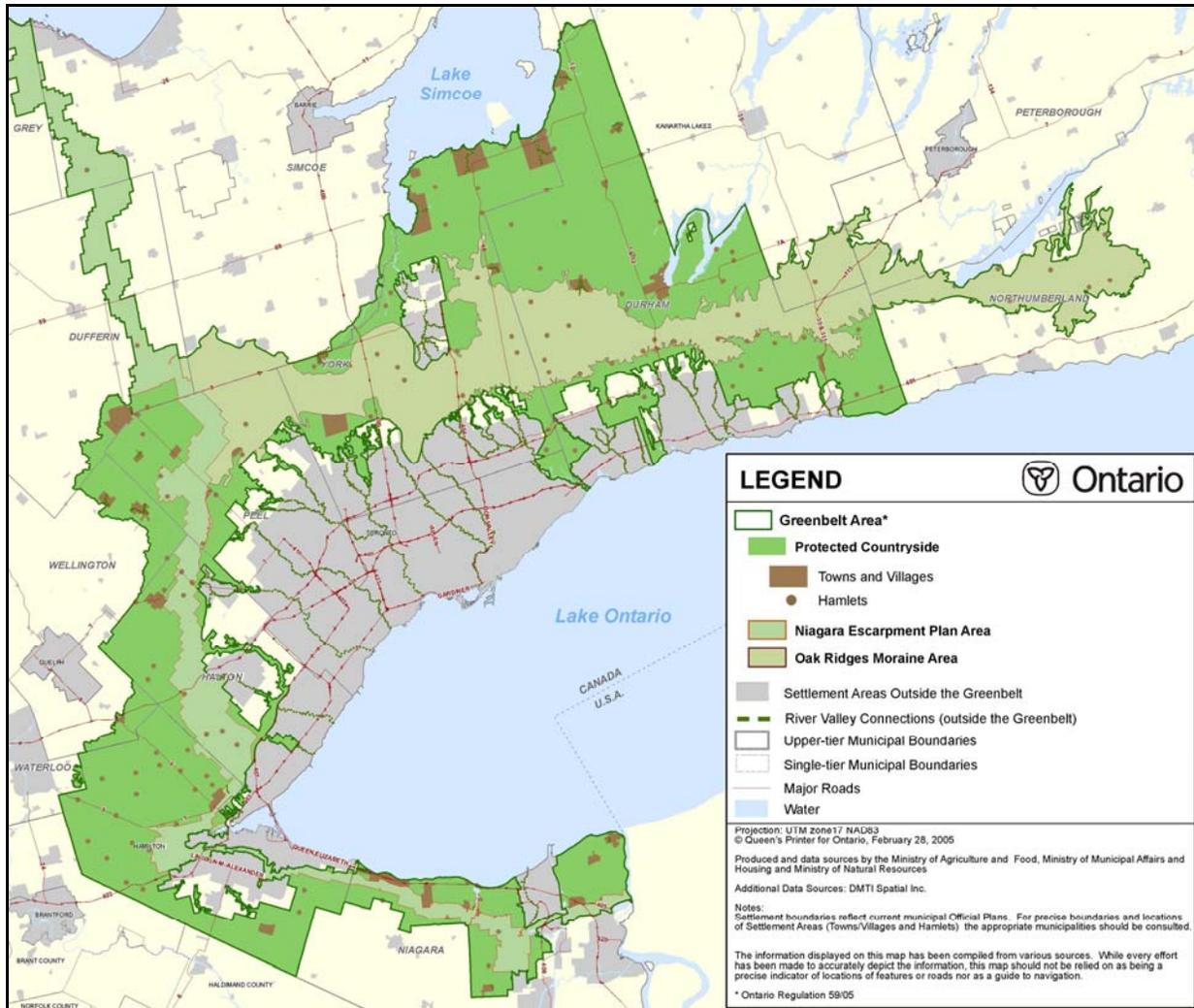
- Downtown Guelph;
- Downtown Milton;
- Brampton City Centre; and,
- Vaughan Corporate Centre.

It is noted that within the GTA West Study Area of Influence the downtowns of Kitchener, Waterloo and Cambridge are identified as Urban Growth Centres.

2.3.3 The Greenbelt Plan

The Greenbelt Plan builds upon the existing policy framework established within the Provincial Policy Statement. The Plan involves and builds upon the ecological protection policies provided by the Niagara Escarpment Plan (NEP) and the Oak Ridges Moraine Conservation Plan (ORMCP). The Preliminary Study Area for this EA lies within the Greenbelt Planning Area, as shown in **Exhibit 2.1**.

Exhibit 2.1: Greenbelt Planning Area



Source: Schedule 1 – Greenbelt Plan Area, Greenbelt Plan, 2005

The Greenbelt Plan is a large band of protected land which has implications on the Preliminary Study Area with policies that:

- Protect against the loss and fragmentation of the agricultural land base and supports agriculture as the predominant land use;
- Give permanent protection to the natural heritage and water resource systems that sustain ecological and human health and that form the environmental framework around which major urbanization in south central Ontario will be organized; and
- Provide for a diverse range of economic and social activities associated with rural communities, agriculture, tourism, recreation and resource uses.

The Greenbelt Plan includes the headwaters of all major watersheds in the western GTA that were not protected by the Niagara Escarpment or Oak Ridges Moraine plans.

The Greenbelt Plan also identifies the importance of infrastructure to economic well-being, human health and quality of life in south central Ontario and the Greenbelt. Policies within the Greenbelt Plan acknowledge the existence of infrastructure and the need to maintain and create new infrastructure to continue serving existing and permitted land uses within the Greenbelt.

Recognizing that major infrastructure serving national, provincial and inter-regional needs traverse the Greenbelt, the Greenbelt Plan anticipates that new and/or expanded facilities will be needed in the future to serve substantial growth projected for south central Ontario.

2.3.4 Ontario – Quebec Continental Gateway and Trade Corridor

The Provinces of Quebec and Ontario, generate some 60%, by value, of Canada's exports and Gross Domestic Product (GDP). The sustained performance of their manufacturing industries and an abundance of natural resources continue to contribute to the economic growth of Ontario, Quebec and Canada.

Meeting the increased demand for transportation arising from this economic growth requires an integrated system of all the modes of transportation (air, rail, marine, and road) along with a large number of border crossings and gateways such as ports and airports. To meet the new challenges of trade growth, as well as sustain it, it is vital that the multi-modal transportation systems of Ontario and Quebec be optimized and improved.

The signing on July 30, 2007 of a memorandum of understanding (MOU) on the **Ontario – Quebec Continental Gateway and Trade Corridor** provides the direction between the Federal, Ontario and Quebec governments in analysing the two provinces' strategic, integrated and globally competitive transportation systems in order to enhance their performance to meet existing and future demand for freight transportation.

The Gateway and Corridor approach will identify and guide the implementation of actions required to:

- Optimize and integrate transportation systems;
- Ensure fluidity at critical border crossings and intermodal connections;
- Reduce environmental impacts and improve sustainability;
- Harmonize regulations / policies to strengthen safety, security, productivity and North American competitiveness; and,
- Identify key opportunities for strategic investments for policy and operational measures to increase capacity and efficiency.

The MOU, to be completed in the summer of 2009, will:

- Estimate current and future demand;
- Evaluate current and future capacity issues;
- Develop a plan for targeted infrastructure improvements; and,
- Review and recommend policy, regulatory and operational measures.

2.4 MUNICIPAL POLICY

In addition to provincial and federal policies, local area policy documents exist, or are currently being developed, that are being considered in the context of the GTA West Corridor Planning and EA Study.

Regional and County governments in Ontario are designed to:

- Provide a high level of service to the residents of the Region/County and to provide these services in as efficient a manner as possible;
- Reorganize and streamline the operation and administration of local government; and
- Establish administrative procedures and mechanisms to deal with problems and issues whose effects extend beyond the limits of any one local municipality's political boundaries.

At the municipal level, Official Plans provide the context and boundaries within which a municipality operates with regards to land use, development and growth. Regulatory documents are based on Official Plans, including Site Plan Control, Comprehensive Zoning Bylaws and Property Standards. Official plans for the municipalities identified in the Preliminary Study Area and the demographic indicators are presented below.

For additional details on the Preliminary Study Area land use, please refer to the Draft Overview of Environmental Conditions and Constraints Working Paper.

2.4.1 County of Wellington Official Plan

The County of Wellington is a community of 85,000² living in an area of over 2,600 square kilometres. The County incorporates many small towns and hamlets over rural countryside west of the GTA and east of the Kitchener-Waterloo area. Located at the southern end of the County of Wellington and surrounding the southeast boundary of the City of Guelph, the Township of Puslinch is a community of several smaller villages with a total population of 7,000 in 2007³. Surrounding the northwestern boundary of the City of Guelph, the Township of Guelph-Eramosa is a community of approximately 12,600 people⁴ and includes the community of Rockwood. The Town of Erin is located north of the Township of Guelph-Eramosa and has a population of approximately 11,785 people in 2007, concentrated in the communities of Erin and Hillsburgh⁴.

The Wellington County Official Plan aims to give direction over the next 20 years to the physical development of the county. Its main principles in planning for the rural towns within its boundaries are sustainable development, land stewardship and healthy communities. The Plan allows for a consistent set of policies that can be used across the County⁵.

2.4.2 City of Guelph Official Plan

The City of Guelph has a population of approximately 120,000⁶ and is geographically within southern Wellington at the west end of the Preliminary Study Area. The City is one of the fastest growing economic regions in Central Ontario, with one of the premier research universities and a diverse variety of manufacturing, service, and high technology

² Growth Plan – Schedule 3

³ County of Wellington Official Plan

⁴ The Town of Erin Official Plan

⁵ County of Wellington Official Plan

⁶ City of Guelph Website

enterprises⁷. The *Growth Plan* designates Downtown Guelph as an *Urban Growth Centre*.

The City of Guelph Official Plan provides a statement of goals, objectives and policies that intend to achieve long-term community sustainability. The Plan functions as a comprehensive land use plan that aims to maintain and enhance social well-being, economic vitality and environmental protection⁸.

In addition to the City's Official Plan, a Local Growth Management Study is in place which responds to the provincial policy initiatives such as the Growth Plan and the Provincial Policy Statement (see **Section 2.3**). The Local Growth Management Study objectives are to:

- Describe the current context for planning Guelph's future;
- Identify and analyze the factors that will shape Guelph's future growth;
- Detail possible scenarios for growth; and,
- Recommend appropriate municipal initiatives to achieve the desired future.⁹

2.4.3 Region of Halton Official Plan

The Halton Regional Official Plan (updated August 17, 2006) incorporates policies that address the goals and objectives of the plan by dividing the geographic area into the Urban System, the Rural System and the Greenlands System. The 2006 Census population data for the Region of Halton is 439,256.

The Official Plan provides detailed policies on environmental quality, human services, heritage resources, urban services (water supply and wastewater treatment), economic development, transportation, energy and utilities. The Plan also includes the strategy for implementation to achieve the goals and objectives as well as ongoing monitoring of the effectiveness of plan policies.

In June 2006, the Region of Halton initiated the process to develop an initiative called the Durable Halton Plan, which is now called Sustainable Halton. The Sustainable Halton Plan will confirm the Region's consistency with the provincial policies found in the Growth Plan, the Greenbelt Plan and the Provincial Policy Statement. The plan will guide the municipal initiatives that will outline the population and employment growth, the required infrastructure to support growth and the necessary policies that need to be in place to protect natural as well as heritage lands.

The Region of Halton is comprised of four municipalities. The Town of Oakville and City of Burlington make up the urban area in the southern portion of the region while areas to the north consisting of the Town of Halton Hills and the Town of Milton are comprised of a mix of rural and small but growing urban areas.

Surrounded predominantly by a natural rural area, with three urban areas – Georgetown, Acton and the 401/407 Employment Area, the Town of Halton Hills is home to 55,289

⁷ For more information on cumulative effects assessment please refer to the Canadian Environmental Assessment Agency's operational policy statement on cumulative effects, http://www.ceaa-acee.gc.ca/013/0002/cea_ops_e.htm

⁸ Guelph Official Plan

⁹ Context for the Local Growth Management Study

people (2006 Census). The Niagara Escarpment runs on the diagonal through the Town of Halton Hills, with Acton resting above the Escarpment and Georgetown below the Escarpment. The Bruce Trail, Ontario's longest footpath, follows along the Escarpment from Niagara to Tobermory. The Town of Halton Hills Official Plan projects that the population for the Town will increase to 70,000 by 2021. The number of jobs is anticipated to increase to 30,000 by 2021¹⁰.

The Town of Milton is located on the west edge of the GTA. The Niagara Escarpment runs on the diagonal through the Town. Below the Escarpment is an urban area surrounded by agricultural land. Above the Escarpment is an extensive rural area comprised of agricultural operations, natural areas, quarry operations, estate residential development and the hamlets of Campbellville, Brookville and Moffat. The population of the Town of Milton has almost doubled in the 5 years since 2001. The Statistics Canada Census shows the Town's population was 31,471 in 2001 and approximately 54,000 in 2006¹¹. The *Growth Plan* designates Downtown Milton as an *Urban Growth Centre*.

2.4.4 Region of Peel Official Plan

The Region of Peel covers approximately 1,225 square kilometres and is home to over 1.2 million people within the municipalities of the Town of Caledon and the cities of Brampton and Mississauga.

The Town of Caledon is the most northerly of the three area municipalities in The Region of Peel and comprises 55% of the total land area in the Region. Located in the north-western area of the GTA, the Town exhibits the characteristics of a distinct rural area under increasing pressure from the expanding urban area¹².

Located between Caledon and Mississauga, the City of Brampton has experienced the 2nd highest rate of growth among the 20 largest cities in Canada and has the 3rd largest population (434,000 in 2006) in the GTA. The City of Brampton is highly urbanized and continues to develop at a rapid pace with future growth primarily in its eastern and northwestern parts. The *Growth Plan* designates Brampton City Centre as an *Urban Growth Centre*.

Brampton is home to the Daimler-Chrysler Brampton Assembly Plant which employs over 4,000 people. One of CN's major Inter-modal terminals is located in eastern Brampton at Airport Road and Intermodal Drive.

The City of Mississauga is the southern most municipality within Peel Region. With a population of 700,000 (2005), Mississauga is Canada's 6th largest city and is home to Toronto - Pearson International Airport, Canada's largest international airport. The *Growth Plan* designates Mississauga City Centre as an *Urban Growth Centre*; however, the Mississauga UGC is south of the GTA West Preliminary Study Area.

The Official Plan for the Region of Peel is a long-term regional strategic policy framework with many goals and objectives, some of which include: the management and planning for the Region's population and employment growth; the minimization of

¹⁰ Town of Halton Hills Official Plan

¹¹ Statistics Canada Community Profile - 2006

¹² Caledon OP – Page 1-1

fragmentation and loss of landscape; and the realization and acknowledgement of the different characteristics between the urban cities of Mississauga and Brampton and the rural Town of Caledon. The planning themes that have dominated the Official Plan include the ecosystem approach, sustainable development and healthy communities¹³.

The Region has begun a new initiative, Liveable Peel, which extends the goals and objectives of the Province to the Region's municipalities. This initiative complements the Province's strong commitment to a policy framework that improves future communities through balanced planning with respect to environmental, social, economic and cultural issues.

The Liveable Peel policy framework has been established with the following objectives:

- To manage the impacts of growth and affect change;
- To achieve a sustainable land use and transportation system;
- To balance the demands of social, economic, environmental and cultural interests;
- To increase recognition and support of long-term planning; and,
- To capitalize on community capacity and stakeholder involvement¹⁴.

2.4.5 Region of York Official Plan

The Region of York covers an area of 11,776 square kilometres from Lake Simcoe in the north to the City of Toronto's northern boundary in the south. With a population of approximately 946,000 (as of October 31, 2006), York Region is one of the most diverse regions in Canada, diverse in industry and business, in landscape and in a multicultural population¹⁵.

To the east end of the GTA West Corridor, the City of Vaughan is one of the largest and fastest growing urban centres in the Preliminary Study Area. The Vaughan Corporate Centre, identified in the *Growth Plan* as a designated *Urban Growth Centre*, is a planned new downtown area that will incorporate business offices, recreational and cultural facilities, and pedestrian shopping areas. The Vaughan Enterprise Zone consists of more than 1,000 hectares in the City's west end that has been designated as employment lands¹⁶. Vaughan is also home to the CPR inter-modal terminal located east of Highway 50 on the north side of Rutherford Road.

King Township, located immediately north of the City of Vaughan, comprises 19 percent of York Region's land and has a population nearing 20,000. The rolling hills of the Oak Ridges Moraine are the Township of King's most prominent geographical features. Also included are the Township's forests, world-class horse and dairy agricultural operations as well as the Holland Marsh, a designated specialty crop area. Nearly 70% of the Township lands are situated in the protected area of the Oak Ridges Moraine¹⁷.

¹³ Region of Peel Official Plan

¹⁴ Liveable Peel

¹⁵ York Region Website - Business

¹⁶ City of Vaughan Website

¹⁷ King Twp Website – Community Information

The Region of York Official Plan is closely linked with the Region's strategic planning initiative, Vision 2026. Some of the goals that the initiative highlights are quality communities for a diverse population; enhanced environment, heritage and culture; and a vibrant economy. The Plan is a set of policies intended to: manage growth within the Region; guide land use planning regarding economic, environmental and community-building sustainability; and allow area municipalities to plan and coordinate more detailed policies¹⁸.

The changing provincial policy framework imposed by initiatives such as the Growth Plan, the Oak Ridges Moraine Conservation Act and the Greenbelt Plan has guided the Region towards a growth management strategy - *Planning for Tomorrow* and a *Preliminary Draft Sustainability Strategy* endorsed by Regional Council. These initiatives aim to create a more sustainable Region through simultaneous consideration of a sustainable natural environment, a vital economy and healthy communities.

¹⁸ Region of York Official Plan

3. DEFINITION AND DESCRIPTION OF THE "AREA TRANSPORTATION SYSTEM"

The "Area Transportation System" is comprised of transportation facilities which have the primary function of providing transportation linkages for the movement of people and goods by all modes and all jurisdictions between multiple regions of the province and/or between cities and other major centres of population or which function to complete such primary transportation linkages, with an emphasis on connections to:

- Cities and other major centres of population that contain designated urban growth centres;
- Cities and other major centres of population that contain designated major transit service/station areas;
- Cities and other major centres of population that contain designated transit interchanges and potential gateway hubs; and
- Major regional facilities for primary goods movement, such as inter-modal facilities and international airports.

Several natural environmental features influence the provision of transportation services and mobility in the Preliminary Study Area. These include the Niagara Escarpment, the designated Greenbelt Area, Credit River Watershed and the Oak Ridges Moraine. Currently a limited number of road and rail corridors cross these existing natural constraints. The influence of sensitive natural habitat or geographic conditions such as wide river valleys have a significant bearing on the provision of transportation facilities. Historically, infrastructure has only been located in areas where construction was uncomplicated unless, as in the case of railways, large structures were required regardless of location. In some locations within the GTA West Preliminary Study Area, the development of a grid road network that propagates across the whole area has been omitted for the reasons of significant obstacles, usually associated with a key watercourse.

3.1 HIGHWAY NETWORK

Provincial, Regional and Municipal roads in Central Ontario serve a growing demand for transportation services on an intercity network of links used for the transport of goods and people. The automobile continues to be the preferred mode of travel and auto ownership has been increasing at a faster rate than population growth over previous decades, with the popularity of suburban life being a major contributor.

Trucks are the principal means of transporting goods in Central Ontario as the existing provincial highway system links to all major manufacturing centres and international border crossings. The demand for truck transport remains a competitive mode of goods distribution for the majority of shippers. Trucking provides inter-modal goods transport connectivity between rail and marine transport facilities using provincial freeways and arterial road networks.

The provincial Highway network within the Preliminary Study Area is illustrated in **Exhibit 3.1**. The network includes Provincial Highways 400, 401, 410, 427, 6, 7, and 10 as well as Highway 407 Express Toll Route (ETR). An overview of each of these facilities is provided below.

Exhibit 3.1: Existing Provincial Highway Network



Highway 400 is a north-south, 10-lane provincial freeway on the east boundary of the Preliminary Study Area. It extends from within the City of Toronto northerly through the Region of York and Simcoe County. The freeway was first opened in 1952 and provides an important link between Highway 401 and Highway 407 corridors to Simcoe County, “Cottage Country”, Northern Ontario and Western Canada.

Highway 401 is a major 6-lane provincial freeway extending across the south end of the Preliminary Study Area (PSA) through the County of Wellington and Regions of Halton and Peel. This highway is the most critical of all highways in Eastern Canada since it extends between the Quebec border through to the U.S. border at Windsor and provides for significant goods movement, tourism and connections across the Province. Outside of the PSA towards the City of Toronto, Highway 401 operates as a core-collector system with upwards of 10 lanes in each direction. The construction of the highway began in 1938 and the last section was completed in 1965. Presently, a significant component of travel through the GTA West Corridor is accommodated by Highway 401, which serves various modes of commuter, tourist and commercial traffic. Highway 401 demand exhibits varying peak travel characteristics depending on the hourly, daily or seasonal impacts resulting from this cross-section of users and operates at or over capacity along specific sections. There is a high proportion of truck traffic along Highway 401 reflecting both the key provincial trade corridor and the commercial activities within the GGH. There are eight interchanges within the Preliminary Study Area: Highway 6 North; Highway 6 South; Guelph Line; Highway 25; James Snow Parkway; Trafalgar Road; Highway 407 ETR; and Winston Churchill Boulevard. A new interchange is also planned at Tremaine Road in Halton Region.

Highway 407 ETR is a privately owned and operated toll facility that opened in 1997. Highway 407 provides east-west travel opportunities across the south end of the

Preliminary Study Area from the east boundary of the Region of Halton through the Regions of Peel and York. This toll highway has a basic 6-lane cross-section, expanding to 10 lanes in specific sections. It accommodates a significant portion of east-west travel along the Highway 407 / Highway 401 corridor providing an alternate route to Highway 401. Originally intended as an untolled provincial highway, the Province decided that it would be financially advantageous to have the private sector construct and operate the highway, resulting in a more timely introduction of new and much needed capacity to the Highway 7 and Highway 401 corridors through the Toronto area and a combination of Highway 403 and QEW corridors in the west.

Highway 410 is a north-south provincial freeway extending from the City of Mississauga into the City of Brampton. The highway provides north-south network connectivity with links between Highway 403, Highway 401, Highway 7 and Highway 407. The first section of Highway 410 opened in 1979 and its current cross-section is upwards of 4 lanes in each direction. This highway accommodates the demand for access between much of Brampton and the rest of the GTA via the intersecting highways. The highway continues to expand with construction underway to the north, ultimately connecting to the Highway 10 corridor north of Brampton.

Highway 427 is a north-south provincial freeway in the vicinity of the municipal boundary between the Cities of Mississauga and Toronto. The highway provides freeway connections between the Queen Elizabeth Way (QEW), Highway 401 and Highway 407 with direct access to Toronto Pearson International Airport and currently extends northerly to Highway 7. This highway was initially introduced as additional capacity in the Highway 27 and Highway 50 corridor. The Highway 427 Extension EA Study is currently underway through a separate and parallel MTO EA process.

Highway 6 is a north-south rural highway located along the western boundary of the Preliminary Study Area connecting Highway 401, Highway 403 at Hamilton and the City of Guelph. Highway 6 (named Hanlon Expressway north of Highway 401) has a 4-lane cross-section and at-grade connections to crossing arterials. The section in Wellington County from Puslinch to Morriston has remained as a two lane road primarily due to significant property constraints to widening. Highway 6 is not aligned north and south of Highway 401 and requires the use of Highway 401 as a connecting link, although plans are in place to improve this connection.

Highway 7 provides relatively direct connections between the urban areas of Kitchener-Waterloo, Guelph, Rockwood, Acton, and Georgetown. The highway had until recently extended through the entire GTA, connecting also to Woodbridge, Richmond Hill, Unionville, and Markham. However, the Province transferred this section to regional municipalities since it provides a more urban function currently in those areas. Highway 7 extends east of the GTA through to east of Peterborough and beyond. The highway now primarily serves shorter distance trips in the GTA and transitions from 2 lanes to 4 lanes in built-up urban areas. Highway 7 was a significant east-west highway in Ontario prior to the introduction of Highway 401, connecting Ottawa to the U.S. border at Sarnia.

Highway 10 is a 4-lane north-south undivided highway between Brampton and Caledon Village crossing the Niagara Escarpment. The highway narrows to two-lanes from just south of Caledon Village northerly and extends to the City of Owen Sound on the shores of Georgian Bay. The Ministry of Transportation is continuing with a program to

reconstruct Highway 10 to a basic four-lane cross-section towards its northern boundary at the south limit of Orangeville. Similar to other highways in the GGH, Highway 10 originally extended from Lake Ontario northerly but was transferred by the Province due to its urban nature. Through the Mississauga and Brampton areas, this function was replaced by Highway 410 and Highway 403.

Other routes that are either inside the Preliminary Study Area or important to the east-west network include Highway 9 running east-west between Highway 10 at Orangeville and Highway 400 and Regional Road 124/County Road 24 that was formerly Highway 24 connecting Highway 401 at Cambridge.. These highways provide key transportation linkages through and adjacent to the study area.

3.1.1 Recent Highway Network Studies/Projects

With the growth of urban areas and traffic demands within the Greater Golden Horseshoe comes a growing demand for additional transportation infrastructure. To address these needs, the MTO is undertaking several initiatives to improve the provincial highway system to address inter-regional travel. The following provides a brief description of the major Ministry of Transportation (MTO) initiatives currently underway with the description of the study/project reflective of the status at the time of investigation for this report.

Highway 400 from Langstaff Road to South Canal Bridge – This project received EA approval under two reports: (1) the Environmental Study Report (December 1998) for Langstaff Road to Major Mackenzie Drive which includes the widening of Highway 400 from 6 to 10 lanes and the replacement of the Highway 400 / Major Mackenzie Drive interchange; and (2) Transportation Environmental Study Report (December 2002) for north of Major Mackenzie Drive to South Canal Bridge which includes the widening of Highway 400 from 6 to 10 lanes with provisions for HOV lanes in the median.

Highway 401 from 1.0 km west of Hespeler Road easterly to Halton Region Boundary – This Class EA and Preliminary design study includes capacity, operational and geometric improvements (widening to 8 or 10 lanes) as well as interchange improvements. *Note that EA approval has been received for the section of Highway 401 between Hanlon Expressway and Highway 6 South.*

Highway 400 New Interchange at Teston Road in Vaughan – This project has a target completion date of 2008, and is being carried out by MTO in partnership with York Region.

Highway 410 Extension (Brampton to Caledon) – This project received Environmental Assessment approval in March 1997 and extends Highway 410 from Bovaird Drive in the City of Brampton to Highway 10 in the Town of Caledon. The project is currently under construction with the first phase completed to Mayfield Road.

Highway 427 Transportation Corridor EA Study – This study addresses existing and short-term transportation problems related to the need for Highway 427 extension and the terminus location of the extended highway, truck traffic to and from the CP Vaughan Intermodal yard and inter-regional traffic on Regional Road 27, Regional Road 50 and York Regional Road 7. The primary objective is to address transportation issues in the area south of the Greenbelt and to facilitate planning and development within the Cities

of Vaughan and Brampton. The study is in progress and nearing conclusion of the alternative selection process.

Highway 6 (Hanlon Expressway) Improvements Study – This study intends to address existing operating and safety deficiencies by upgrading the highway with interchanges at key crossing roads between Maltby Road and the Speed River. The study commenced in February 2007 and is ongoing.

Highway 6 - Freelon to Guelph – The study examines the existing 4-lane Highway 6 section at Freelon to the proposed Hanlon Expressway/Wellington County Road 34 connecting road interchange to the north. The study has been submitted to Ministry of Environment and is under review.

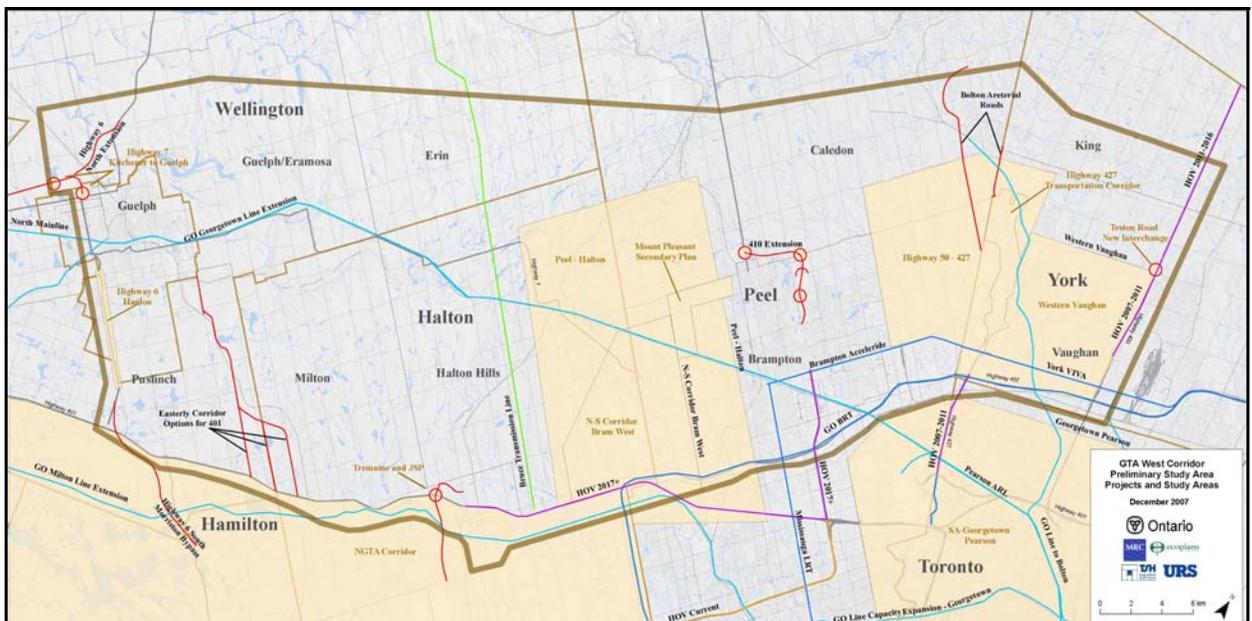
Highway 6 (Hanlon Expressway) Extension – The Highway 6 Extension was identified in the 2005 Guelph Wellington Transportation Study and extends the Hanlon Expressway north of the City of Guelph to Highway 6 North.

Highway 7 Kitchener to Guelph Individual EA Study – This study assessed a new highway facility between Kitchener and Guelph and was recently approved by the Minister of the Environment in March 2007.

Niagara to GTA Corridor Planning and EA Study – This study intends to examine existing and future anticipated transportation capacity deficiencies within the Niagara to GTA corridor and to provide additional capacity for a 30 year planning horizon and beyond. The study completion is anticipated for late 2010.

A summary of the study area locations for the various MTO and Municipal transportation project study areas is presented in **Exhibit 3.2** with a larger version of this exhibit provided in the Appendix.

Exhibit 3.2 MTO and Municipal Transportation Project Study Areas



3.2 MUNICIPAL ROAD NETWORK

The Counties and Regional Municipalities are responsible for maintaining and operating the Regional Road and County Road System for the transport of goods and people in a safe and efficient manner. These road facilities serve both short distance and longer inter-regional trips by connecting rural and urban centres to each other as well as to the Provincial Highway System. Part of the Regional/County operational and planning mandate is to provide physical improvements to the Regional Road and County Road system to meet growth needs and improve the level of service. Following are descriptions of major municipal roads inside the GTA West Preliminary Study Area.

3.2.1 County of Wellington

The primary east-west county roads include County Roads 30, 124, 50, 37 (Arnell Road) and 34. These County roadways serve the County's east-west travel demand as well as provide connections to Highway 6. The primary north-south county roads include Watson Road and County Roads 39, 38 (Victoria Road), 29, 27, 24 (Eramosa-Erin Townline) and 125. These County roadways connect towns within Wellington County and provide links to Highway 401 and Highway 7.

County Road 124 is a major rural roadway in the County of Wellington. It runs through the City of Guelph as Wellington Street/Woolwich Street/Eramosa Road and provides east-west connections through the Town of Guelph-Eramosa. County Road 124 runs through the Town of Erin outside of the Preliminary Study Area and eventually connects to Highway 9 via Peel Regional Roads 24 and 7. As noted previously, this road was originally within the provincial highway network.

3.2.2 City of Guelph

The primary east-west roadways under the jurisdiction of the City of Guelph include Woodlawn Road, Speedvale Avenue, College Avenue, Stone Road, and Clair Road. These roadways accommodate internal municipal traffic as well as provide access to the City's Hanlon Expressway (Highway 6). The primary north-south arterial roads include Edinburgh Road, Woolwich Street/Gordon Street, Victoria Road and Watson Road, which provide both internal and north-south access to Highway 401 to the south and Highway 7, via York Road, to the north. Woodlawn Road currently connects the Hanlon Expressway with Highway 6 North, north from the City of Guelph.

3.2.3 Region of Halton

The only major continuous east-west facilities within the Halton section of the Preliminary Study Area are Derry Road and Steeles Avenue, the others being discontinuous for reasons related to either the Niagara Escarpment or wide watercourses such as Sixteen Mile Creek and Bronte Creek. These natural corridors all generally run north-south in Halton Region. The primary north-south regional arterial roads include Guelph Line, Regional Road 25 and Trafalgar Road, which provide connections to Highway 7, Highway 401, Highway 407 and the QEW/Highway 403.

3.2.4 Region of Peel

The primary east-west regional arterial roads within Peel Region include Old Baseline Road, King Street, Mayfield Road, Bovaird Drive/Castlemore Road, Queen Street, Steeles Avenue, Derry Road and Britannia Road. The primary north-south regional arterial roads include Winston Churchill Boulevard, Mississauga Road/Erin Mills Parkway, Main Street/Hurontario Street, Dixie Road, Airport Road and Gore Road. These roadways provide continuous arterial road connections to the Region's population and employment centres and highway network including Highways 401, 410, 403, 407 and Highway 7.

Main Street/Hurontario Street becomes Highway 10 north of Mayfield Road at the City of Brampton / Town of Caledon boundary. It provides connections to Highway 407 and Highway 410 and runs through downtown Brampton and Mississauga.

3.2.5 Region of York

The primary east-west regional arterial roads include King Road, Teston Road, Major Mackenzie Drive, Rutherford Road, Langstaff Road, Steeles Avenue and Finch Avenue. The primary north-south regional arterial roads include Regional Roads 27 and 50 (Caledon-King Townline), Weston Road, Pine Valley Drive and Keele Street. These roadways provide connections to Highways 400, 401, 407 and 7.

3.2.6 Recent Municipal Network Studies/Projects

The following summaries provide a brief description of the major Regional studies/projects that are located within the Preliminary Study Area. The description or the progress of the reported studies/projects reflects the information and status at the time of investigation for this report.

In the Region of Halton, the **Tremaine Road and James Snow Parkway Transportation Corridor Improvements Class EA** focuses on improvements to Tremaine Road (Regional Road 22) and associated connections including the alignment of James Snow Parkway (Regional Road 4) from 200 m west of Regional Road 25 to Tremaine Road. The study also proposed an interchange along Tremaine Road at Highway 401.

The **Halton-Peel Boundary Area Transportation Study (BATS)** is a joint study between the Region of Peel, Halton Region, City of Brampton, Town of Caledon and the Town of Halton Hills. The study has been initiated to identify the long-term (2021 and 2031) transportation network required to support provincial and inter-municipal planning goals and to serve future transportation demands within the Preliminary Study Area.

The **North-South Corridor Bramwest Parkway EA Study** examines potential new north-south corridors between Highway 401 in Halton and the Mayfield Road area in Caledon as well as connections to Highway 401 and Highway 407.

The **Peel-Highway 427 Extension Area Transportation Master Plan Study** will build upon previous municipal road needs studies for new/improved road connections in the Peel/York boundary area. This Master Plan Study undertaken by Region of Peel, City of Brampton and Town of Caledon will consider local road connections to the Highway 427 Transportation Corridor to the west.

The **Bolton Arterial Roads Plan EA** was initiated as a result of the Ministry of Environment's requirement that an individual EA be carried out to address the impacts associated with the Town of Caledon's proposal to construct Townline Road between 5 Sideroad and King Street. The EA was approved by the Ministry of Environment on April 19, 2000.

The **Western Vaughan Individual EA** study is a result of the approved (February 2006) Pine Valley Drive EA Terms of Reference (as amended). The EA study undertaken by the Region of York will examine transportation improvements in Western Vaughan.

The **Brampton Transportation and Transit Master Plan Sustainable Update** is a platform to move forward with the implementation of the transportation vision defined in City's first TTMP in 2004. The Study was completed in November 2009.

The **Caledon Transportation Needs Study Update** is a joint project by Region of Peel and the Town of Caledon. It is a reference document to help identify and assess the potential transportation improvements needed to accommodate future traffic demand with Caledon. The Study was completed in 2009.

The **Guelph-Wellington Transportation Study** addresses the transportation needs in Guelph-Wellington for the planning period from 2001 to 2021. The Study was completed in 2005.

Other studies are also underway by several municipalities; however, these are not considered to be significant in the context of inter-regional transportation.

3.3 TRANSIT NETWORK

Transit throughout the GTA West Preliminary Study Area and connections beyond this area provide a significant opportunity to offer alternative transportation to private vehicle use. The area covers a full range of land uses from the very rural to the very urban and the availability of transit also ranges widely. This report provides a description of the existing road and rail based transit services and the planned transit initiatives within and adjacent to the Preliminary Study Area.

3.3.1 Local Transit

Local/regional transit service in the Preliminary Study Area is currently focused on local requirements as well as connections for inter-regional travel. The Cities of Guelph, Brampton and Mississauga as well as the Town of Milton and the Region of York provide local transit service to support the major destinations within their respective municipalities.

Guelph: The Guelph Railway Company began operation in 1895 and has evolved into several bus routes serving the City of Guelph under the name Guelph Transit. Services are focused on the downtown transit terminal which is adjacent to the VIA/GO Station and Intercity Bus Terminal.

Brampton: Brampton Transit began operations in 1974, providing service to the City and its major institutional, industrial, commercial and retail centres. Today, the transit service operates several bus routes throughout the city with connections to other transit systems such as GO Transit, Mississauga Transit, Toronto Transit Commission (TTC) and York

Region Transit. As well, Brampton AcceleRide, the city's bus rapid transit initiative is also in the planning stages and will further connect the City of Brampton to major destinations such as Vaughan Corporate Centre and York University.

Mississauga: Established in 1974, Mississauga Transit began serving the newly amalgamated city by acquiring the previous service provider, Travelways Limited. Today, Mississauga Transit serves the city with its central hub at Square One Shopping Centre. The future of transit in Mississauga includes BRT along Highway 403 and light-rail transit (LRT) along Hurontario and Dundas Streets, which are currently in the planning stages.

Milton: The Town of Milton began offering expanded transit services through Milton Transit in August 2004. A total of five fixed routes now operate throughout the day using some of Oakville Transit's smaller vehicles. The five routes serve various communities within Milton and provide service to the Milton GO Station.

York: York Region Transit established in 2001, is a local transit service that connects all nine municipalities in York Region, replacing the individual transit services of Vaughan, Markham, Richmond Hill and Newmarket. VIVA is York Region's rapid transit system that began operation in September 2005. VIVA services four key transportation corridors: Yonge Street, Highway 7, Markham North-South and Vaughan North-South and connects to York Region Transit, GO Transit, various TTC stations and York University.

3.3.2 Inter-Regional Transit

Inter-regional transit services are generally focused on connecting urban centres and major gateways that are either integrated with local transit service or integrated with park and ride facilities. A prominent example of inter-regional transit meeting these criteria is GO Transit which currently serves 92% of the corridor markets to downtown Toronto.

The inter-regional transit market is generally made up of two groups of riders - riders who have no realistic car access alternative (captive riders) and riders with car access who may be persuaded to use transit service (choice riders). The transit captive rider generally requires inter-regional transit service that is integrated with local transit and a transit fare structure that is affordable to low income users, whereas the choice rider requires a convenient transit service with overall journey times that are competitive with the automobile and fare levels that are lower than the alternative direct driving costs (i.e. parking and gasoline).

The inter-regional transit service needs to consider the transit market's desire for travel characteristics that allow for compact origins and destinations as well as regular and common travel times for both peak and non-peak commuting travel time periods.

Currently, public (GO Transit) and privately controlled (Greyhound, Coach Canada, etc.) inter-regional bus services are available throughout Southern and Central Ontario. Specific inter-regional transit connections between major urban centres are presented in **Exhibit 3.3**. The current available bus services fall on the boundaries of the GTA West Corridor Preliminary Study Area, along Highway 6 on the west boundary, along Highway 401 and Highway 407 on the south boundary and along Highway 400 on the east boundary.

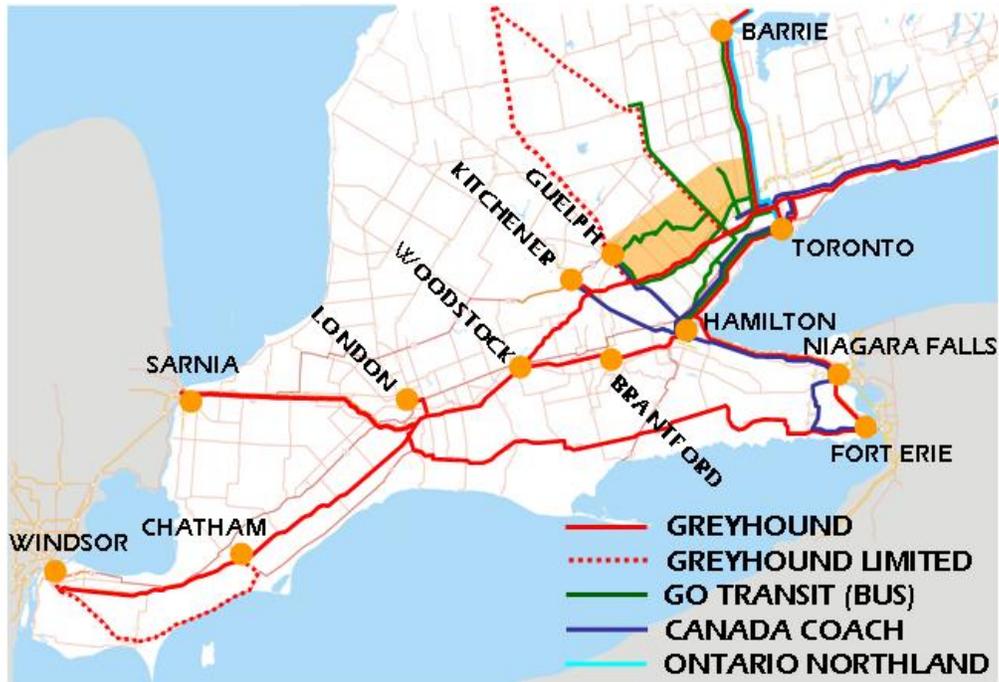
GO Transit operates an extensive network of bus services that includes Guelph, Milton Hamilton, Bolton and Orangeville. In September 2007, GO Transit introduced two new bus routes in the Guelph area to complement the GO Bus service operating along the Highway 7 corridor through Rockwood and Acton to Georgetown GO Station continuing through Brampton to the York Mills Subway Station in Toronto. The new GO Bus routes area:

- Route between University of Guelph, the Aberfoyle Park-and-Ride Lot (Highway 401 and Aberfoyle), Square One Mall in Mississauga and the Cooksville GO Station; and,
- Route between the University of Guelph, the Aberfoyle Park-and-Ride Lot (Highway 401 and Aberfoyle) and the Meadowvale GO Station.

In late June 2008, GO initiated a new weekday bus service between Milton and Bronte GO Stations with GO buses serving the Milton GO Station, the carpool lot at Bronte Road and Highway 407, and the Bronte GO Station to connect with the Lakeshore West GO Train service.

It is also important to note that in 2003, the GO Transit Board approved the development of the Inter-Regional Bus Rapid Transit Program. GO Transit continues to develop the BRT by moving ahead with its Highway 407 BRT bus service, which is a precursor of the BRT network. This bus corridor is one of the GO Transit's fastest growing services, carrying in excess of 2.2 million riders in 2007, seven years after its inception. In April 2008, GO Transit launched its newest BRT service from Square One to Langstaff GO Station centered on serving Pearson International Airport. GO Transit is experiencing a significant level of overall ridership between Square One and Richmond Hill Centre.

Exhibit 3.3: Inter-Regional Transit – Bus Routes



In addition to the inter-regional bus service, rail service is available throughout Southern and Central Ontario. VIA Rail has an east-west service between Toronto and Kitchener through the study area, and a station in the City of Brampton. **Exhibit 3.4** provides a summary of the daily VIA Rail service in Southern and Central Ontario.

Exhibit 3.4: Inter-Regional Transit – VIA Rail (Daily Service, Trains)



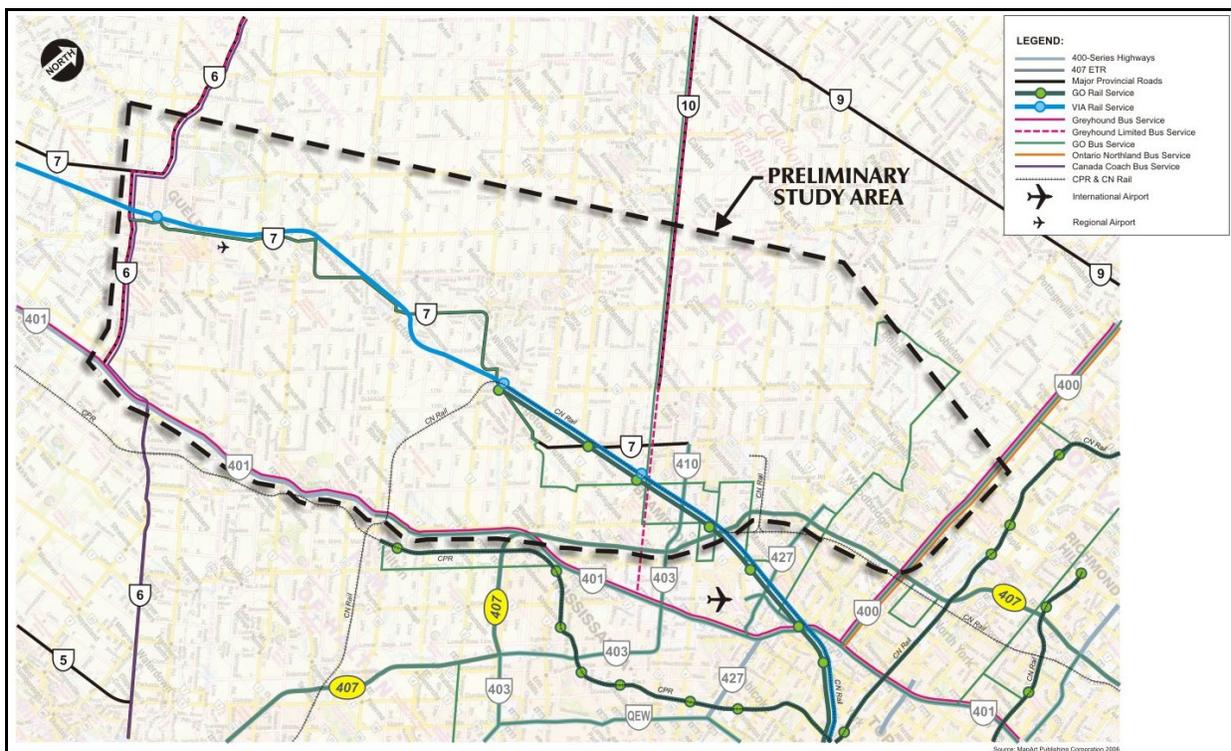
GO Transit provides commuter rail service between Georgetown and Toronto Union Station with stations in Brampton and the northwest area of Toronto. This service

currently includes four Toronto-bound trains during the weekday morning peak period and four Georgetown-bound trains during the weekday afternoon peak period.

GO Transit also provides commuter rail service between Milton and Toronto Union Station with stations in Mississauga and the west area of Toronto. This service currently includes six Toronto-bound trains during the weekday morning peak period and six Milton-bound trains during the weekday afternoon peak period.

A summary of the inter-regional transit service provided in the Preliminary Study Area is presented in **Exhibit 3.5**. It is anticipated that inter-regional transit will play a significant role in accommodating the transportation needs in this area.

Exhibit 3.5: Inter-Regional Transit – Summary



3.3.3 Recent Transit Network Studies/Projects

In June 2007, the province announced MoveOntario 2020, a landmark plan to invest \$17.5 billion, over 12 years toward 52 public transit projects in the Greater Toronto and Hamilton area. This announcement represents the largest public transit investment in Canadian history. The investment includes \$11.5 billion in provincial funds and an anticipated \$6 billion in federal funds. MoveOntario 2020 will result in 902 kilometres of new or improved rapid transit which is anticipated to add 800 million new transit trips per year that will remove 300 million car trips off GTA roads and reduce carbon dioxide emission in the region by 10 mega tonnes by 2020.

The majority of the studies/projects presented below are included as part of the recent *MoveOntario 2020* rapid transit action plan for the GTA and Hamilton areas and range from improvements to local transit service (Mississauga Transit, Brampton Transit, and

York Region Transit) to inter-regional transit improvements including expansion to existing GO rail service and the introduction of new GO Rail and BRT service. The plan calls for 66 % of the projects to be completed by 2015 and 95 % to be completed by 2020.

In the Spring 2008 budget, the province committed more than \$744 million to fund all of the Metrolinx's Quick Win Transit projects. Relevant to this study, the following projects were included as Quick Wins:

- City of Hamilton
 - B-Line Improvements, King-Main Corridor
 - A-Line Improvements, James-Upper James Corridor with service to Hamilton International Airport
 - James Street North GO/VIA Station Gateway to Niagara
- Halton Region
 - Dundas Street Rapid Transit
- Peel Region
 - Dundas Street Higher Order Transit Corridor Development
 - Hurontario Street Higher Order Transit Corridor Development
 - City of Mississauga Transitway Hub, Airport-Renforth Gateway
 - Bolton GO Transit Improvements
- Inter-Regional
 - GO Transit Double Decker Buses – 10 new double decker commuter buses for the Highway 407-403 Corridor and service to York University
- Mobility
 - New bicycle carrying devices on municipal transit vehicles
 - Bicycle storage spaces at GO Transit stations

The 2008 budget also included the following additional funding for GO Transit:

- \$166 Million over next 5 years to expand GO Transit's Bus Rapid Transit System including BRT investments that are complementary to the Mississauga Transitway and creating an interregional transit hub at the TTC Kipling Subway Station.

The following discussion provides a brief description of the major studies/projects that are underway and will influence travel patterns within the Preliminary Study Area. These descriptions were current at the time of the draft report preparation.

Brampton AcceleRide is the City of Brampton's rapid transit initiative that will provide enhanced bus rapid transit (BRT) along five key corridors; Queen Street, Main Street/Hurontario Street, Bovaird Drive, Steeles Avenue and Airport Road. Phase 1 of AcceleRide covers the time period up to 2013 and includes service on Queen Street from Downtown Brampton to York University (through York Region) beginning Fall 2010; service on Main Street from Sandeewood Parkway to Mississauga City Centre beginning Fall 2011 and service on Steeles Avenue from Main Street in Brampton to Humber College in Toronto beginning Fall 2012..

Pearson Air-Rail Link (ARL) is part of an EA study that is addressing rail improvements along the Georgetown GO line. The objective of the study is to examine alternatives — both within and outside the Georgetown South rail corridor — for an Airport Transportation link, including the proposed Air-Rail Link (ARL) service between Union Station and Toronto Pearson International Airport. The other part of the EA examines proposed improvements along GO Transit's Georgetown South rail corridor that would meet the increasing demand and future need for GO Rail service to the communities along the corridor between Halton and Peel Regions and the City of Toronto.

Mississauga Transit is embarking on three key initiatives to improve transit services: a BRT system along Highway 403 from Winston Churchill Boulevard east to Renforth Drive; a LRT system along Hurontario Street from Lakeshore Road in Mississauga north to Queen Street in Brampton; and a LRT system along Dundas Street in Mississauga from Kipling Station west to Hurontario Street. All three initiatives are included in the MoveOntario 2020 projects list and are in the planning stages. The BRT system is set to be operational by 2012/2013, and the planning study for the Hurontario LRT system will be undertaken in collaboration with the City of Brampton.

York VIVA Highway 7 from Highway 50 to Yonge Street (Richmond Hill Centre at Langstaff) is one of six York VIVA MoveOntario 2020 projects that will enhance the current transit service by implementing dedicated transitways along the established VIVA corridors. The transitways are an essential step to establishing higher-order transit, increasing transit's modal share and improving inter-regional connections within the GTA. Specific to the GTA West Corridor, the *Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements EA – 2006* provides the design details of Highway 7 becoming a multi-use urban street with a bus transitway.

Toronto-York Subway Extension – This project will extend the University-Spadina subway line from its current terminus at Downsview Station to the Vaughan Corporate Centre at Highway 7 in York Region, with a major stop at York University/Steeles Avenue. The provincial EA's for both the City of Toronto and York Region segments have been approved.

GO Transit has the following studies/projects currently underway within the study area:

- Environmental Assessment study to expand the rail capacity of the GO Milton rail line from Union Station to Milton, allowing all day service along that line;
- GO Georgetown rail line capacity expansion from Union Station to Georgetown;

- Environmental Assessment study for the extension of the GO Georgetown rail line from Georgetown to Kitchener, which involves extending GO rail services to Guelph;
- Development of an implementation plan for GO Bus service to Waterloo Region. This implementation plan is expected to be completed by the fall of 2008.

In addition, MoveOntario 2020 identified the following projects related to GO Transit. However, no timeframes have been established for these projects. Metrolinx will be reporting back to the province with an implementation plan for MoveOntario 2020 through the release of its draft Regional Transportation Plan and draft Investment Strategy which is expected in September 2008. The GO Transit projects include:

- New Rail Line from Union Station to Bolton;
- BRT network along Highway 403 from Oakville GO rail station to Mississauga;
- BRT along Highway 407 between Burlington and Highway 401;
- BRT along Highway 407 between Highway 401 and Highway 427;
- BRT along Highway 407 between Highway 427 and York University.

3.4 RAIL NETWORK

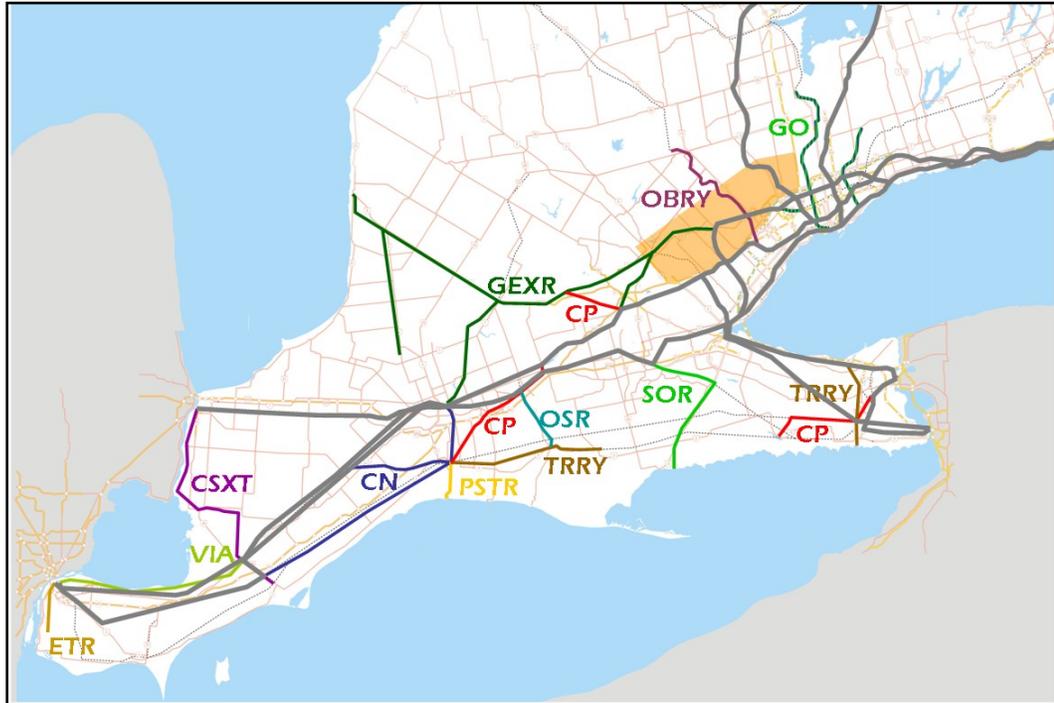
Southcentral Ontario has historically been well served by rail. The Canadian Pacific Railway (CP) and the Canadian National (CN) maintain an extensive mainline network providing access for people and goods between major urban centres. **Exhibit 3.6** provides an overview of the mainline rail system.

Exhibit 3.6: Mainline Rail System



Over the last two decades however, the major rail companies have been selling and/or abandoning some rail lines that provide linkages to secondary centres. As the economies in these secondary centres decline in relative importance, it becomes more efficient for industry to ship by truck, resulting in secondary rail lines being sold to regional carriers or abandoned altogether and converted to community trails. **Exhibit 3.7** provides a depiction of the remaining active secondary rail system.

Exhibit 3.7: Secondary Rail System

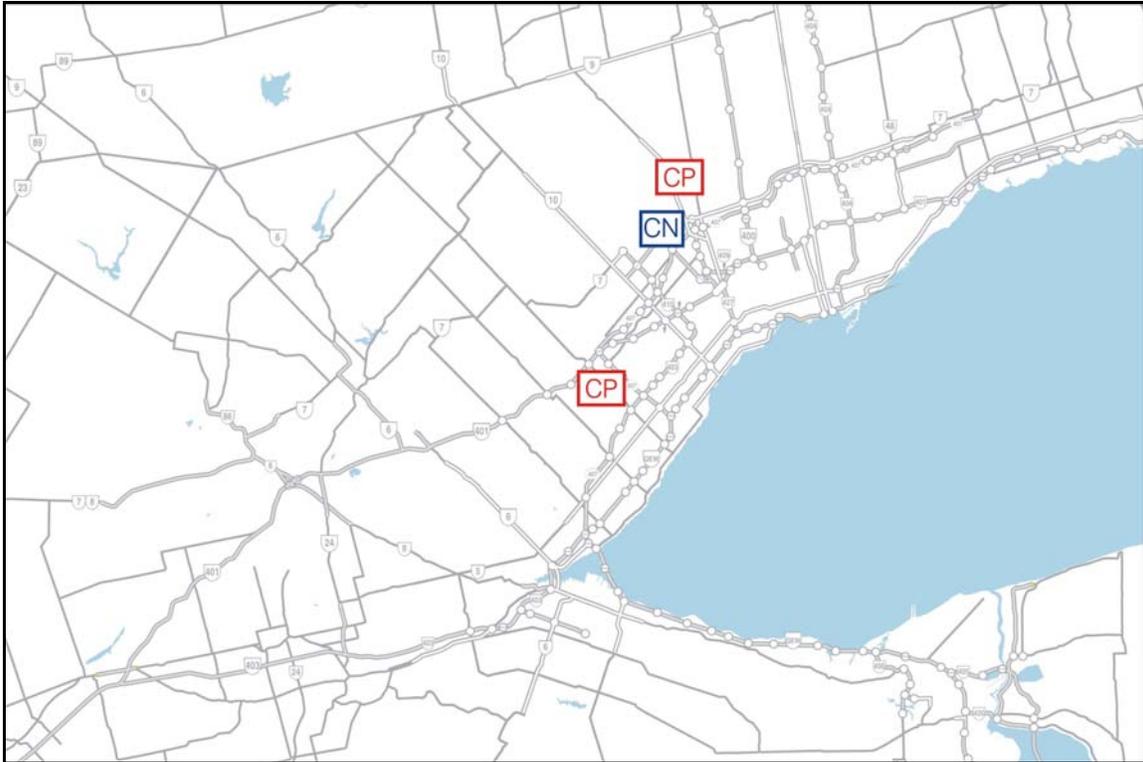


3.4.1 Intermodal Facilities

Intermodal facilities within and adjacent to the Preliminary Study Area are shown on **Exhibit 3.8**. These include the CP Vaughan Terminal, the CP Trafalgar Road-Rail Terminal and the CN Brampton (Toronto) Terminal. In addition to these main intermodal facilities, CP has an intermodal facility located in Etobicoke (CP Obico).

The existing CN Brampton Intermodal Terminal is approaching the capacity of the existing footprint and several logistic firms are moving containers during the night time hours to maximize the terminal capacity. The CP Vaughan Intermodal Terminal is one of the largest container facilities in Canada and there are plans to double the size of this facility. It is of note that both CN and CP have indicated that the Vaughan and Brampton Terminals are structured to service southcentral Ontario and not just the GTA or GGH areas.

Exhibit 3.8: Intermodal Facilities



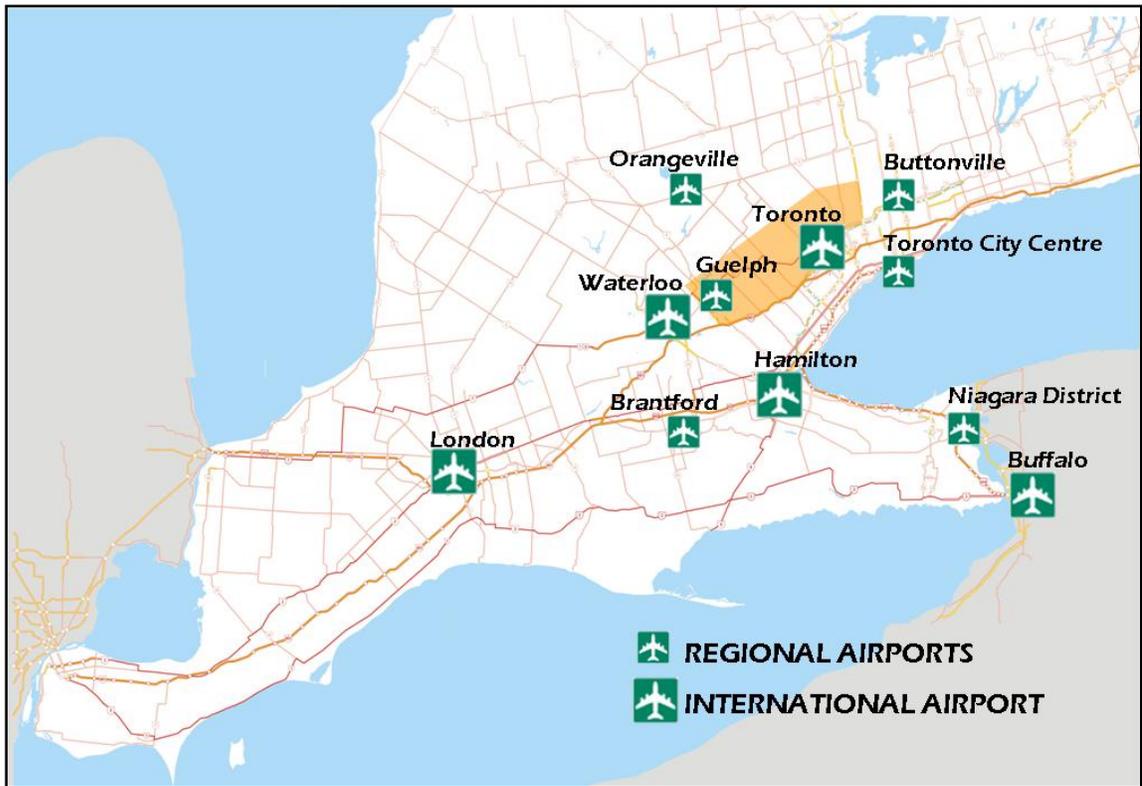
3.5 AIRPORTS

Although there is no significant passenger air service directly within the Preliminary Study Area, the largest international airport in Canada, Toronto Pearson International Airport, is located approximately 3 km south of the study boundary on the east side of the Preliminary Study Area. As the major international airport in the region, Toronto Pearson International Airport serves several domestic and international destinations.

Canada's busiest airport served 31 million passengers in 2006 and is currently expanding under its 10-year, \$4.4 billion Airport Development Program. This plan has set out four major projects: terminal development, airside development, infield development and utilities and airport support. In the year 2020, the number of passengers passing through Toronto Pearson International Airport is projected to reach 50 million.

Other airports in the vicinity of the Preliminary Study Area include Waterloo International, Hamilton International, Buttonville Municipal and Toronto City Centre. Each of these airports serves to move people and goods. **Exhibit 3.9** provides an overview of the airports that influence the travel patterns within the Preliminary Study Area.

Exhibit 3.9: Airport Locations



4. DESCRIPTION OF CURRENT “AREA TRANSPORTATION SYSTEM” TRAVEL CONDITIONS

4.1 BACKGROUND

Earlier sections of this report have described the transportation network that serves the GTA West Preliminary Study Area. Physically there are several existing and proposed infrastructure components that provide accessibility within and through the area (road, transit, rail, and air).

The historical use of these transportation networks is determined through review and analysis of readily available data, most of which is based on surveys and traffic counts. Both the Province and the municipal agencies have detailed traffic count databases reflecting both vehicular and person travel. From a goods movement perspective, the MTO has a historical database at select locations (bridge crossings and truck inspection stations) providing information regarding volume, commodity and origin-destination characteristics.

Building on available travel information by mode within the Preliminary Study Area, focus turns to specific data collection activities, stakeholder meetings with transportation service providers and with major industry and community business representatives. Together these data sources expand the transportation database to be as full as practically possible.

The following discussion provides an overview of available traffic and travel characteristics information assembled to date focusing on existing conditions.

4.2 OVERVIEW TRAFFIC CONDITIONS

4.2.1 Daily Flows on Major Facilities

Daily traffic flows on major roadways within and adjacent to the Preliminary Study Area were assembled from traffic count data obtained from Wellington County, the Region of Peel, the GTA Cordon Count Program, the MTO Provincial Highways Traffic Volumes publication and actual field observations (ATR counts). The summary of daily traffic flows presented in **Exhibit 4.1** indicates that the Provincial 400 Series Highways carry significant daily traffic volumes ranging from 100,000 to 300,000 AADT (Average Annual Daily Traffic). Highway 401 carries upwards of 100,000 vehicles daily in the vicinity of Highway 6/Hanlon Expressway and daily demand increases to over 300,000 vehicles east of Highway 410 and over 400,000 immediately west of Highway 400 at the east limit of the Preliminary Study Area. This stretch of highway is acknowledged to be North America’s busiest section of highway. Highway 410 carries a daily traffic volume of upwards of 160,000 vehicles between Highway 401 and Queen Street, while Highway 400 carries a daily demand approaching 130,000 vehicles.

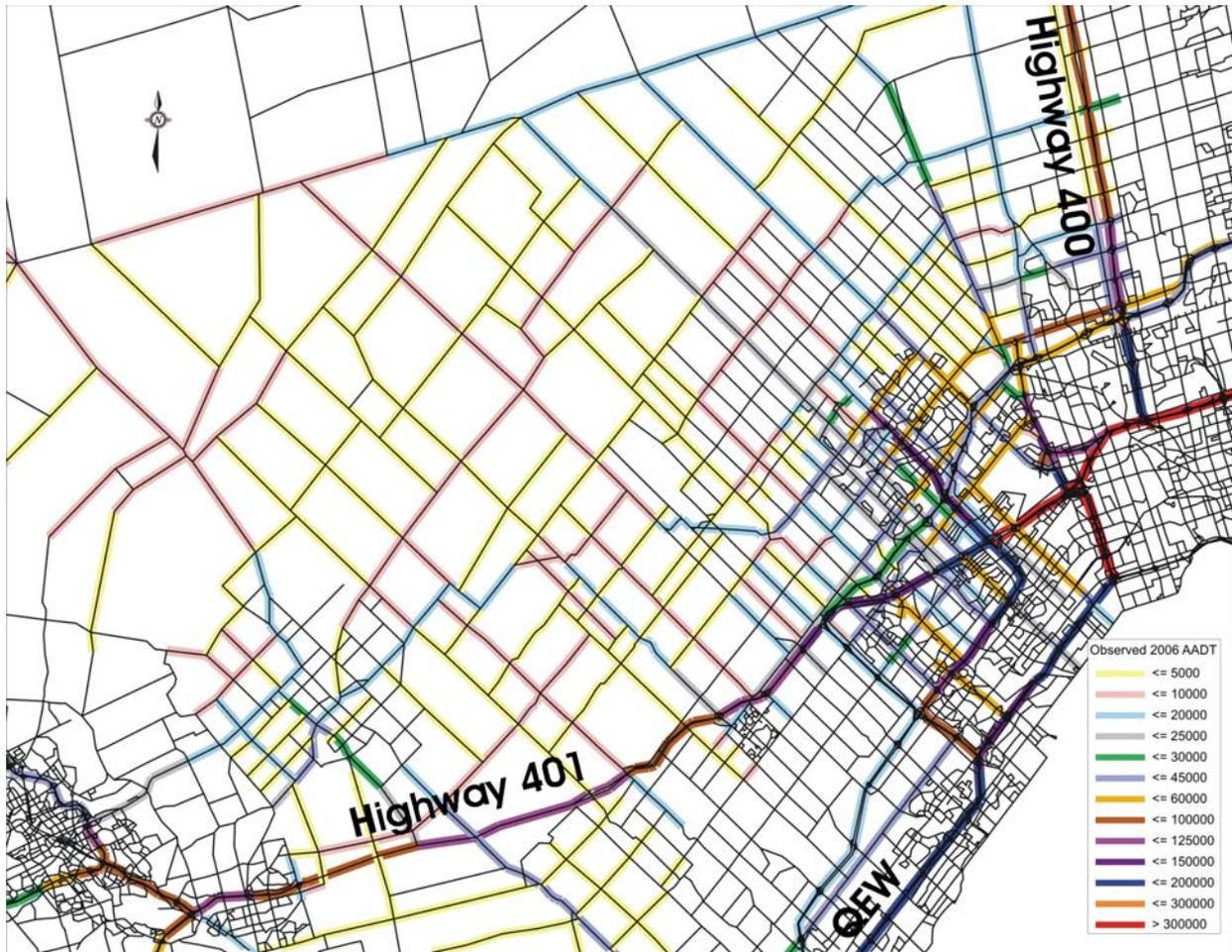
High capacity arterials and highways such as Highway 6 and Regional Road 27 carry upwards of 45,000 vehicles daily and sections of Regional Road 7 in east Brampton and Regional Road 50 carry upwards of 60,000 vehicles daily. Some sections of major east-west arterial roadways, including Bovaird Drive, Queen Street and Steeles Avenue in Brampton also carry upwards of 60,000 vehicles daily. Major Mackenzie Drive in the

City of Vaughan carries daily traffic volumes of upwards of 20,000 vehicles and Highway 10 carries upwards of 25,000 vehicles daily north of Mayfield Road.

The rural arterial roadways within and adjacent to the Preliminary Study Area carry daily traffic volumes ranging from less than 5,000 to upwards of 20,000 vehicles. The daily traffic flow along Highway 6 south of Guelph is approximately 25,000 vehicles while the corresponding demand along Highway 6 north of Guelph is over 10,000 vehicles. The daily travel demand along Highway 7 between Guelph and urban Brampton increases from approximately 10,000 to over 40,000 vehicles.

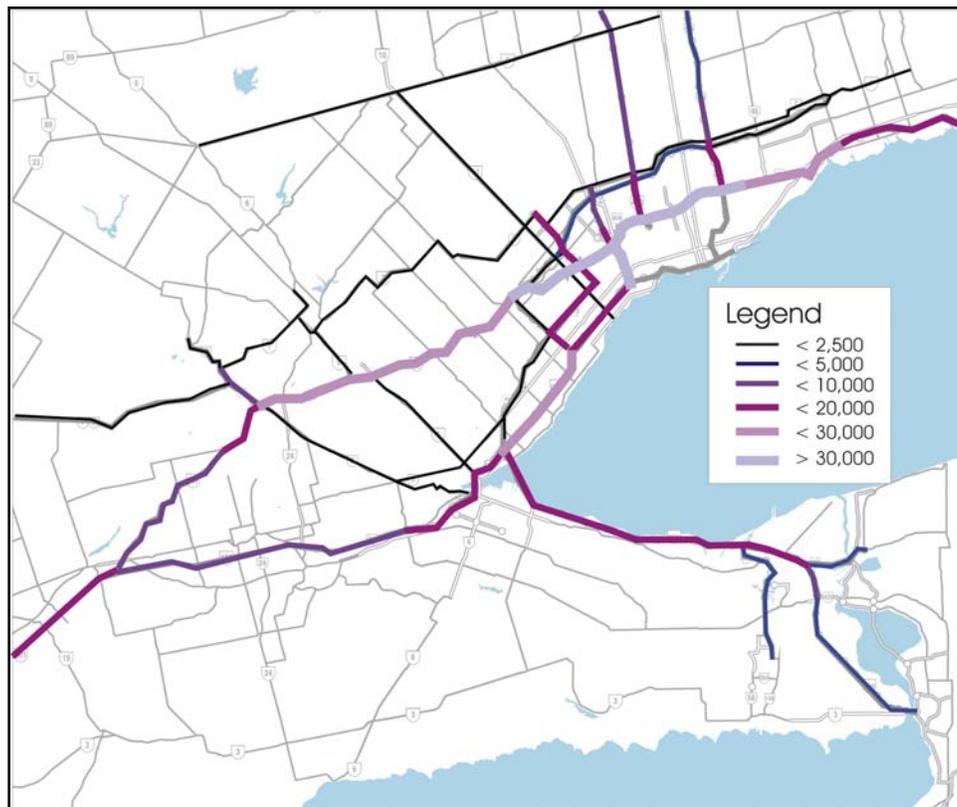
Truck traffic reflects a significant proportion of the daily traffic flows presented in **Exhibit 4.1**. This commercial vehicle demand can account for upwards of 20% of the total traffic on some highway sections and, as expected, the Provincial 400 Series highways carry the majority of the commercial vehicle traffic. The magnitude of daily commercial vehicle travel demand on the major highway system is summarized in **Exhibit 4.2**.

Exhibit 4.1: Daily Vehicle Traffic Flows within the GTA West Preliminary Study Area



Source: MTO 2005 AADT

Exhibit 4.2: Daily Commercial Vehicle Flows within GTA West Preliminary Study Area



Source: MTO 2005 AADT

4.2.2 Truck Traffic Flow Characteristics at Selected Highway Locations

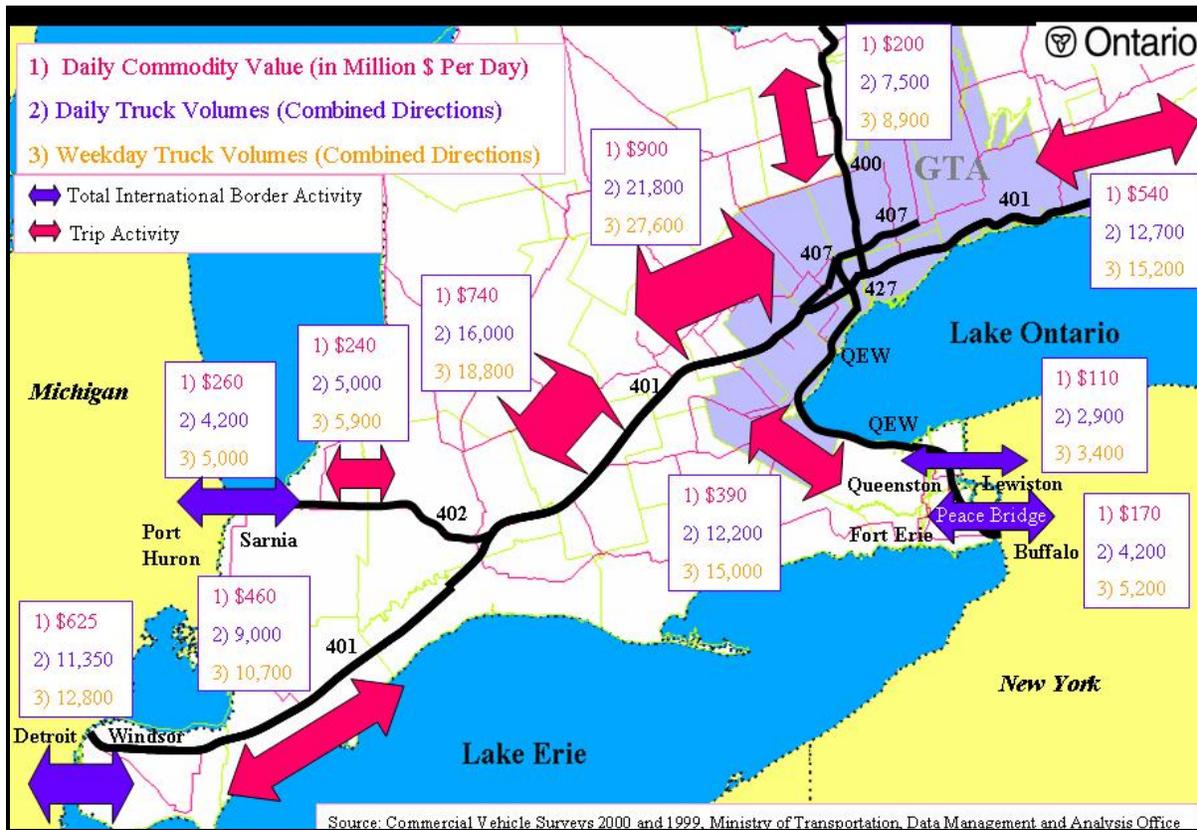
The Ministry of Transportation conducted a comprehensive Commercial Vehicle Survey (CVS) in 1999 and 2000 at selected highway locations to quantify truck volumes, distances travelled, key commodities transported, daily value of goods transported and major trip destination locations.

An overview of the 1999/2000 average daily cargo values and volumes for the Provincial Highway system is presented in **Exhibit 4.3**. The survey information indicates that the Highway 401 corridor through the GTA West Preliminary Study Area carries approximately 22,000 trucks per day and transports commodity values of approximately \$900 million per day. West of the GTA West Preliminary Study Area the Highway 401 corridor carries approximately 16,000 trucks with commodity value of \$740 million.

In addition to the overall network summary, details from the Commercial Vehicle Survey are presented for the following survey stations adjacent to the GTA West Preliminary Study Area:

- Highway 401 West of Putnam Road;
- Highway 7 East of Stratford;
- Highway 6 North of Guelph; and,
- Industrial Parkway West of Simcoe Road 10.

Exhibit 4.3: 2000 Average Daily Cargo Values and Volumes



Highway 401 West of Putnam Road – (West of Ingersoll)

Highway 401 at the Putnam truck inspection station located west of Ingersoll, carries a daily demand of approximately 55,000 vehicles, including approximately 17,000 trucks or approximately 30% of the total traffic volumes.

Nearly 85% of the observed trucks at this location are tractor-trailer combinations. Approximately 88% of the westbound truck trips begin in Ontario with the majority of the trips having destinations in Ontario (51%), Michigan (19%) or Illinois (5%). The majority of the eastbound truck trips originate in Ontario (47%), Ohio (6%) or Michigan (19%) and 90% of the eastbound demand is destined within Ontario.

The total commodity value observed on Highway 401 at this location was approximately \$640 million with transportation, machinery and electrical and manufactured products representing over 70% of the total commodity value.

A summary of key commercial vehicle information, commodity and travel distance is presented in **Table 4.1**.

Table 4.1: CVS Statistics for Highway 401 West of Putnam Road

Travel Characteristic	Direction		
	Eastbound	Westbound	Combined
<i>Route Type</i>			
Intra-Ontario	44%	48%	
Inter-provincial	2%	2%	
International	54%	51%	
<i>Commodity Value (M\$)</i>			
Intra-Ontario	\$95	\$115	\$210
Inter-provincial	\$6	\$5	\$11
International	\$229	\$184	\$413
Total	\$330	\$304	\$634
<i>Mean Travel Distance (km)</i>			
Intra-Ontario	257	253	
Inter-provincial	1,134	1,059	
International	1,141	1,161	
<i>Main Commodities (M\$)</i>			
Transportation	\$97	\$92	\$189
Machinery & Electrical	\$89	\$50	\$139
Manufactured Products	\$62	\$62	\$124
Chemicals & Products	\$31	\$26	\$57
Metals & Products	\$16	\$28	\$44
Food	\$14	\$18	\$32
Agricultural Products	\$11	\$5	\$16
Empty Trucks	21%	19%	20%

Highway 7 East of Stratford (Shakespeare)

Highway 7 carries approximately 10,500 vehicles per day east of Stratford, including approximately 1,300 trucks or 12% of the total traffic volume.

Nearly 70% of the observed trucks at this location are tractor-trailer combinations. Approximately 92% of the westbound truck trips begin in Ontario with the majority of the trips having destinations in Ontario (93%), Michigan (2%) or Ohio (1%). The majority of the eastbound truck trips originate in Ontario (98%) and Michigan (1%) and 93% of the eastbound demand is destined within Ontario. A summary of key commercial vehicle information, commodity and travel distance is presented in **Table 4.2**.

Highway 6 North of Guelph

Highway 6 carries a total daily travel demand of approximately 13,000 vehicles north of Guelph, including approximately 1,100 trucks or 9% of the total traffic volumes.

Nearly 65% of the observed trucks are tractor-trailer combinations. All of the southbound truck trips begin in Ontario with the majority of the trips having a destination in Ontario (77%), Michigan (3%) or Ohio (4%). The mean distance travelled by southbound trucks on Highway 6 north of Guelph is approximately 350 km. A summary of key commercial vehicle information, key commodity and travel distance for southbound Highway 6 is presented in **Table 4.3**. Detailed commercial vehicle information was not available for northbound Highway 6.

Table 4.2: CVS Statistics for Highway 7 East of Stratford

Travel Characteristic	Direction		
	Eastbound	Westbound	Combined
<i>Route Type</i>			
Intra-Ontario	89%	85%	
Inter-provincial	3%	3%	
International	8%	12%	
<i>Commodity Value (M\$)</i>			
Intra-Ontario	\$6	\$9	\$15
Inter-provincial	\$1	\$1	\$2
International	\$5	\$2	\$7
Total	\$12	\$12	\$24
<i>Mean Travel Distance (km)</i>			
Intra-Ontario	171	209	
Inter-provincial	902	1,032	
International	1170	905	
<i>Main Commodities (M\$)</i>			
Transportation	\$2	\$2	\$4
Machinery & Electrical	\$4	\$0.5	\$4.5
Manufactured Products	\$1	\$1	\$2
Chemicals & Products	\$1	\$2	\$3
Metals & Products	\$0.5	\$0.5	\$5.5
Food	\$1	\$2	\$3
Agricultural Products	\$2	\$2	\$4
Empty Trucks	40%	23%	32%

Table 4.3: CVS Statistics for Highway 6 North of Guelph (Southbound Statistics)

Travel Characteristic	Direction	
	Northbound	Southbound
<i>Route Type</i>		
Intra-Ontario		77%
Inter-provincial		2%
International		21%
<i>Commodity Value (M\$)</i>		
Intra-Ontario		\$3
Inter-provincial		\$0.5
International		\$4
Total		\$7.5
<i>Mean Travel Distance (km)</i>		
Intra-Ontario		154
Inter-provincial		676
International		971
<i>Main Commodities (M\$)</i>		
Transportation		\$1
Machinery & Electrical		\$2
Manufactured Products		\$2
Chemicals & Products		\$0
Metals & Products		\$0.5
Food		\$0.5
Agricultural Products		\$0.5
Empty Trucks		36%

Industrial Parkway West of Simcoe Road 10 in Alliston

Commercial vehicle survey information for Industrial Parkway in Alliston has been summarized to establish an appreciation of the number of trucks and value of goods moved in close proximity to an auto manufacturing plant. Industrial Parkway is a rural arterial road that carries approximately 5,500 vehicles daily, including approximately 500 trucks which represents approximately 10% of the total traffic volume.

Nearly 75% of the observed trucks are tractor-trailer combinations. Approximately 78% of the westbound truck trips begin in Ontario with almost all trips having a destination in Ontario (99%). The majority of the eastbound truck trips originate in Ontario (99%) and with the main destination point being Ontario (89%) followed by Ohio (4%) and Michigan (4%). A summary of key commercial vehicle information, key commodity and travel distance is presented in **Table 4.4**.

Table 4.4: CVS Statistics for Industrial Parkway - Alliston

Travel Characteristic	Direction		
	Eastbound	Westbound	Combined
<i>Route Type</i>			
Intra-Ontario	87%	77%	
Inter-provincial	2%	3%	
International	11%	20%	
<i>Commodity Value (M\$)</i>			
Intra-Ontario	\$2	\$5	\$7
Inter-provincial	\$1	\$1	\$2
International	\$0.5	\$1	\$1.5
Total	\$3.5	\$7	\$10.5
<i>Mean Travel Distance (km)</i>			
Intra-Ontario	129	149	
Inter-provincial	1,115	822	
International	648	771	
<i>Main Commodities (M\$)</i>			
Transportation	\$1.5	\$3.5	\$5
Machinery & Electrical	\$0.5	\$0.5	\$1
Manufactured Products	\$0.25	\$2	\$2.25
Chemicals & Products	\$0.25	\$0.5	\$0.75
Metals & Products	\$0	\$0.5	\$0.5
Food	\$0	\$0	\$0
Agricultural Products	\$0	\$0	\$0
Empty Trucks	47%	29%	36%

4.2.3 General Traffic Flow Characteristics at Selected Highway Locations

General traffic flow characteristics and profiles for selected highway locations within and adjacent to the Preliminary Study Area were developed from the traffic information assembled from the Ministry of Transportation Permanent Data Collection Stations (PDCS) database. The PDCS database is an assembly of traffic count data from 365 days per year and is used to develop relationships and factors that can be applied to estimate Annual Average Daily Traffic (AADT) and Summer Average Daily Traffic (SADT) volumes at similar locations. The traffic profile information provided for each of the following highway locations includes daily traffic flows during the spring/fall and summer months, vehicle flows during the commuter peak periods and the daily and peak period truck percentages. It is also important to note that the highway system experiences significant seasonal variation and that the magnitude of the seasonal variation depends on the type of highway. All highways experience higher traffic flows

during the months between May, June, July, August and September, however, the tourist / recreational routes experience significantly higher volumes in these months than the late fall / winter months. Traffic counts undertaken during late spring or early fall reflect average conditions whereas the summer traffic represents a higher traffic flow. The following traffic profile / characteristic discussion includes both the spring/fall and summer time frames.

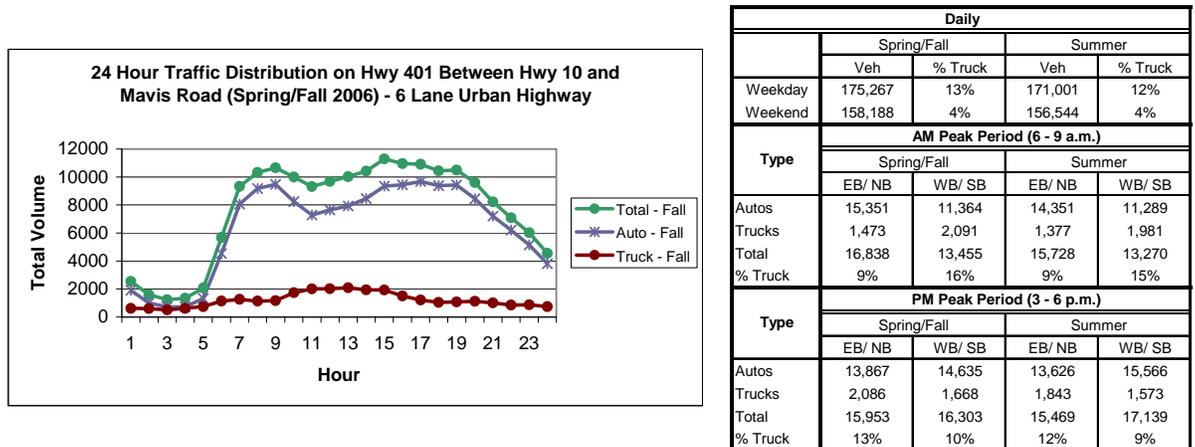
Highway 401 East of Mavis Road

The year 2006 Highway 401 weekday daily traffic volume east of Mavis Road is approximately 175,000 vehicles (as presented on **Exhibit 4.4**) in comparison to the weekend daily traffic volume of fewer than 160,000 vehicles. Truck traffic represents approximately 13% and 4% of the weekday and weekend daily traffic flows, respectively. The spring/fall and summer traffic flows are similar under weekday and weekend conditions.

Approximately 36% of the weekday daily traffic flow occurs during the morning (6:00 to 9:00 a.m.) and afternoon (3:00 to 6:00 p.m.) peak periods. The a.m. peak hour is approximately 35% of the a.m. peak period with the peak direction travel representing approximately 55% of the total two-way traffic flow. The 24-hour total vehicle profile reflects a commuter travel pattern with typical morning and afternoon peak periods and slight reductions through the midday hours. Traffic volumes start to increase after 5:00 a.m. and ramp up to the beginning of the morning peak period (starting at 6:00 a.m.) Traffic volumes begin to build again after 1:00 p.m. and remain high through to at least 7:00 p.m.

The truck profile shown in **Exhibit 4.4** is fairly consistent throughout the day with the highest proportion of truck flows observed between 10:00 a.m. and 3:00 p.m. During the morning and afternoon peak periods, the peak flows are in the eastbound and westbound directions, respectively.

Exhibit 4.4: Highway 401 Traffic Profile/ Characteristics



Daily				
	Spring/Fall		Summer	
	Veh	% Truck	Veh	% Truck
Weekday	175,267	13%	171,001	12%
Weekend	158,188	4%	156,544	4%
AM Peak Period (6 - 9 a.m.)				
Type	Spring/Fall		Summer	
	EB/ NB	WB/ SB	EB/ NB	WB/ SB
Autos	15,351	11,364	14,351	11,289
Trucks	1,473	2,091	1,377	1,981
Total	16,838	13,455	15,728	13,270
% Truck	9%	16%	9%	15%
PM Peak Period (3 - 6 p.m.)				
Type	Spring/Fall		Summer	
	EB/ NB	WB/ SB	EB/ NB	WB/ SB
Autos	13,867	14,635	13,626	15,566
Trucks	2,086	1,668	1,843	1,573
Total	15,953	16,303	15,469	17,139
% Truck	13%	10%	12%	9%

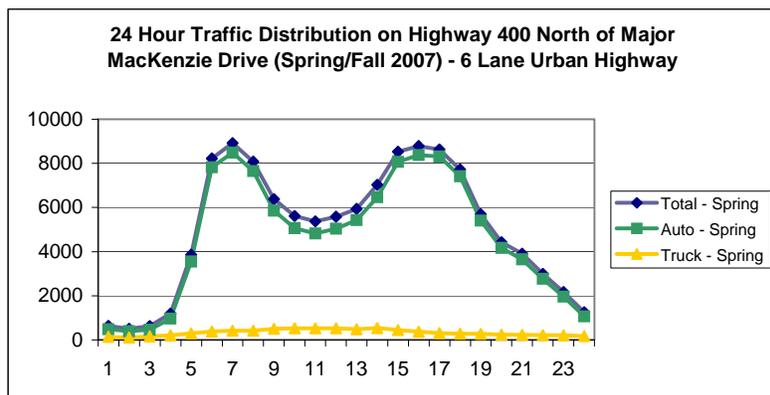
Highway 400 North of Major Mackenzie Drive

The Highway 400 spring and fall weekday and weekend daily traffic volumes north of Major Mackenzie Drive (presented on **Exhibit 4.5**) are approximately 115,000 and 100,000 vehicles, respectively. The corresponding weekday and weekend daily volumes during the summer months are approximately 11% and 20% higher, respectively. It is interesting to note that, during the spring/fall, the weekday daily travel demand is 10% higher than the corresponding weekend demand while during the summer months this difference is less than 5%. This is likely caused by the influence of tourist/recreational travel using the Highway 400 corridor throughout the week.

The peak direction for weekday travel demand throughout the year is southbound during the morning peak period and northbound during the afternoon peak period. However, where the peak direction flow is more than double the off-peak direction flow during the spring and fall, the peak direction demand is only 70 % to 95% greater during the summer months. This relationship is also likely a reflection of the influence of the tourist/recreational travel demand impacts. The hourly profile for total vehicles indicates that the demand begin to ramp up after 4:00 a.m. and peak between 6:00 and 7:00 a.m. The afternoon peak period is ranging between 2:00 and 6:00 p.m. The a.m. peak hour is approximately 38% of the a.m. peak period with the peak direction travel representing approximately 70% of the total two-way traffic flow.

Weekday commercial vehicle demand is consistent throughout the day and represents 6% to 7% of the total hourly traffic flow. The weekday daily truck volumes are 3 to 4 times greater than the corresponding weekend demand. We note that truck volumes are nominally greater in the off-peak direction. Although this may appear to reflect operators desire to travel against peak flows, the absolute differences are so slight that they cannot be statistically qualified.

Exhibit 4.5: Highway 400 Traffic Profile/ Characteristics



Daily				
	Spring/Fall		Summer	
	Veh	% Truck	Veh	% Truck
Weekday	112,930	7%	124,981	6%
Weekend	101,503	2%	121,105	2%
Type	AM Peak Period (6 - 9 a.m.)			
	Spring/Fall		Summer	
	EB/ NB	WB/ SB	EB/ NB	WB/ SB
Autos	6,900	15,093	6,876	14,013
Trucks	691	649	644	655
Total	7,591	15,742	7,520	14,668
% Truck	9%	4%	9%	4%
Type	PM Peak Period (3 - 6 p.m.)			
	Spring/Fall		Summer	
	EB/ NB	WB/ SB	EB/ NB	WB/ SB
Autos	16,959	7,148	13,746	7,822
Trucks	464	510	408	485
Total	17,423	7,658	14,154	8,307
% Truck	3%	7%	3%	6%

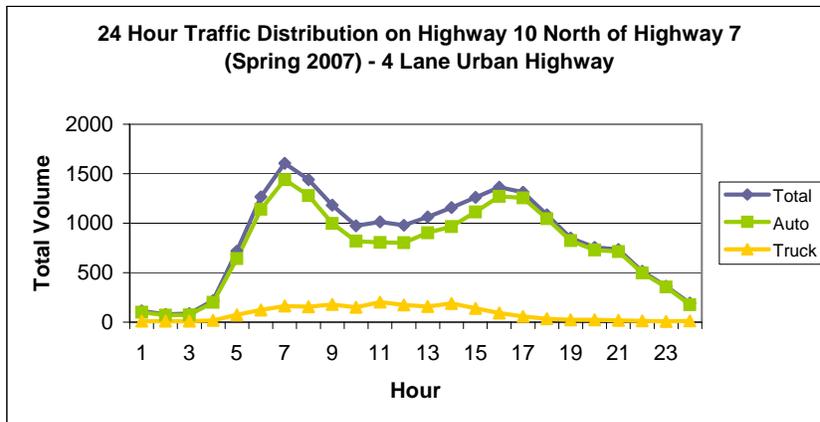
Highway 10 North of Highway 7

The traffic profile and daily/peak period travel characteristics available for Highway 10 north of Highway 7 reflect only spring conditions and are presented in **Exhibit 4.6**. The permanent data collection station (PDCS) at this location was not operating during the summer months and therefore data was not collected.

The Highway 10 weekday daily travel demand north of Highway 7 is approximately 20,000 vehicles and the corresponding weekend demand is approximately 20% lower. While the morning peak period peak direction (southbound) travel demand is more than twice the off-peak flow rate, the afternoon peak period peak direction (northbound) demand is less than 50% greater than the off-peak flow rate. The hourly traffic profile indicates that the traffic volumes start to ramp up before 5:00 a.m. and peak between 6:00 and 7:00 a.m. The a.m. peak hour is approximately 38% of the a.m. peak period with the peak direction travel representing approximately 76% of the total two way traffic flow. The characteristics for this section of Highway 10 are consistent with a route that serves predominantly commuter traffic.

The truck traffic profile shown in **Exhibit 4.6** confirms that the vehicles travel primarily between 5:00 a.m. and 5:00 p.m. Daily commercial vehicle travel demand during a weekday is 5 times greater than during weekends and the directional split for truck traffic is generally balanced during each of the morning and afternoon peak periods.

Exhibit 4.6: Highway 10 Traffic Profile/ Characteristics



Daily		
Spring		
	Veh	% Truck
Weekday	20,125	11%
Weekend	16,511	2%
AM Peak Period (6 - 9 a.m.)		
Spring		
Type	EB/ NB	WB/ SB
Autos	1,061	2,656
Trucks	258	239
Total	1,319	2,895
% Truck	20%	8%
PM Peak Period (3 - 6 p.m.)		
Spring		
Type	EB/ NB	WB/ SB
Autos	2,136	1,435
Trucks	76	106
Total	2,212	1,541
% Truck	3%	7%

In addition to the data available from the MTO permanent data collection stations, supplementary traffic counts were undertaken during the Fall of 2007 at locations along Highway 7 and Wellington County Roads 109 and 124. Insight gained from the review of the collected data is provided below and the corresponding 24-hour traffic volume profiles and daily/peak period traffic volume summaries are presented in **Exhibit 4.7**.

Highway 7 (Guelph Street) South of Maple Avenue, Georgetown

Weekday and weekend daily traffic flows on Highway 7 south of Maple Avenue are approximately 22,000 and 20,000 vehicles, respectively. The afternoon peak period

directional split is approximately balanced, which may in part reflect the urban and commercial nature of this section of Highway 7. The hourly traffic profile indicates that travel demand is fairly constant between 7:00 a.m. and 7:00 p.m. The a.m. peak hour is approximately 44% of the a.m. peak period with the peak direction travel representing approximately 57% of the total two way traffic flow.

Truck volume represents 15% and 13% of the total weekday and weekend daily traffic flow, respectively. Weekday truck volumes peak between 8:00 and 9:00 a.m. and remain approximately constant until 6:00 p.m. While the eastbound truck traffic volume during the morning peak period is approximately 3 times greater than the westbound flow, the corresponding directional split during the afternoon peak period is relatively balanced.

Wellington County Road 109 (formerly Highway 9) East of Wellington County Road 12

Wellington County Road 109 is a two-lane rural highway east of County Road 12 and is located outside of the Preliminary Study Area. The weekday and weekend daily traffic volumes are approximately 7,600 and 7,200 vehicles, respectively. As shown in **Exhibit 4.7**, weekday traffic volumes during the morning peak period (6:00 to 9:00) peak between 7:00 and 8:00 a.m. Following a mid-morning drop in demand, volumes rise steadily starting after 11:00 a.m. and peak during the afternoon between 4:00 and 6:00 p.m. The a.m. peak hour is approximately 38% of the a.m. peak period with the peak direction travel representing approximately 70% of the total two way traffic flow.

Truck volume represents 10% and 7% of the total weekday and weekend daily traffic flow on County Road 109 east of County Road 12 and the weekday profile indicates that truck travel demand peaks between 8:00 a.m. and 9:00 a.m. Truck volumes during the weekday morning and afternoon peak periods reflect 8% to 10% of the peak direction travel demand.

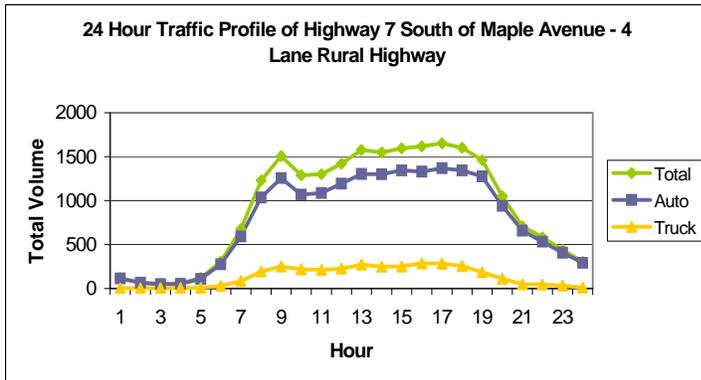
Waterloo Region Road 24 (Hespler Road) Northeast of Maple Grove Road

Regional Road 24 is a two-lane arterial roadway northeast of Maple Grove Road, connecting the City of Guelph to Highway 401 and is located outside of the Preliminary Study Area. Weekday and weekend daily traffic volumes are approximately 24,000 and 18,500 vehicles, respectively. The a.m. peak hour is approximately 48% of the a.m. peak period with the peak direction travel representing approximately 62% of the total two way traffic flow.

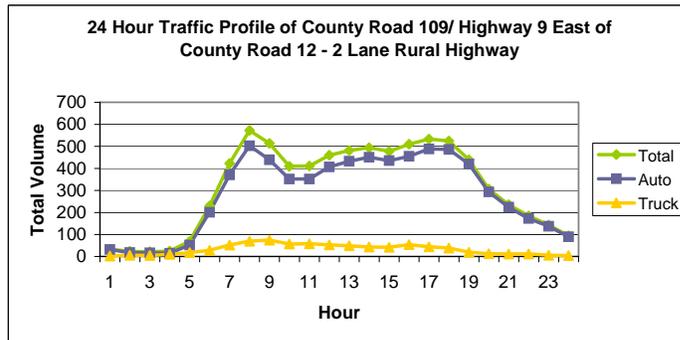
Afternoon peak period demand is 80% greater than the corresponding morning peak period demand. Weekday traffic volumes during the morning peak period (6:00 to 9:00 a.m.) peak between 8:00 and 9:00 a.m. and following a mid-morning drop, rise steadily over the afternoon and peak again between 5:00 and 6:00 p.m. While peak direction travel demand during the morning peak period (southbound) is approximately double the opposing flow, the peak direction demand during the afternoon peak period is only 25% greater than the opposing flow.

Daily truck volumes represent approximately 8% and 3% of the total vehicle demand on a typical weekday and weekend day, respectively. The profile illustrates that truck volumes peak mid-day with a combined direction demand of 130 to 150 vehicles.

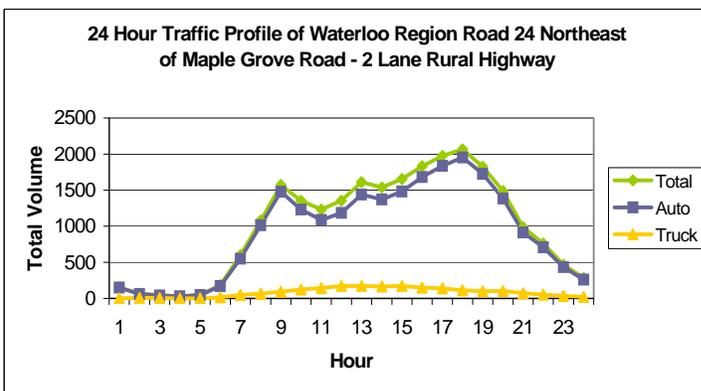
Exhibit 4.7: Additional Highway Profiles/Characteristics



		Daily		
		Fall		
		Veh	% Truck	
Weekday		22,250	15%	
Weekend		19,771	13%	
Type	AM Peak Period (6 - 9 a.m.)	PM Peak Period (3 - 6 p.m.)		
	Fall			
	EB/ NB	WB/ SB	EB/ NB	WB/ SB
Autos	1,730	1,155	1,891	2,151
Trucks	401	129	379	448
Total	2,131	1,284	2,271	2,600
% Truck	19%	10%	17%	17%



		Daily		
		Fall		
		Veh	% Truck	
Weekday		7,631	10%	
Weekend		7,168	7%	
Type	AM Peak Period (6 - 9 a.m.)	PM Peak Period (3 - 6 p.m.)		
	Fall			
	EB/ NB	WB/ SB	EB/ NB	WB/ SB
Autos	952	362	571	859
Trucks	118	78	61	75
Total	1,070	440	632	935
% Truck	11%	18%	10%	8%



		Daily		
		Fall		
		Veh	% Truck	
Weekday		24,280	8%	
Weekend		18,502	3%	
Type	AM Peak Period (6 - 9 a.m.)	PM Peak Period (3 - 6 p.m.)		
	Fall			
	EB/ NB	WB/ SB	EB/ NB	WB/ SB
Autos	1,050	1,993	3,038	2,431
Trucks	50	163	241	165
Total	1,100	2,156	3,279	2,596
% Truck	5%	8%	7%	6%

4.3 HISTORICAL TRAFFIC FLOWS

4.3.1 Average Daily Traffic Volumes

Historical daily traffic volumes available from the MTO Provincial Highway Volumes summary and recent PDCS data are summarized in **Table 4.5** for the period between 1960 and 2007.

Table 4.5: Historical Average Daily Traffic Flows at Specific Locations

Highway	Location	1960	1965	1970	1980	1988	1990	1995	2000	2005	2007
401	West of Putnam Road	8,000	15,000	19,900	32,150	32,900	37,450	42,800	49,900	57,100	65,500
	West of Drumbo Road	NA	9,000	12,300	20,000	27,600	29,050	33,400	38,700	43,700	49,800
	West of Highway 10 - Estimate	13,000	22,000	28,450	69,100	97,100	107,300	114,100	142,500	162,600	180,800
400	North of Major Mackenzie Drive	11,000	15,500	20,550	42,100	58,050	62,200	78,200	82,500	90,600	113,000
10	North of Highway 7	5,000	5,000	6,600	11,400	12,250	16,650	18,200	18,500	20,800	20,150
7	South of Maple Avenue	4,000	3,600	8,350	8,600	NA	NA	NA	NA	NA	22,250
9 (County Road 109)	East of County Road 12	1,400	1,500	1,600	2,500	NA	NA	NA	NA	NA	7,650
24	North of Maple Grove Road	3,400	3,600	4,200	6,800	NA	NA	NA	NA	NA	24,300

It is no surprise that traffic volumes have grown significantly along all of the roadways described above over the last 45 to 50 years, particularly along the 400 Series Highways. Discussion related to the specific nature of this growth is presented below.

Highway 401

Amongst the sections of Highway 401 included in the Preliminary Study Area summary in **Table 4.5**, the most significant relative and absolute growth has occurred west of Highway 10 within the GTA. The daily flow has increased more than 13 fold since 1960 as a result of the substantial growth in the GTA and the continued expansion of the Highway 401 corridor throughout the GTA. Highway 401 traffic growth west of the GGH and to the east of London (west of Putnam Road) has increased 8 fold since 1960, and the growth around Woodstock (west of Drumbo Road) has been similar.

Highway 400

The current average daily travel demand on Highway 400 north of Major Mackenzie Drive within the City of Vaughan (113,000 vehicles) has grown 10-fold since 1960. This section of Highway 400 experienced an average annual growth of 4% between 2001 and 2007 due to continued development within York Region significant growth in and around Barrie and the growing attraction of Georgian Bay and Muskoka as recreational destinations.

Highway 10

Highway 10 is a four-lane urban highway north of Mayfield Road in the City of Brampton. The current daily traffic volume (20,000 vehicles) has increased four times since 1960.

Highway 7

Highway 7 is a four-lane urban arterial road south of Maple Avenue in the community of Georgetown. The current average daily traffic volume (22,000 vehicles) has increased more than five-fold since 1960. Increases in demand since 1980 reflect an average annual growth rate of just over two percent relative to the current demand level.

Highway 9 (Wellington County Road 109)

Highway 9 east of County Road 12 is a two-lane rural highway. Highway 9 connects Highway 6, Highway 10 and Highway 400 and provides an inter-regional route that also accommodates longer distance travel. The current average daily traffic volume (7,600 vehicles) has increased by more than five times since 1960.

Waterloo Regional Road 24

The current average daily traffic volume (24,300 vehicles) on Regional Road 24 north of Maple Grove Road reflects growth of more than seven-fold since 1960. The current daily traffic volume is approaching the capacity of a two-lane rural roadway.

Historical Traffic Flow Summary

In summary, all the roadway sections identified in **Table 4.5** have experienced significant traffic growth over the last 45 to 50 years and the majority of these are approaching operating capacity, even with previous road widenings and enhancements considered. Annual traffic growth along each of the road sections since 1960 has averaged 1.7 to 2.0% relative to current (2007) demand levels. This is consistent with general population growth trends in Southwestern Ontario.

4.3.2 Commercial Vehicles

Average daily truck volumes presented in **Table 4.6** reflect MTO data available from the 1995 Commercial Vehicle Survey and the most recent PDCS counts.

Table 4.6: Historical Average Daily Commercial Vehicle Flows at Specific Locations

Highway	Location	Average Daily Traffic Volume		Growth Rate ¹
		1995	2007 ²	
401	West of Putnam Road	10,010	18,500	3.8%
	West of Highway 10	13,315	21,795	3.2%
400	North of Major Mackenzie Drive	5,315	8,010	3.1%
10	North of Regional Road 7	1,320	1,940	2.7%

Note: 1. Growth reflects average annual increase relative to current demand level
 2. Current demand on Highway 400 reflects conditions in 2006

The commercial vehicle data presented in **Table 4.6** indicates that the average daily truck volume on Highway 401 west of the GTA (as represented by the demand east of London) is 85% greater than the demand recorded in 1995. The average annual increase is equivalent to nearly 4% relative to the current demand. This growth in commercial vehicle travel is due in part to the increase in cross-border trucking movements in the Windsor/Sarnia area as a result of NAFTA (North American Free Trade Agreement -

1994) as well as growth in the auto manufacturing and auto parts sector in Southwestern Ontario. The average daily commercial vehicle traffic volume along Highway 401 within the GTA (as represented by the demand in central Mississauga) is currently 65% greater than the demand recorded in 1995 and the average annual increase is equivalent to just over 3%.

The average daily truck traffic volume on Highway 400 north of Major Mackenzie Drive is less than 40% of the observed commercial vehicle travel demand on Highway 401 in Mississauga. However, commercial vehicle traffic continues to increase along the Highway 400 corridor by upwards of 3% annually (relative to current demand levels).

The average daily commercial vehicle traffic volume on Highway 10 north of Regional Road 7 has increased by approximately 55% since 1995 and the average annual increase reflects nearly 3% of the current travel demand.

Historical Commercial Vehicle Traffic Flow Summary

In general terms, annual increases in commercial vehicle traffic flow have been equivalent to 3% to 4% of the current demand over the last decade as a result of both increased consumer demand resulting from continued growth within the GTA as well as continued growth in the export of goods to the USA as is described in Chapter 5.

4.4 SERVICE CHARACTERISTICS AND FLOWS

4.4.1 Transit Service Characteristics and Flows

As noted in Section 3.3.2, transit service is a key mode of transportation for many people who have no realistic car access (captive riders) and riders with car access who may be persuaded to use transit service (choice riders). Transit service is made up of local service and connections to inter-regional transit services and park-and-ride facilities. Increasing the number of choice riders requires the operation of frequent and fast service to well defined origins and destinations with few intermediate station stops. Within the Preliminary Study Area, local municipal transit operators provide service within the community as well as some connections to inter-regional transit service.

Local Transit Characteristics

Guelph: Guelph Transit was the first transit authority to offer passengers real-time information about arrival times on routes – *Next Bus* service. *Next Bus* uses global positioning satellites (GPS) and advanced computer modelling to track buses on routes every 90 seconds. Guelph Transit currently has 22 bus routes that deliver passengers to various business areas, medical facilities and university sites around the city. The 2006 Transportation Tomorrow Survey indicates that approximately 6% of the population in the City of Guelph uses public transit during the morning peak period.

Brampton: Brampton Transit currently has four transit terminals to serve the public with a fleet of 180 buses. Brampton Transit has 39 bus routes that serve travel within the municipality as well as provide connections to other transit systems in the Greater Toronto Area. Connections offer access to the Finch Subway/Bus Terminal in Toronto, the Promenade Mall Terminal in York Region, the Westwood Mall Terminal in Mississauga and Humber College in Etobicoke. Brampton Transit also provides service to the Bramalea, Brampton and Mount Pleasant GO Stations. With such a broad transit

network, Brampton Transit served approximately 10.1 million riders in 2006. By November, the 2007 ridership had reached over 10.2 million riders, surpassing the 2006 ridership and confirming continued transit growth in the City.

Mississauga: The City Centre Transit Terminal, Mississauga Transit's main hub, is located on the north side of the Square One Shopping Centre and approximately 40,000 passengers travel through the City Centre Transit Terminal on a daily basis. Mississauga Transit operates a fleet of 397 buses on 81 bus routes to accommodate internal municipal travel as well as connections to other transit systems in the Greater Toronto Area. Mississauga Transit connects with services provided by the Toronto Transit Commission, Brampton Transit, Oakville Transit and a GO Transit Station in proximity to the City Centre Transit Terminal. Approximately 28 million riders use Mississauga Transit annually.

Milton: Transit service in the Town of Milton is offered through a contract with Oakville Transit. Five main routes each run to and from the Milton GO Station and provide local transit service. The 2006 Transportation Tomorrow Survey indicates that approximately 4% of the population in the Town use public transit during the morning peak period.

York: In 2006, York Region Transit (YRT) operated five VIVA routes and over 66 other transit routes to service GO shuttle trips, VIVA rapid transit routes, community bus routes and key high school locations. The YRT bus fleet is made up of approximately 360 buses that provide service to passengers within the Region as well as connecting to other transit systems such as the service provided by the Toronto Transit Commission (TTC), Durham Region Transit, Brampton Transit, Mississauga Transit and GO Transit. The VIVA system is separate from YRT and has a fleet of 85 buses that run on 5 routes that primarily serve demand along Highway 7 and Yonge Street. From its amalgamation in 2001, ridership in York Region has grown by over 10 million riders or at an average rate of 12% per year. By November, the 2007 ridership on YRT routes had reached more than 18.6 million passengers, taking the average weekday ridership to over 64,000 passengers.

Inter-Regional Transit

The major inter-regional transit service provider within the Preliminary Study Area and throughout the Greater Golden Horseshoe is GO Transit. Currently, GO Transit operates seven GO Rail services out of 15 terminals with a fleet size that includes 435 bi-level coaches and 54 locomotives. The GO Rail service is complemented by a bus fleet of 341 highway coaches and 12 double deck buses servicing major urban communities throughout the Greater Golden Horseshoe that provide transfer opportunities at the rail stations.

GO Train Service Characteristics

Throughout the Preliminary Study Area, two main GO Rail lines provide service to the west, the Georgetown GO Rail Line and the Milton GO Rail Line. In addition, the Lakeshore West GO Rail Line provides an alternate service for study area residents. GO Transit's 2006 Annual Report identified annual ridership levels on the Lakeshore West, Georgetown and Milton Lines of approximately 13.6 million, 3.8 million and 6.1 million passengers, respectively. The most recent information from GO Transit indicates that

between May 2007 and May 2008 the overall GO Rail ridership increased by 6.3% and the GO Bus ridership increased by 7.1%. The recently reintroduced GO Transit rail service between Barrie and Union Station, which is an extension of GO Transit's Bradford Rail service, has resulted in this rail corridor experiencing a 21.6% increase in ridership. Within the GTA West Study Area, the Milton GO rail ridership increased by 4.5% whereas the Georgetown GO rail ridership increased by 3.5%.

Peak hour and total daily ridership crossing key municipal boundaries on the GO Rail lines described above are summarized in **Table 4.7**. These statistics were obtained from the 2006 GTA Cordon Count database.

Table 4.7: 2006 GTA Cordon Count GO Rail Transit Ridership Statistics

GO Rail Line	Screenlines	Time Period and Direction			
		Total Daily Ridership 6:00 - 20:00 (EB)	AM Peak Period 6:00 - 9:00 (EB)	Total Daily Ridership 6:00 - 20:00 (WB)	PM Peak Period 15:00 - 18:00 (WB)
Lakeshore West	Hamilton/Halton	784	784	529	361
	Halton/Peel	14,124	11,289	12,401	8,811
	Peel/Toronto	20,971	16,691	18,589	12,955
Milton	Halton/Peel	1,172	1,172	1,195	666
	Credit River	5,099	5,099	5,092	2,829
	Peel/Toronto	10,337	10,337	10,645	7,938
Georgetown	Halton/Peel	632	632	563	315
	Brampton/Mississauga	5,124	4,629	5,275	3,758
	Peel/Toronto	5,788	5,194	5,936	4,217

GO Rail train ridership increases closer to downtown Toronto given the propensity for employees in the downtown core to live closer to their employer. The total two-direction daily ridership (6:00 a.m. to 8:00 p.m.) on Lakeshore West Line at the Peel/Toronto boundary (approximately 40,000 passengers) is 20% higher than the combined ridership on the Milton GO Line (approximately 21,000 passengers) and Georgetown GO Line (approximately 12,000 passengers).

GO Bus Service Characteristics

GO Transit provides bus service to Hamilton, Milton, Georgetown (to Guelph), Orangeville and Bolton. The annual 2006 GO bus ridership in the Greater Golden Horseshoe (approximately 7.1 million passengers) was down slightly from 2005. The Hamilton QEW GO bus frequency is every 20 to 30 minutes throughout the day in both directions.

In September 2007, GO Transit introduced two new bus routes in the Guelph area to complement the GO Bus service operating along the Highway 7 corridor through Rockwood and Acton to Georgetown GO Station continuing through Brampton to the York Mills Subway Station in Toronto. The new GO Bus routes area:

- Route between University of Guelph, the Aberfoyle Park-and-Ride Lot (Highway 401 and Aberfoyle), Square One Mall in Mississauga and the Cooksville GO Station; and,
- Route between the University of Guelph, the Aberfoyle Park-and-Ride Lot (Highway 401 and Aberfoyle) and the Meadowvale GO Station.

In late June 2008, GO initiated a new weekday bus service between Milton and Bronte GO Stations that serves the Milton GO Station, the carpool lot at Bronte Road and Highway 407, and the Bronte GO Station to connect with the Lakeshore West GO Train service.

GO service between Union Station and Milton is a combination of bus and train service. Peak direction rail service is offered during peak periods and is supplemented by bus service outside of these peaks. The frequency of this bus service is approximately every 30 minutes. GO Transit also provides bus service along Highway 401 between Milton and the Finch Subway Station using 10 to 15 minute headways during peak the morning period (peak direction) and 15 to 40 minute headways during the afternoon peak period (peak direction). Service headways outside of the peak periods are much greater and as high as once every 3 hours.

GO Transit provides morning and evening bus service between the Georgetown GO Station and Guelph as well as a single night-time bus from Guelph into Georgetown.

GO Bus service between Orangeville and the Brampton GO Rail terminal is offered in the early morning between 5:30 and 7:00 a.m. with approximately 30 minute headways and once at noon and in the evening. Service from Brampton to Orangeville is offered once in the morning (10:45 a.m.), every 30 minutes between 5:00 and 7:00 p.m. and a final run at 8:00 p.m.

GO Transit has added three mid-day bus services to its Bolton-Malton line along Highway 50. Service to Malton from Bolton is offered 6 times and service from Malton to Bolton is offered 8 times per work day. The GO bus service from Bolton to Toronto along Highway 27 is offered twice a day.

Inter-Regional Rail Service Characteristics

VIA Rail serves 4.1 million passengers annually using 480 trains each week and running over 14,000 km of track to serve over 450 Canadian communities. Specific to Southcentral Ontario, VIA Rail provides service on both the CP and CN rail lines between the GTA and Windsor.

Within the Preliminary Study Area, the CP rail line links the GTA with Guelph, Waterloo Region, London and areas west. There are currently three passenger services provided on this line in both directions although none of them directly serve the Preliminary Study Area. VIA rail service is also provided on the CN mainline south of the Preliminary Study Area, connecting the GTA to Hamilton, Brantford, Woodstock, London and areas west with four daily services.

Inter-Regional Bus Service Characteristics

Private inter-regional transit service within the Preliminary Study Area is provided by Greyhound and Coach Canada. Greyhound is the largest provider and serves over 1,100 locations, carrying approximately 6.5 million passengers annually. Greyhound currently provides limited bus service stops in Brampton, Georgetown and Milton.

Summary of Transit Service Characteristics

Both the public transit network (local and inter-city) and private transit services are provided within the Preliminary Study Area with various levels and frequencies of

service. Trends suggest that ridership will continue to grow provided the service is expanded to meet travel demands.

Integration of local and inter-regional transit services at common transfer points or terminals is very important in order to provide the inter-regional transit opportunities required between the designated urban growth centres in Kitchener/Waterloo, Guelph, Brampton and Vaughan.

4.4.2 Rail Service Characteristics and Flows

Rail service within Southcentral Ontario is critical to provide access for people and goods between major urban centres. **Exhibit 4.8** illustrates the existing rail network within south-central Ontario.

Canadian Pacific (CP) and Canadian National (CN) provide Class I rail service in Southcentral Ontario. Within the Preliminary Study Area, CN operates approximately 80 trains daily while CP operates 30 trains daily, carrying specific commodities to various destinations.

Exhibit 4.8: Existing Rail Network



The bulk commodity market comprises approximately 44% of the CP revenue based on information obtained from the CP 2007 Annual Report. The major components of the bulk commodities include grain, coal and fertilizers. Each of the merchandise and intermodal markets make up approximately 28% of the total revenues. The CP 2007 Annual report indicates that the revenue ton-miles (RTM) (millions), which measures the

distance travelled by the head locomotive on each train operation over CP track is steadily increasing, indicating significant growth in rail freight service.

CN's merchandise commodity market represents 47% of total freight revenues. The bulk commodity and intermodal markets represent 34% and 19% of total revenues, respectively. The revenue ton-miles (RTM) (millions) for CN continues to increase each year.

Table 4.8 and **Table 4.9** summarize the major commodities carried as a percentage of freight revenues for the CP and CN rail lines respectively, whereas the historical and projected container volumes for the Continental United States and Canada are summarized in **Exhibit 4.9**. This summary is based on data from the American Association of Port Authorities and is published in a report entitled *Trends in Containerization and Capacity at Canadian Ports*. The projections point to an increasing rate of growth in the volume of container shipment and corresponding growth for the railway industry.

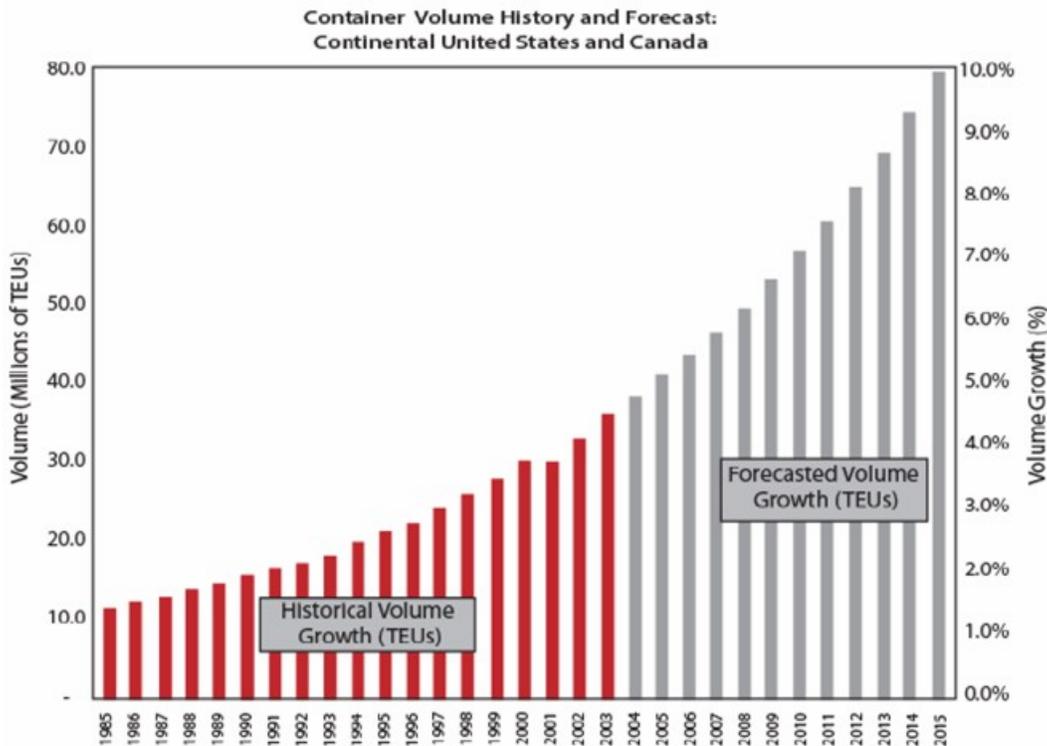
Table 4.8: 2006 CPR Freight Revenue and Percent Distribution of Commodities

Commodity	Proportion of Revenue
<i>Bulk</i>	44%
Grain	20%
Coal	14%
Sulphur and Fertilizers	10%
<i>Merchandise</i>	28%
Forest Products	7%
Industrial and Consumer Products	14%
Automotive	7%
<i>Intermodal</i>	28%
Total Freight Revenue (Millions)	\$4,427

Table 4.9: 2006 CN Freight Revenue and Percent Distribution of Commodities

Commodity	Proportion of Revenue
<i>Bulk</i>	34%
Grain	17%
Coal	5%
Sulphur and Fertilizers	12%
<i>Merchandise</i>	47%
Forest Products	24%
Industrial and Consumer Products	16%
Automotive	7%
<i>Intermodal</i>	19%
Total Freight Revenue (Millions)	\$7,371

Exhibit 4.9: Container Volume History and Forecast: Continental U. S. and Canada



Source: Trends in Containerization and Capacity of Canadian Ports, Economics Division, January 30, 2006

4.4.3 Intermodal Service Characteristics

Intermodal facilities accommodate the movement of freight between transportation modes as part of a transportation system that is directed at time and cost efficient delivery. The primary intermodal facilities located within the Preliminary Study Area include:

- CP Vaughan Terminal
- CP (Milton) Truck-Train Terminal
- CN Brampton (Toronto) Terminal

The CP Intermodal Terminal in Vaughan is CP Rail’s newest intermodal facility and is located northwest of Toronto. This intermodal terminal serves traffic destined for or originating in western Canada and traffic destined for or originating throughout the Pacific Rim.

The Vaughan intermodal terminal has an annual capacity of about 110,000 containers and trailers. Upwards of 95% of the container traffic occurs between 6 a.m. and 9 p.m. with peak activity occurring between 2:00 p.m. and 5 p.m. CP has plans to expand the existing Vaughan Terminal to provide up to a 100% increase in container activity.

The historical traffic and container movement throughout intermodal terminals is presented in **Table 4.10**. Since 1970, the number of containers on flatcars has increased from fewer than 400,000 to over 20 million by year 2000. Over the same time frame, the total tonnes moved have increased from approximately 2 million to approximately 22 million.

Table 4.10: Historical Container and Trailer Growth on Flatcars at Intermodal Terminals

Year	Shipment (Tonnes)		
	Containers on Flatcars	Trailers on Flatcars	Total
1970	369,500	1,910,500	2,280,000
1980	4,345,000	1,848,500	6,163,500
1990	9,095,000	3,917,000	13,012,000
2000	20,213,500	1,713,000	21,926,500
Average Annual Growth ¹	3.5%	-0.5%	3.2%

Note: 1. Reflects current rate of growth i.e. average annual increase relative to estimated 2000 conditions based on regression

4.4.4 Air Service Characteristics

Within the Preliminary Study Area there are no significant passenger air services; however, there are several adjacent airports that provide accessibility to the movement of people and goods.

International Airports

Toronto Pearson International Airport (LBPIA) accommodated over 31 million passengers in 2006 and had more than 415,000 aircraft movements. Toronto LBPIA is a major international airport and airline hub with significant amounts of cargo traffic including the main FedEx Canada cargo hub. Current projections forecast 2020 air passenger traffic at Toronto Pearson International Airport to be 50 million annually.

South of the Preliminary Study Area, the John C. Munro Hamilton International Airport served nearly 450,000 passengers in 2005 and accommodated more than 74,000 aircraft movements. Although, Hamilton International Airport is mainly a large commercial airport moving a significant amount of cargo traffic, it also accommodates scheduled passenger flights. It currently accommodates both the United Parcel Service (UPS) and Purolator Courier cargo hubs. Current forecasts for 2027 indicate that Hamilton Airport will move 4.7 million passengers annually.

The Region of Waterloo International Airport, located to the west of the Preliminary Study Area, serves more than 100,000 aircraft movements annually. Activity at this regional airport continues to grow with recent entrance into the international market serving both passenger and goods movement.

The locations of the three international airports that serve the Preliminary Study Area are shown in **Exhibit 4.10**.

Exhibit 4.10: International Airports and Major Marine Ports



Regional Airports

Regional airports in the vicinity of the Preliminary Study Area include Buttonville Municipal Airport, Guelph Aerodrome and the Toronto City Centre Airport. Buttonville Airport is a high traffic general aviation facility with significant amounts of private, charter and air ambulance traffic. Although there are no scheduled passenger flights, there were over 145,000 aircraft movements in 2005. The Guelph Aerodrome is a small private aerodrome that is primarily used as a flight instruction facility. Toronto City Centre Airport is a regional airport with private aviation, air ambulance, charter and limited passenger service. In 2005, there were approximately 68,000 aircraft movements from this airport.

Each of these regional airports accommodates people and goods movement and will influence travel patterns within the Preliminary Study Area as well as provide access to the domestic and international markets. Historical air passenger trends indicate that domestic travel has been growing by 2.6% per annum while transborder travel and international travel is growing by approximately 4.0% per annum. Air cargo has been increasing at an even greater rate of 10% annually, which is roughly three times the Gross Domestic Product (GDP) growth.

4.5 EXISTING ROADWAY OPERATING CONDITIONS

4.5.1 Overview

The historic and existing traffic flows discussed in the previous sections of this report provide an overview of the current total and commercial vehicle travel demand in the Preliminary Study Area as well as an indication of the traffic growth trends in specific corridors. In order to assess how well the transportation system is operating during peak travel periods, analysis screenlines were established at eleven locations within the Preliminary Study Area.

A screenline is a linear feature such as a road, a river, a rail line or a municipal boundary that is used for the purpose of evaluating the cumulative travel demand on the roadways crossing this feature. The cumulative travel demand is compared to the available screenline capacity in order to establish volume-to-capacity ratios, which provide an indication of how well a specific corridor/screenline is operating. A Level of Service / Operating Condition guideline defined in NCHRP 187 Report and shown in **Table 4.11** is used in the following sections to discuss Level of Service and volume-to-capacity ratios (V/C) to operating conditions.

Table 4.11: Volume / Capacity Operating Conditions Guideline

Volume-to-Capacity Ratio	Level of Service (LOS)	Facility Operating Condition	Screenline Operating Condition
< .70	A + B	Free Flow	Good
.71 to .80	C	Stable Flow	Good
.81 to .90	D	Unstable Flow	Unstable
.91 to 1.0	E	Congested	Congested
> 1.0	F	Very Congested	Very Congested

4.5.2 Analysis Screenlines

Screenline Description and Location

A series of analysis screenlines within the GTA West Preliminary Study Area were identified to capture the east-west and north-south traffic flows within and adjacent to the Preliminary Study Area from west of Guelph to east of Highway 400. These are illustrated in **Exhibit 4.11**. Current (2006/2007) traffic data available from the GTA Cordon Count program, Wellington County, Region of Peel, and supplementary traffic surveys undertaken during the fall of 2007 were assembled and summarized for each of the roadways crossing the various analysis screenlines. A description of the analysis screenlines is presented in **Table 4.12**.

Exhibit 4.11: GTA West Screenline Locations



Table 4.12: Screenline Description and Location

Screenline	Description	Limits
<i>North-South Screenlines (East-West Travel)</i>		
8003	West of Guelph	Highway 401 to County Road 12
8002	East of Guelph	Highway 401 to County Road 19
8001	West of Milton	Highway 401 to County Road 19
4002	West of Winston Churchill Boulevard	Highway 401 to County Road 109/Highway 9
4001	East of Highway 10 (Hurontario Street)	Highway 401 to Highway 9
3002	East of Highway 50	Steeles Avenue to Highway 9
3001	East of Highway 400	Steeles Avenue to Highway 9
<i>East-West Screenlines (North-South Travel)</i>		
8004	North of Highway 401 (Wellington County)	Regional Road 24 to County Road 46
4006	South of Highway 401 (Halton and Peel Regions)	Guelph Line to Highway 407
4005	South of Highway 407	Winston Churchill Boulevard to Regional Road 50
4004	South of Mayfield Road	Regional Road 25 to Regional Road 50

4.5.3 Existing Screenline Flows

A summary of the peak hour/peak direction screenline traffic flows is presented in **Table 4.13** and a brief discussion related to the current demand follows:

Table 4.13: Analysis Screenline Peak Hour Traffic Volume Summary

Screen Line	Description	AM Peak Hour (EB/SB)				PM Peak Hour (WB/NB)			
		Total	Auto	Truck	%Truck	Total	Auto	Truck	%Truck
<i>North-South Screenlines (East-West Travel)</i>									
8003	West of Guelph	10,665	9,345	1,320	12%	11,421	9,904	1,517	13%
8002	East of Guelph	6,607	5,774	834	13%	6,795	6,155	905	13%
8001	West of Milton	6,415	5,676	739	12%	6,863	6,166	888	13%
4002	West of Winston Churchill Boulevard	12,876	11,839	1,037	8%	15,278	14,232	1,046	7%
4001	East of Highway 10 (Huronario Street)	28,703	26,618	2,085	7%	24,095	22,799	1,296	5%
3002	East of Highway 50	14,010	12,869	1,141	8%	14,202	12,942	1,260	9%
3001	East of Highway 400	19,489	18,155	1,334	7%	21,783	20,362	1,421	7%
<i>East-West Screenlines (North-South Travel)</i>									
8004	North of Highway 401 (Wellington)	5,368	4,896	472	9%	5,909	5,407	502	8%
4006	South of Highway 401 (Halton/Peel)	5,982	5,457	525	9%	6,486	6,137	463	7%
4005	South of Highway 407	27,104	25,708	1,396	5%	26,838	25,308	1,530	6%
4004	South of Mayfield Road	13,037	11,965	1,072	8%	13,233	12,028	1,205	9%

Highlights of the north-south screenline analysis (east-west peak hour peak direction traffic flows) with reference to travel demand along specific roadway facilities crossing the screenlines include:

- Truck traffic represents 12% to 13% of total vehicle travel crossing the north-south screenlines situated east and west of Guelph and west of Milton and 7% to 9% for the screenlines east of Milton during the morning and afternoon peak hours.
- Highway 401 travel demand crossing the screenlines east and west of Guelph represents 61% of the total screenline volumes. The corresponding demand volumes for Highway 7 and Highway 24/County Road 124 crossing the screenline represent an additional 8% and 10% of the total screenline demands, respectively. Combined, these major facilities accommodate approximately 80% of the total screenline volume during the morning and afternoon peak hours.
- Highway 401, Highway 7 and Highway 24 also accommodate 85% of the truck traffic crossing the analysis screenlines east and west of Guelph during the morning and afternoon peak hours.
- Highway 401 and Highway 407 accommodate 42% and 19%, respectively of the demand crossing the analysis screenlines east of Guelph, west of Milton, west of Winston Churchill Boulevard and east of Highway 10. The combined demand on Highways 401 and 407 represents as much as 50% of the total flow crossing specific individual screenlines.
- Highway 407 accommodates approximately 33% of the total peak hour peak direction traffic flow crossing the north-south screenlines east of Highway 50 and east of Highway 400. Both these screenlines exclude the Highway 401 corridor.

Highlights of the east-west screenline analysis (north-south peak hour peak direction traffic flows) with reference to travel demand along specific links crossing the screenlines include:

- Truck traffic volumes represent 5% to 9% of total vehicle travel crossing all of the east-west screenlines in the Preliminary Study Area during the morning and afternoon peak hours.
- Truck traffic represents a higher proportion (than the screenline average) of the total vehicle travel demand on some of the rural arterials especially in areas where the aggregate industry is prominent.
- Less than one quarter of the total north-south vehicle demand crossing all of the east-west analysis screenlines is accommodated by Highway 410 and Highway 407.
- The north-south arterial/highway facilities such as Highway 6, Highway 10, Highway 50 and Highway 27, Airport Road and Dixie Road provide a major role in moving north-south auto and truck flows during the peak hours.

4.5.4 Existing Screenline Operating Characteristics

The operating characteristics of each of the screenlines were assessed in relation to the current volume-to-capacity (v/c) ratio. The existing peak hour peak direction screenline v/c ratios identified in **Tables 4.14 and 4.15** reflect the travel demand identified in Section 4.5.3. The estimated roadway capacities reflect the current lane geometry and capacities assigned by the Greater Golden Horseshoe Model (GGHM). It is noted that the capacities of only the major roads and highways crossing the screenline have been considered in the v/c ratio calculations.

Table 4.14: Analysis Screenline A.M. Peak Hour Operating Level of Service

Screen Line	Description	AM Peak Hour (EB/SB)			
		Total Vehicles	Total Capacity	V/C	Screenline Operating Condition
<i>North-South Screenlines (East-West Travel)</i>					
8003	West of Guelph	10,665	17,600	0.61	Good
8002	East of Guelph	6,607	11,990	0.55	Good
8001	West of Milton	6,415	9,900	0.65	Good
4002	West of Winston Churchill Boulevard	12,876	17,930	0.72	Good
4001	East of Highway 10 (Hurontario Street)	28,703	38,170	0.75	Good
3002	East of Highway 50	14,010	19,470	0.72	Good
3001	East of Highway 400	19,489	26,180	0.74	Good
<i>East-West Screenlines (North-South Travel)</i>					
8004	North of Highway 401 (Wellington)	5,368	9,130	0.59	Good
4006	South of Highway 401 (Halton/Peel)	5,982	14,410	0.42	Good
4005	South of Highway 407	27,104	38,720	0.70	Good
4004	South of Mayfield Road	13,037	22,440	0.58	Good

Table 4.15: Analysis Screenline P.M. Peak Hour Operating Level of Service

Screen Line	Description	PM Peak Hour (WB/NB)			
		Total Vehicles	Total Capacity	V/C	Screenline Operating Condition
<i>North-South Screenlines (East-West Travel)</i>					
8003	West of Guelph	11,421	17,600	0.65	Good
8002	East of Guelph	6,795	11,990	0.57	Good
8001	West of Milton	6,863	9,900	0.69	Good
4002	West of Winston Churchill Boulevard	15,278	17,930	0.85	Unstable
4001	East of Highway 10 (Huronario Street)	24,095	34,210	0.70	Good
3002	East of Highway 50	14,202	19,470	0.73	Good
3001	East of Highway 400	21,783	26,180	0.83	Unstable
<i>East-West Screenlines (North-South Travel)</i>					
8004	North of Highway 401 (Wellington)	5,909	9,130	0.65	Good
4006	South of Highway 401 (Halton/Peel)	6,486	14,410	0.45	Good
4005	South of Highway 407	26,838	38,720	0.69	Good
4004	South of Mayfield Road	13,233	22,440	0.59	Good

The peak hour volume-to-capacity ratios reflect good existing operating conditions crossing all analysis screenlines with the exception of the screenlines west of Winston Churchill Boulevard and east of Highway 400. On the basis of the definitions provided in **Table 4.11**, these screenlines are currently operating with a level-of-service D during the afternoon peak hour, reflecting unstable flow conditions.

The east-west travel demand crossing the north-south screenlines reflects volume-to-capacity ratios between 0.55 and 0.85. The screenline analysis indicates that current travel demand is approaching capacity west of Winston Churchill Boulevard and east of Highway 400. The analysis indicates that there is sufficient screenline capacity to accommodate up to a 10% increase in travel demand on these screenlines and up to a 20% increase elsewhere in the Preliminary Study Area while maintaining theoretical volume-to-capacity ratios at or below 0.95.

The north-south travel demand crossing the east-west screenlines reflects volume-to-capacity ratios between 0.42 and .70. The screenline analysis indicates that there is sufficient screenline capacity to accommodate up to a 25% increase in travel demand while maintaining a theoretical volume-to-capacity ratio at or below 0.95.

4.5.5 Summary of Key Facility Operating Characteristics

Screenline operating characteristics provide a general overview of how the transportation network is generally operating within the GTA West Preliminary Study Area. However, a more in-depth review of the operating characteristics of individual facilities crossing screenlines is required to assess specific corridor operations. In this regard, the morning peak hour eastbound and afternoon peak hour westbound traffic flows were reviewed for the following major highway corridors to assess capacity utilization and operating level of service: Highway 401; Highway 407; Highway 7; Highway 9; Highway 410; Highway 124 and Highway 50. Summaries of the major road facilities that are currently

experiencing congestion or are approaching a congested state are presented in **Tables 4.16 and 4.17** for the morning and afternoon peak hours, respectively.

Discussion of the existing operating characteristics described in both **Table 4.16** and **Table 4.17** is provided for each of the corresponding major road facilities within the Preliminary Study Area.

Table 4.16: A.M. Peak Hour Operating Level of Service of Major Facilities

Major Facility Description	Lanes Peak Direction	Vehicle Capacity	Total Vehicles	V/C	LOS	Operating Condition
<i>Highway 401 (Eastbound)</i>						
West of Guelph	3	5,940	5,690	0.96	E	Congested
West of Milton	3	5,940	4,590	0.77	C	Good
Credit River	3	5,940	5,390	0.91	E	Congested
<i>Highway 407 (Eastbound)</i>						
West of Winston Churchill Boulevard	2	4,400	4,800	1.09	F	Congested
East of Highway 10	3	6,600	5,730	0.87	D	Unstable
<i>Highway 7 (Eastbound)</i>						
West of Acton	1	1,100	550	0.50	B	Good
East of Winston Churchill Boulevard	1	1,100	990	0.90	E	Congested
<i>Highway 9 (Eastbound)</i>						
East of Highway 10	1	1,100	800	0.73	C	Good
<i>Highway 410 (Southbound)</i>						
North of Highway 407	4	7920	7260	0.92	E	Congested
<i>Highway 124 (Eastbound)</i>						
East of Township Road	1	1,100	1,105	0.91	E	Congested
<i>Highway 50 (Southbound)</i>						
South of Mayfield Road	2	1,100	2,070	0.94	E	Congested

Table 4.17: P.M. Peak Hour Operating Level of Service of Major Facilities

Major Facility Description	Lanes Peak Direction	Vehicle Capacity	Total Vehicles	V/C	LOS	Operating Condition
<i>Highway 401 (Eastbound)</i>						
West of Guelph	3	5,940	3,800	0.64	B	Good
West of Milton	3	5,940	4,400	0.74	C	Good
Credit River	3	5,940	5,100	0.86	D	Unstable
<i>Highway 407 (Eastbound)</i>						
West of Winston Churchill Boulevard	2	4,400	4,370	0.99	E	Congested
East of Highway 10	3	6,600	4,800	0.73	C	Good
<i>Highway 7 (Eastbound)</i>						
West of Acton	1	1,100	470	0.42	B	Good
East of Winston Churchill Boulevard	1	1,100	900	0.82	D	Unstable
<i>Highway 9 (Eastbound)</i>						
East of Highway 10	1	1,100	1,360	1.24	F	Congested
<i>Highway 410 (Northbound)</i>						
North of Highway 407	4	7920	8149	1.03	F	Congested
<i>Highway 124 (Westbound)</i>						
East of Township Road	1	1,100	1,245	1.03	F	Congested
<i>Highway 50 (Northbound)</i>						
South of Mayfield Road	2	1,100	2,250	1.02	F	Congested

Highway 401

Highway 401 is operating at LOS E west of Guelph in the morning peak hour. The corresponding impacts reflect high traffic volumes, unstable flow, congestion and intermittent queuing. Highway 401 traffic west of the Highway 401/Highway 403 split at Woodstock is approximately 35% higher than the traffic east of the Highway 403 interchange (based on a comparison of 2004 AADT volumes).

Highway 401 operates at LOS C between Guelph and Mississauga. Operating conditions reflect stable flow with tolerable, but fluctuating operating speed and manoeuvrability. The improved level of service in this section is in part a result of the significant trip attraction between Highway 6 South and points west along Highway 401.

Highway 401 is operating at LOS E and D east of the Credit River during the morning and afternoon peak hours, respectively. Along this section of the Highway 401 corridor, commuters experience unstable flow with high traffic volumes that are at or near roadway capacity. Heavy truck traffic (20% of total vehicle flow) also contributes to the deteriorated level of service through this section of Highway 401.

Highway 407

Prior to the widening of Highway 407 ETR to 6 lanes (and subsequently to 8 lanes in Spring 2008) east of Highway 401 in 2007, the section of Highway 407 ETR between Winston Churchill Boulevard and Highway 410 was operating at capacity during the morning and afternoon peak-hours. Highway 407 ETR is operating at LOS D east of Highway 410 towards Highway 400 with truck traffic representing less than 10% of the total vehicle flow.

Highway 7

Highway 7 operates at LOS B west of Acton while the section east of Winston Churchill Boulevard operates at LOS E and D during the morning and afternoon peak-hours respectively. Trucks account for approximately 5% of the total vehicle flow.

Wellington County Rd 109/Highway 9

County Road 109 currently operates at LOS A west of Orangeville (based on an estimated current peak hour demand of approximately 400 vehicles) with truck volumes representing approximately 10% of the total vehicle demand. To the east of Orangeville, the highway is operating at LOS C during the morning peak hour and is congested during the afternoon peak hour. Truck volumes represent approximately 12% of total demand.

Highway 410

Highway 410 is operating in a congested state where it crosses the Brampton/Mississauga boundary with morning and afternoon peak hours operating at LOS E and LOS F respectively. Operating conditions are characterized by vehicle queuing and frequent stoppages. The truck traffic volumes comprise approximately 5% of the total vehicle demand during the commuter peak hours.

Waterloo Regional Road 24/Wellington County Road 124

Regional Road 24 is currently operating at LOS E west of Guelph, reflecting congested travel conditions during the morning and afternoon peak hours. Trucks on this section of roadway comprise approximately 10% of the total travel demand. County Road 124 operates at LOS C east of Guelph with peak direction volumes of upwards of 600 vehicles during the peak hours.

Regional Road 50

Regional Road 50 currently operates at LOS F south of Mayfield Road during the morning peak hour and LOS F during the afternoon peak hour. Truck traffic volumes along Highway 50 are as high as 15% of total vehicles. The high percentage of trucks reflects the impacts of truck traffic generated by the CP Vaughan Intermodal Terminal (located east of Highway 50 on the north side of Rutherford Road) as well as several retail distribution centres situated along the Regional Road 50 corridor.

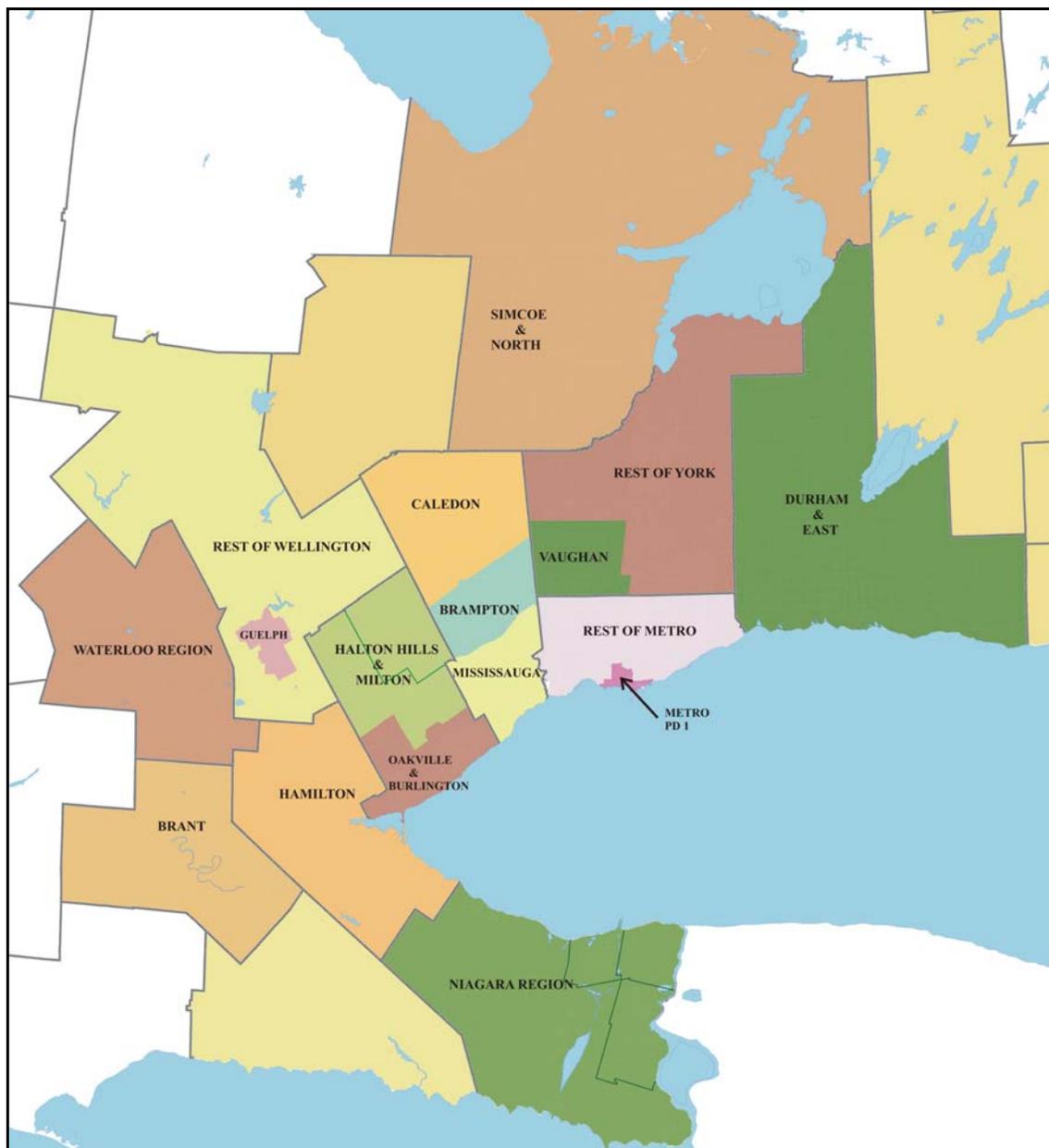
In addition to these inter-regional arterial roads, the majority of the key urban arterial road corridors within the Brampton/Mississauga/Vaughan area are operating at congested conditions during the morning and afternoon peak hours.

4.6 EXISTING NON COMMERCIAL TRAVEL CHARACTERISTICS

4.6.1 Review of Municipal Origin – Destination Travel Characteristics

The Preliminary 2006 Transportation Tomorrow Survey (TTS) database was used to identify morning peak period (6:00 to 9:00 a.m.) travel characteristics and person trip interchanges (origin-destination) by mode of travel for the 17 GTA West Municipal Planning Districts illustrated in **Exhibit 4.12**. Summaries of the 2006 morning peak period travel characteristics for Waterloo Region, City of Cambridge, City of Guelph, County of Wellington, Region of Halton, Town of Milton, Town of Caledon and City of Brampton, City of Barrie, Rest of Simcoe County and Town of Orangeville are presented in Exhibits 4.13 through 4.23.

Exhibit 4.12: GTA West Planning Districts



Waterloo Region

The 2006 TTS morning peak period travel characteristics for Waterloo Region as well as the population growth between 1996 and 2006 are presented in **Exhibit 4.13**. The 2006 TTS data indicates that:

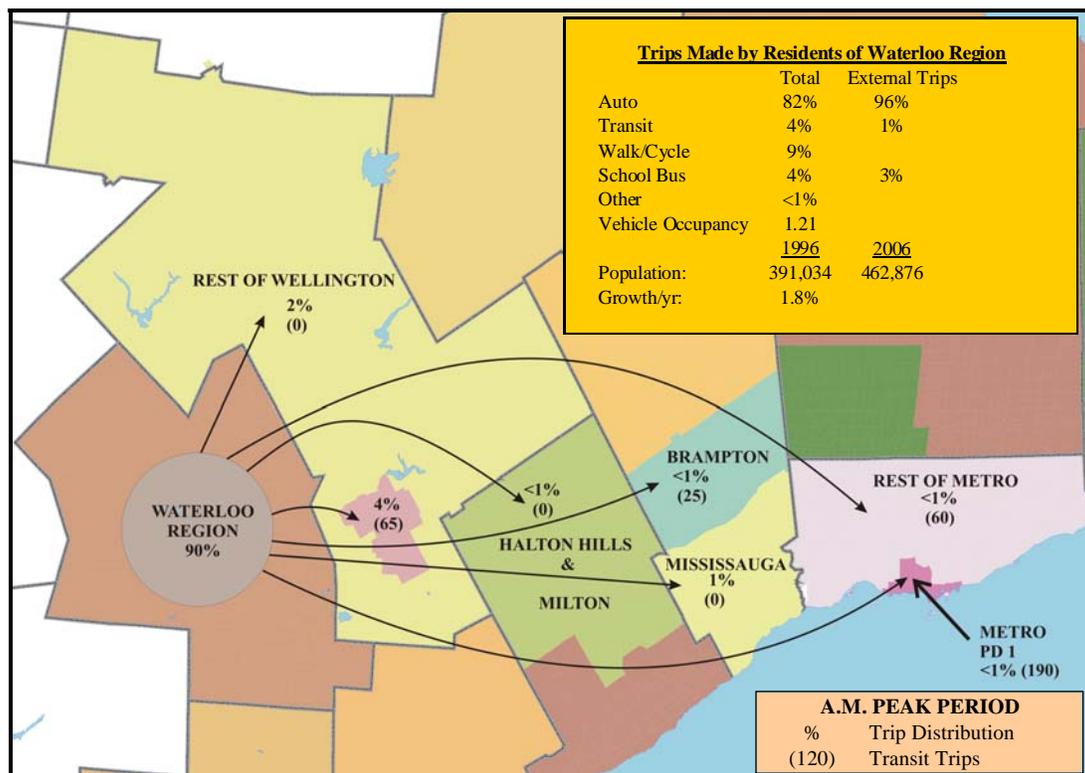
- 90% (211,725 trips) of the morning peak period trips start and end within Waterloo Region;
- 82% of the trips are by automobile; and
- 4% of the trips are by transit with the remaining 14% representing walk, cycle, school bus and other trips.

The data indicates that 10% of the morning peak period trips leave Waterloo Region; approximately 96% of these external trips are made by car and only 1% reflect inter-regional transit use. The majority of these inter-regional transit trips are attracted to Metro PD 1 (190 trips) and the City of Guelph (65 trips).

The major external destinations for trips leaving Waterloo Region during the morning peak period are:

- 8,600 (4%) total person trips to the City of Guelph
- 5,100 (2%) total person trips to the Rest of Wellington County
- 3,000 (1%) total person trips to the City of Mississauga
- Less than 1% of the total person trips travel to Rest of Metro (1,300) and PD1 (500)

Exhibit 4.13: 2006 Morning Peak Period Travel Characteristics for Waterloo Region



City of Cambridge

The 2006 TTS morning peak period travel characteristics for the City of Cambridge as well as the population growth between 1996 and 2006 are presented in **Exhibit 4.14**. The 2006 TTS data indicates that:

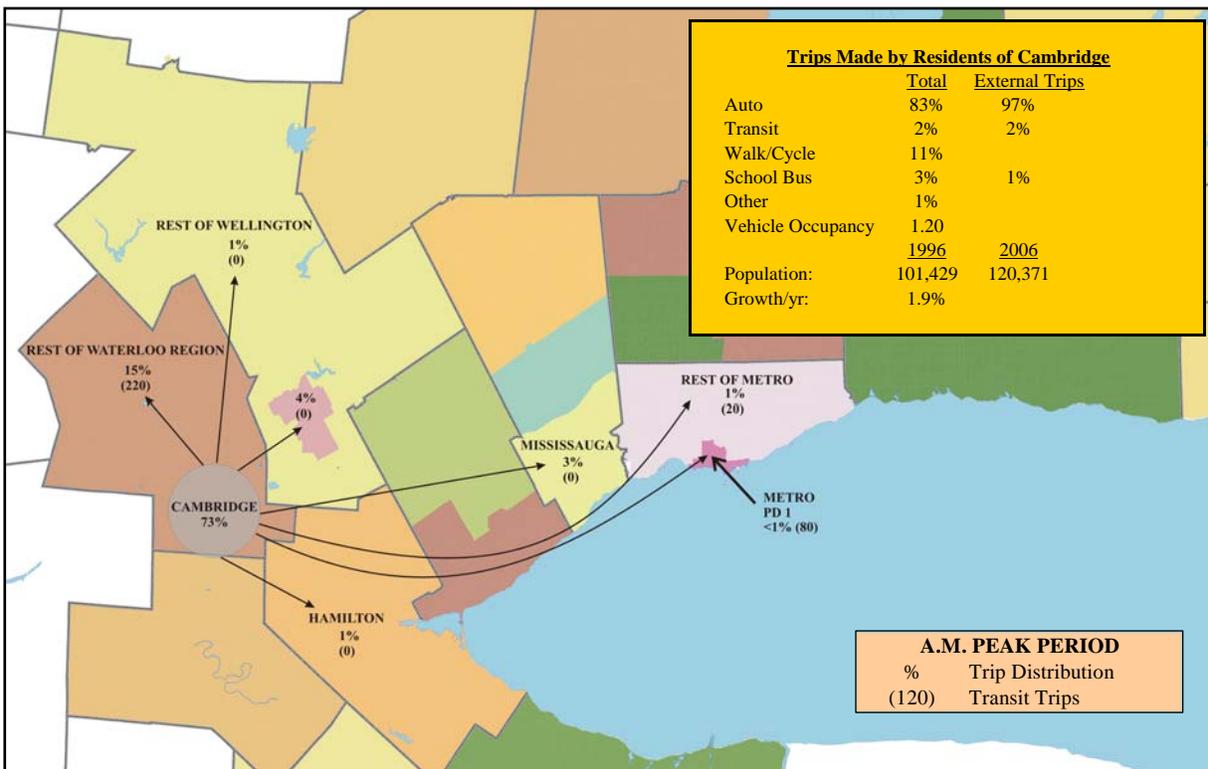
- 73% (44,050 trips) of the morning peak period trips start and end within the City of Cambridge;
- 83% of the trips are by automobile; and
- 2% of the trips are by transit.

The data indicates that 27% of the morning peak period trips leave the City of Cambridge; approximately 97% of these external trips are by car and only 2% reflect inter-regional transit use. The majority of these inter-urban transit trips are attracted to the Rest of Waterloo Region (220 trips).

The major external destinations for trips leaving the City of Cambridge during the morning peak period are:

- 8,870 (15%) total person trips to the Rest of Waterloo Region
- 2,675 (4%) total person trips to the City of Guelph
- 1,530 (3%) total person trips to the City of Mississauga
- 1% of the total person trips travel to Rest of Metro (620) and less than 1% to PD1 (180)

Exhibit 4.14: 2006 Morning Peak Period Travel Characteristics for City of Cambridge



City of Guelph

The 2006 TTS morning peak period travel characteristics for the City of Guelph as well as the population growth between 1996 and 2006 are presented in **Exhibit 4.15**. The 2006 TTS data indicates that:

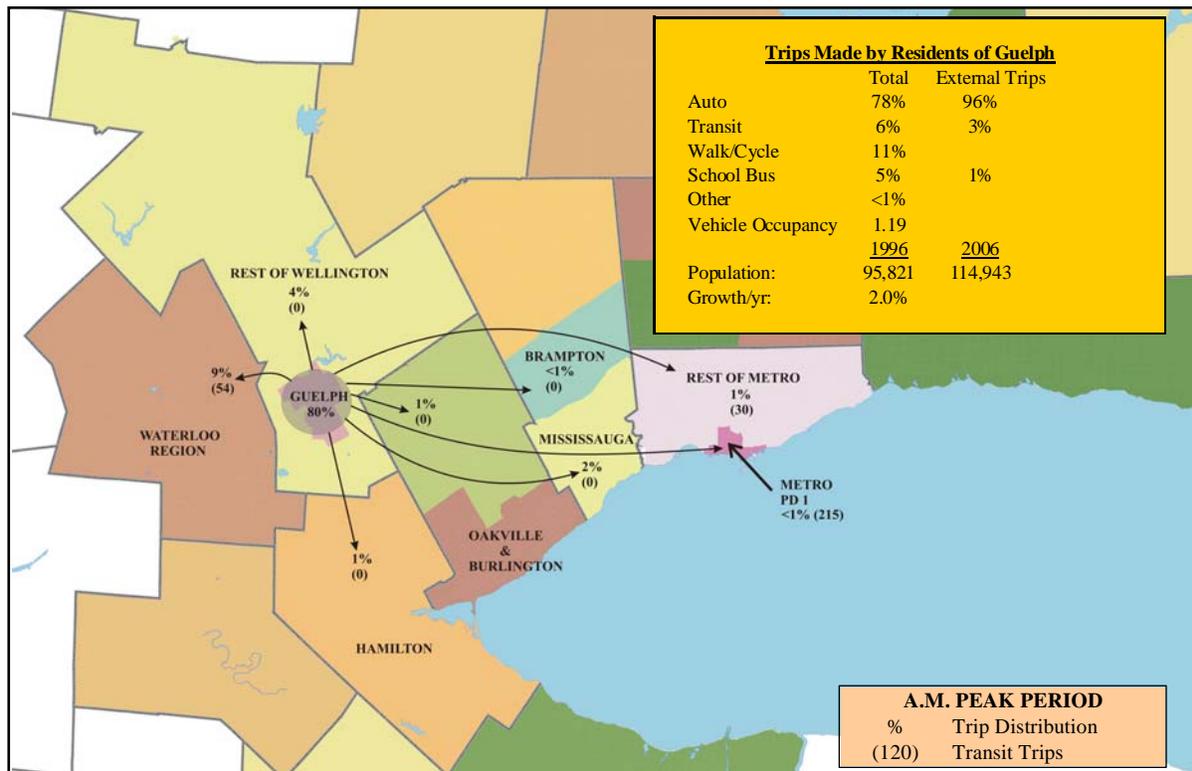
- 80% (46,120 trips) of the morning peak period trips start and end within the City of Guelph;
- 78% of the trips are by automobile; and
- 6% of the trips are by transit.

The data indicates that 20% of the morning peak period trips leave the City of Guelph; approximately 96% of these external trips are by car and only 3% reflect inter-regional transit use. The majority of these inter-regional transit trips are attracted to Metro PD 1 (215 trips).

The major external destinations for trips leaving the City of Guelph during the morning peak period are:

- 5,400 (9%) total person trips to the Waterloo Region
- 2,300 (4%) total person trips to the Rest of Wellington County
- 1,100 (2%) total person trips to the City of Mississauga
- 1% of the total person trips travel to Rest of Metro (645) and less than 1% to PD1 (215)

Exhibit 4.15: 2006 Morning Peak Period Travel Characteristics for the City of Guelph



Rest of Wellington County

The 2006 TTS morning peak period travel characteristics for the County of Wellington as well as the population growth between 1996 and 2006 are presented in **Exhibit 4.16**. The 2006 TTS data indicates that:

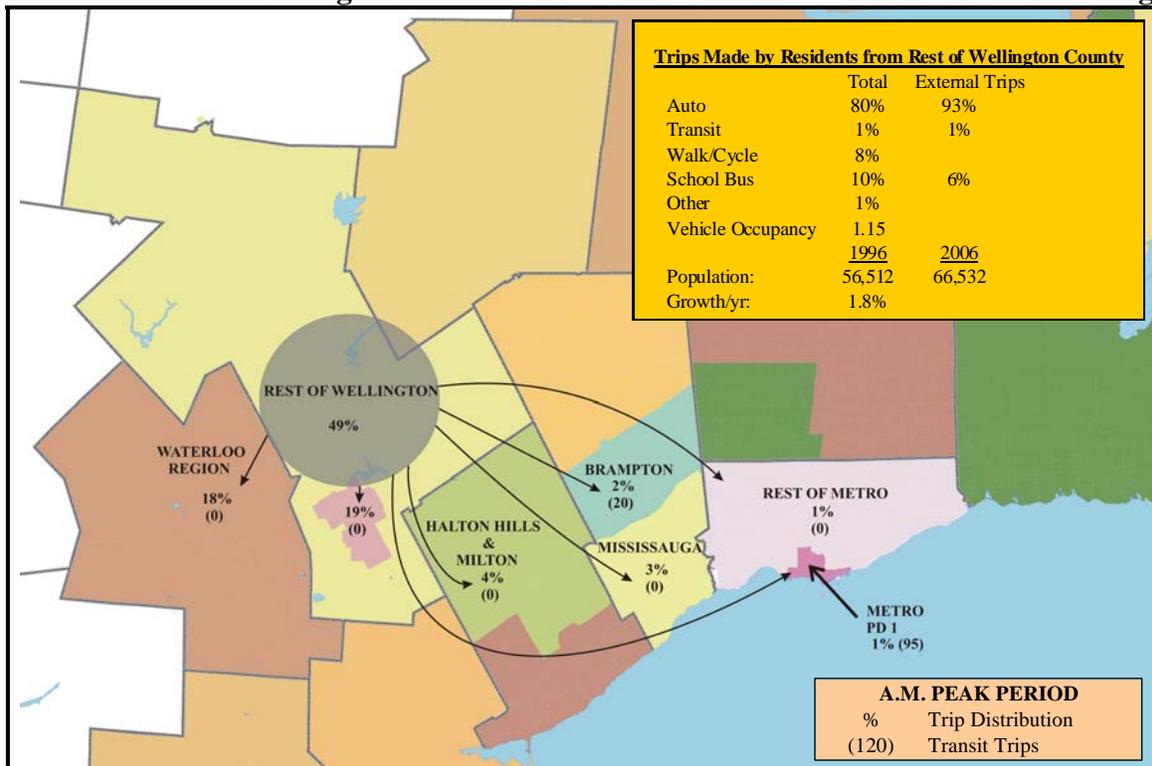
- 49% (14,945 trips) of the morning peak period trips stay within the Wellington County;
- 80% of the trips are by automobile; and
- 1% of the trips are by transit.

The data indicates that 50% of the morning peak period trips leave the County of Wellington; approximately 93% of these external trips are by car and only 1% reflects inter-regional transit use. The majority of these inter-regional transit trips are attracted to Metro PD 1 (95 trips).

The major external destinations for trips leaving the County of Wellington during the morning peak period are:

- 5,600 (19%) total person trips to the City of Guelph
- 5,500 (18%) total person trips to Waterloo Region
- 1,240 (4%) total person trips to the North of Halton Region
- 840 (3%) total person trips to the City of Mississauga
- 1% of the total person trips travel to Rest of Metro (270) and PD 1 (220)

Exhibit 4.16: 2006 Morning Peak Period Travel Characteristics for the Rest of Wellington



Region of Halton

The 2006 TTS morning peak period travel characteristics for the Halton Region as well as the population growth between 2001 and 2006 are presented in **Exhibit 4.17**. The 2006 TTS data indicates that:

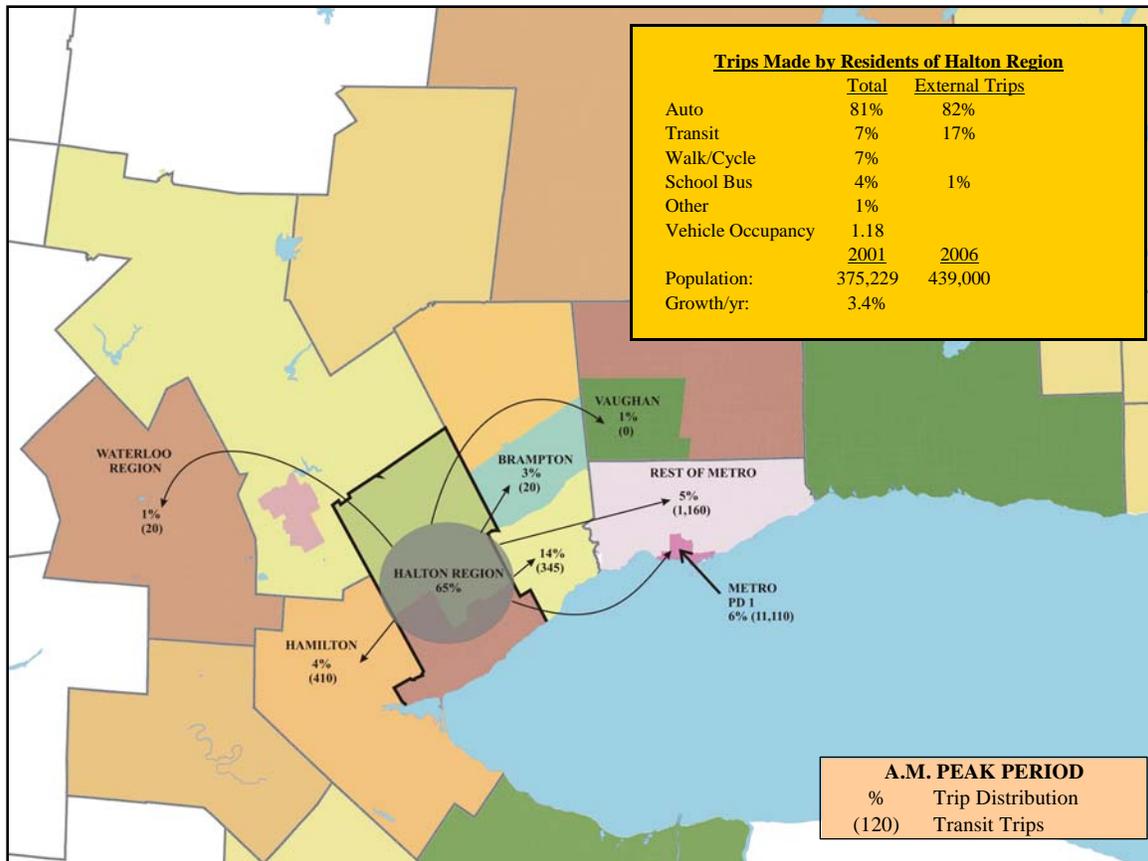
- 65% (142,290 trips) of the morning peak period trips stay within the Halton Region;
- 81% of the trips are by automobile; and
- 7% of the trips are by transit.

The data indicates that 35% of the morning peak period trips leave the Halton Region; approximately 82% of these external trips are by car, and 17% reflects inter-regional transit use. The majority of these inter-regional transit trips are attracted to Metro PD 1 (11,110 trips).

The major external destinations for trips leaving the Halton Region during the morning peak period are:

- 31,110 (14%) total person trips to the City of Mississauga
- 14,165 (6%) total person trips to Metro PD 1 and 10,770 (5%) total person trips to the Rest of Metro
- 6,340 (3%) total person trips to the City of Brampton

Exhibit 4.17: 2006 Morning Peak Period Travel Characteristics for the Region of Halton



Town of Halton Hills

The 2006 TTS morning peak period travel characteristics for the Town of Halton Hills as well as the population growth between 2001 and 2006 are presented in Exhibit 4.18. The 2006 TTS data indicates that:

- 52% (13,860 trips) of the morning peak period trips stay within the Town of Halton Hills;
- 82% of the trips are by automobile; and
- 2% of the trips are by transit.

The data indicates that 48% of the morning peak period trips leave the Town of Halton Hills; approximately 92% of these external trips are by car and 5% reflects inter-regional transit use. The majority of these inter-regional transit trips are attracted to Metro PD 1 (540 trips).

The major external destinations for trips leaving the Town of Halton Hills during the morning peak period are:

- 4,280 (16%) total person trips to the City of Mississauga
- 2,816 (10%) total person trips to the City of Brampton
- 1,117 (4%) total person trips to the City of Milton
- 1,159 (4%) total person trips to the Rest of Metro and 771 (3%) total person trips to Metro PD 1

Town of Milton

The 2006 TTS morning peak period travel characteristics for the Town of Milton as well as the population growth between 2001 and 2006 are presented in **Exhibit 4.18**. The 2006 TTS data indicates that:

- 42% (11,330 trips) of the morning peak period trips stay within the Town of Milton;
- 85% of the trips are by automobile; and
- 4% of the trips are by transit.

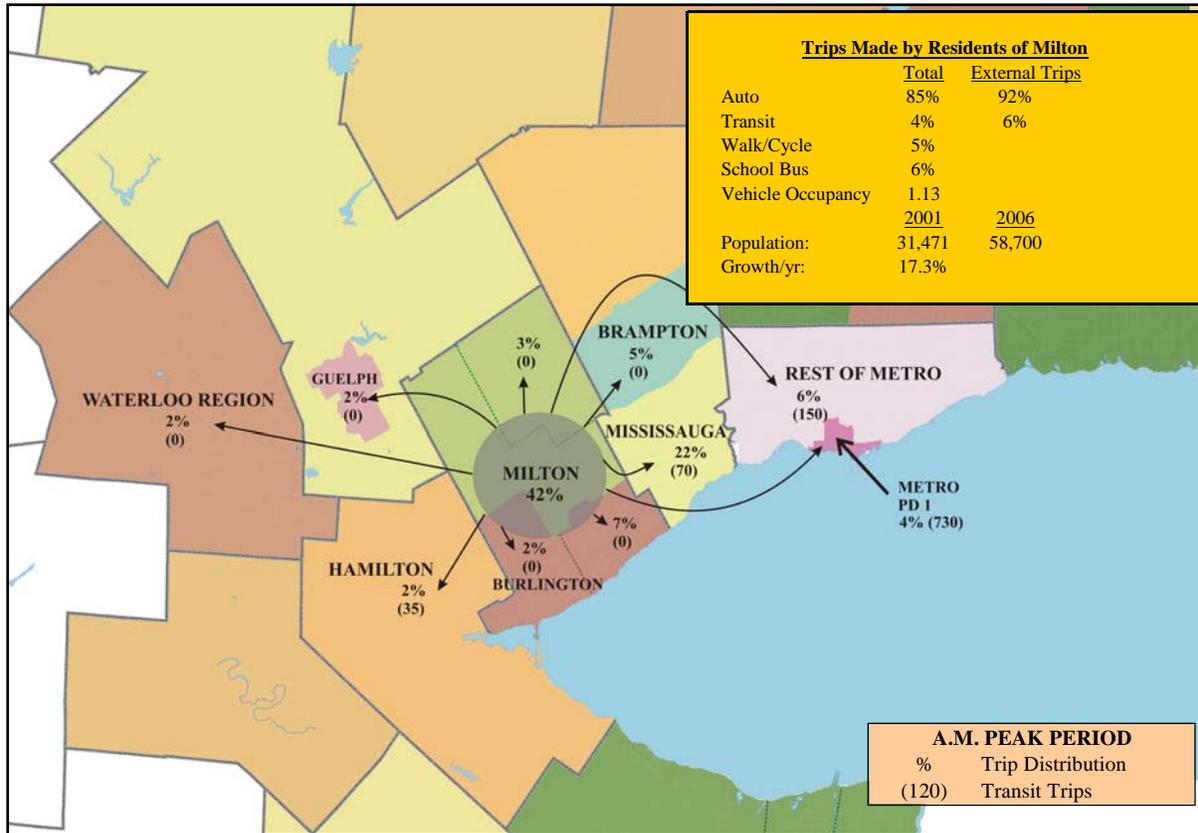
The data indicates that 58% of the morning peak period trips leave the Town of Milton; approximately 92% of these external trips are by car and 6% reflects inter-regional transit use. The majority of these inter-regional transit trips are attracted to Metro PD 1 (730 trips).

The major external destinations for trips leaving the Town of Milton during the morning peak period are:

- 5,810 (22%) total person trips to the City of Mississauga
- 1,735 (7%) total person trips to the City of Oakville
- 1,285 (5%) total person trips to the City of Brampton

- 1,580 (6%) total person trips to the Rest of Metro and 960 (4%) total person trips to Metro PD 1

Exhibit 4.18: 2006 Morning Peak Period Travel Characteristics for the Town of Milton



Town of Caledon

The 2006 TTS morning peak period travel characteristics for the Town of Caledon as well as the population growth between 1996 and 2006 are presented in **Exhibit 4.19**. The 2006 TTS data indicates that:

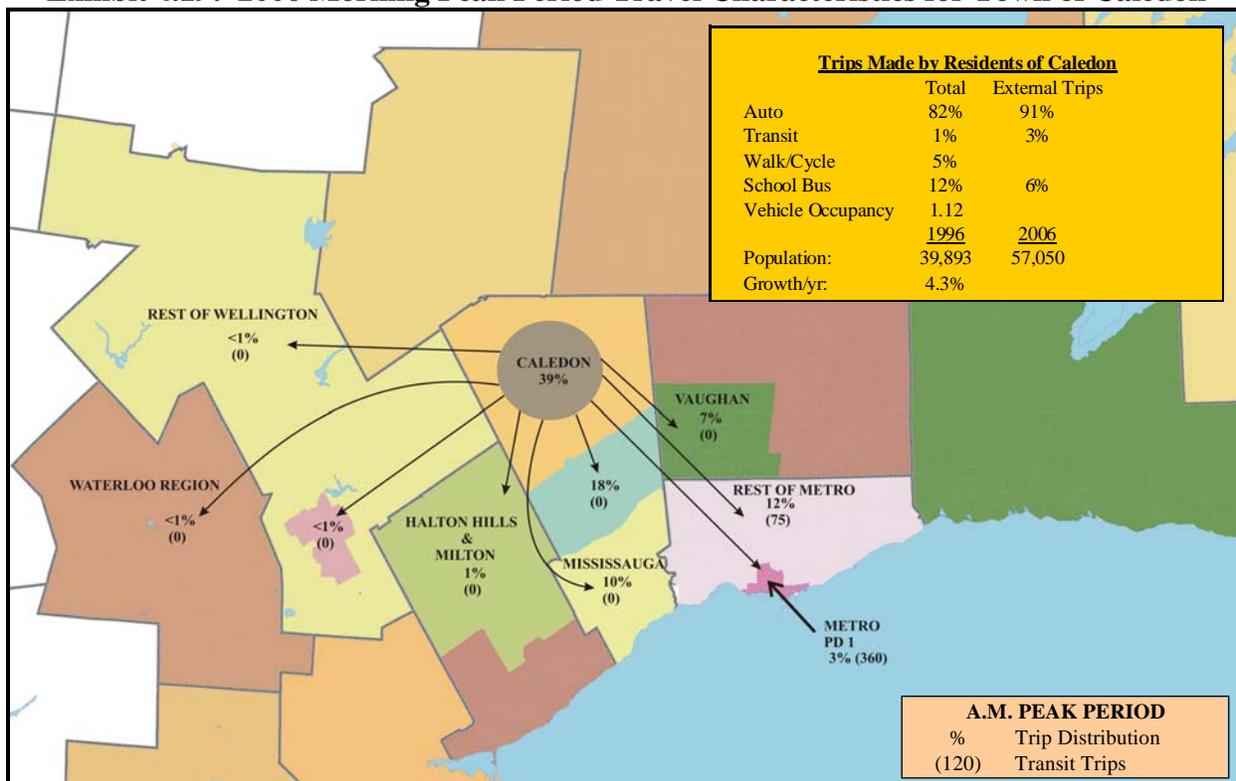
- 39% (10,430 trips) of the morning peak period trips start and end within the Town of Caledon;
- 82% of the trips are by automobile; and
- 1% of the trips are by transit

The data indicates that 60% of the morning peak period trips leave the Town of Caledon; approximately 91% of these trips external are by car and only 3% reflect inter-regional transit use. The majority of the inter-regional transit trips from the Town of Caledon are attracted to Metro PD 1 (360 trips).

The major external destinations for trips leaving the Town of Caledon during the morning peak period are:

- 4,800 (18%) total person trips to the City of Brampton
- 3,260 (12%) total person trips to the Rest of Metro and 685 (3%) total person trips to Metro PD 1
- 2,810 (10%) total person trips to the City of Mississauga
- 1,800 (7%) total person trips to the City of Vaughan

Exhibit 4.19: 2006 Morning Peak Period Travel Characteristics for Town of Caledon



City of Brampton

The 2006 TTS morning peak period travel characteristics for the City of Brampton as well as the population growth between 1996 and 2006 are presented in **Exhibit 4.20**. The 2006 TTS data indicates that:

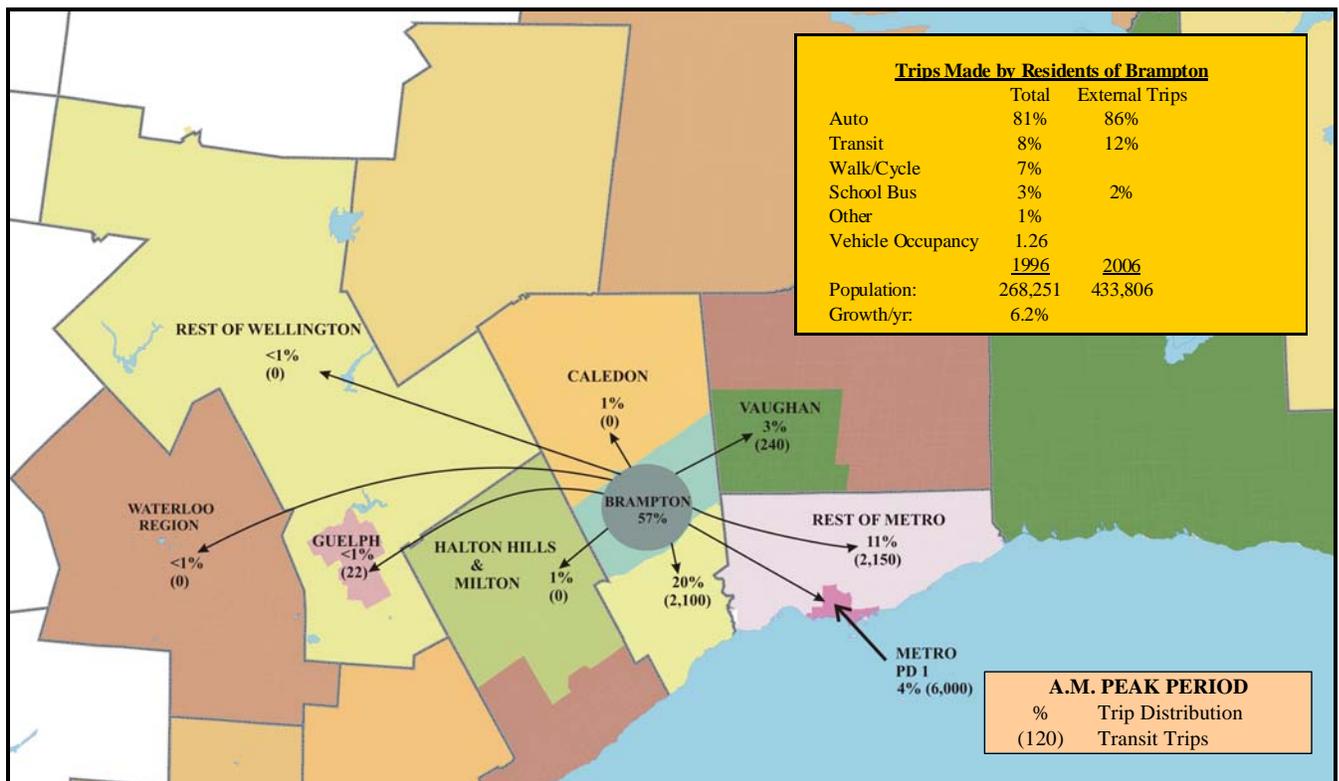
- 57% (120,540 trips) of the morning peak period trips start and end within the City of Brampton;
- 81% of the trips are by automobile; and
- 8% of the trips are by transit.

The data indicates that 40% of the morning peak period trips leave the City of Brampton; approximately 86% of these external trips are by car and 12% reflect inter-regional transit use. The majority of these inter-regional transit trips are attracted to Metro PD 1 (6,000 trips), the Rest of Toronto (2,150 trips) and the City of Mississauga (2,100 trips).

The major external destinations for trips leaving the City of Brampton during the morning peak period are:

- 41,700 (20%) total person trips to the City of Mississauga
- 22,450 (11%) total person trips to the Rest of Metro
- 9,400 (4%) total person trips to Metro PD 1
- 6,600 (3%) total person trips to the City of Vaughan

Exhibit 4.20: 2006 Morning Peak Period Travel Characteristics for City of Brampton



City of Barrie

The 2006 TTS morning peak period travel characteristics for the City of Barrie as well as the population growth between 1996 and 2006 are presented in **Exhibit 4.21**. The 2006 TTS data indicates that:

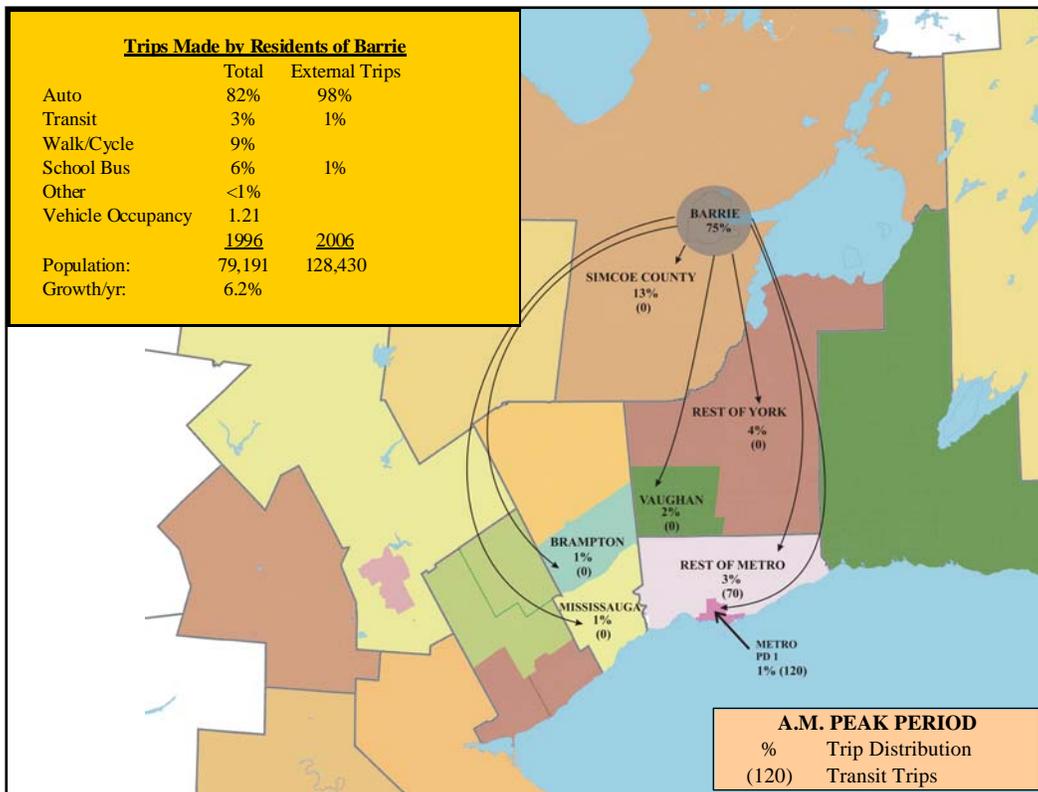
- 75% (45,415 trips) of the morning peak period trips stay within the City of Barrie;
- 82% of the trips are by automobile; and,
- 3% of the trips are by transit.

The data indicates that 25% of the morning peak period trips leave the City of Barrie; approximately 98% of these external trips are by car, and only 1% reflects inter-regional transit use. The majority of these inter-regional transit trips are attracted to Metro PD 1 (120 trips).

The major external destinations for trips leaving the City of Barrie during the morning peak period are:

- 7,970 (13%) total person trips to the Rest of Simcoe County
- 3,330 (6%) total person trips to the York Region
- 1,675 (3%) total person trips to the Rest of Metro and 540 (1%) total person trips to Metro PD 1

Exhibit 4.21: 2006 Morning Peak Period Travel Characteristics for City of Barrie



Rest of Simcoe County

The 2006 TTS A.M. morning travel characteristics for the rest of Simcoe County as well as the population growth between 1996 and 2006 are presented in **Exhibit 4.22**. The 2006 TTS data indicates that:

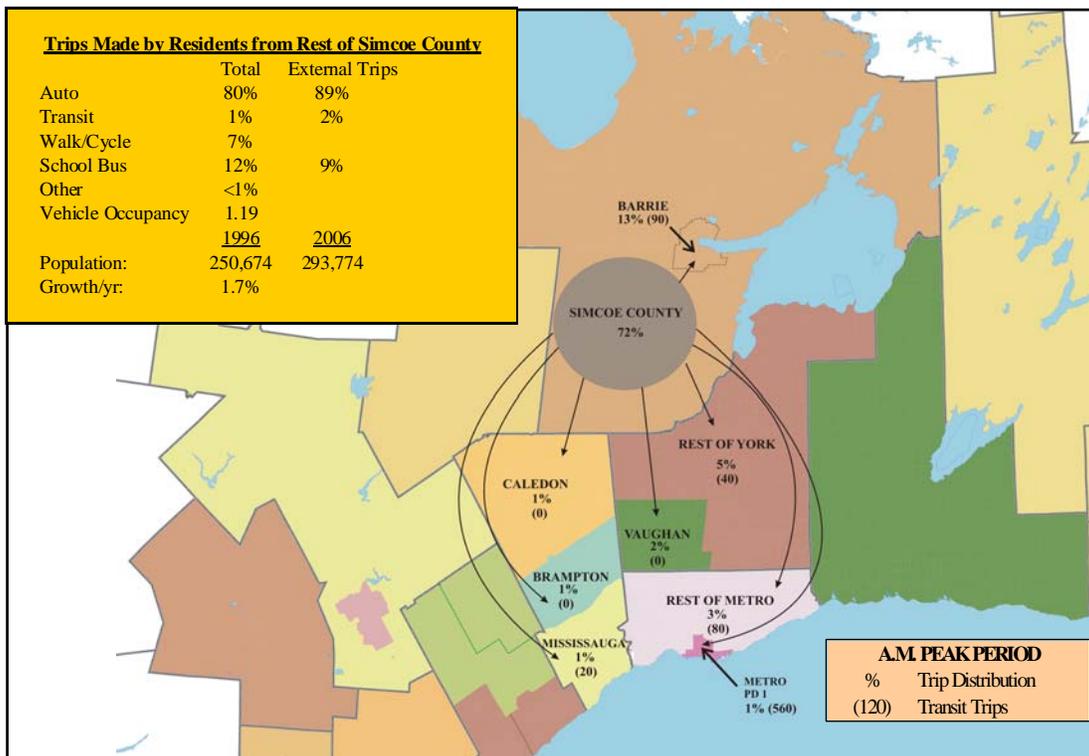
- 72% (45,415 trips) of the morning peak period trips stay within Simcoe County (excluding Barrie);
- 80% of the trips are by automobile; and,
- 1% of the trips are by transit.

The data indicates that 20% of the morning peak period trips leave Simcoe County (excluding Barrie); approximately 89% of the external trips are by car, and only 2% reflects inter-regional transit use. The majority of these inter-regional transit trips are attracted to Metro PD 1 (560 trips).

The major external destinations for trips leaving the rest of Simcoe County during the morning peak period are:

- 15,860 (13%) total person trips to the City of Barrie
- 8,580 (7%) total person trips to York Region
- 4,020 (3%) total person trips to the Rest of Metro and 1,315 (1%) total person trips to Metro PD 1

Exhibit 4.22: 2006 Morning Peak Period Travel Characteristics for the Rest of Simcoe County



Town of Orangeville

The 2006 TTS morning peak period travel characteristics for the Town of Orangeville as well as the population growth between 1996 and 2006 are presented in **Exhibit 4.23**. The 2006 TTS data indicates that:

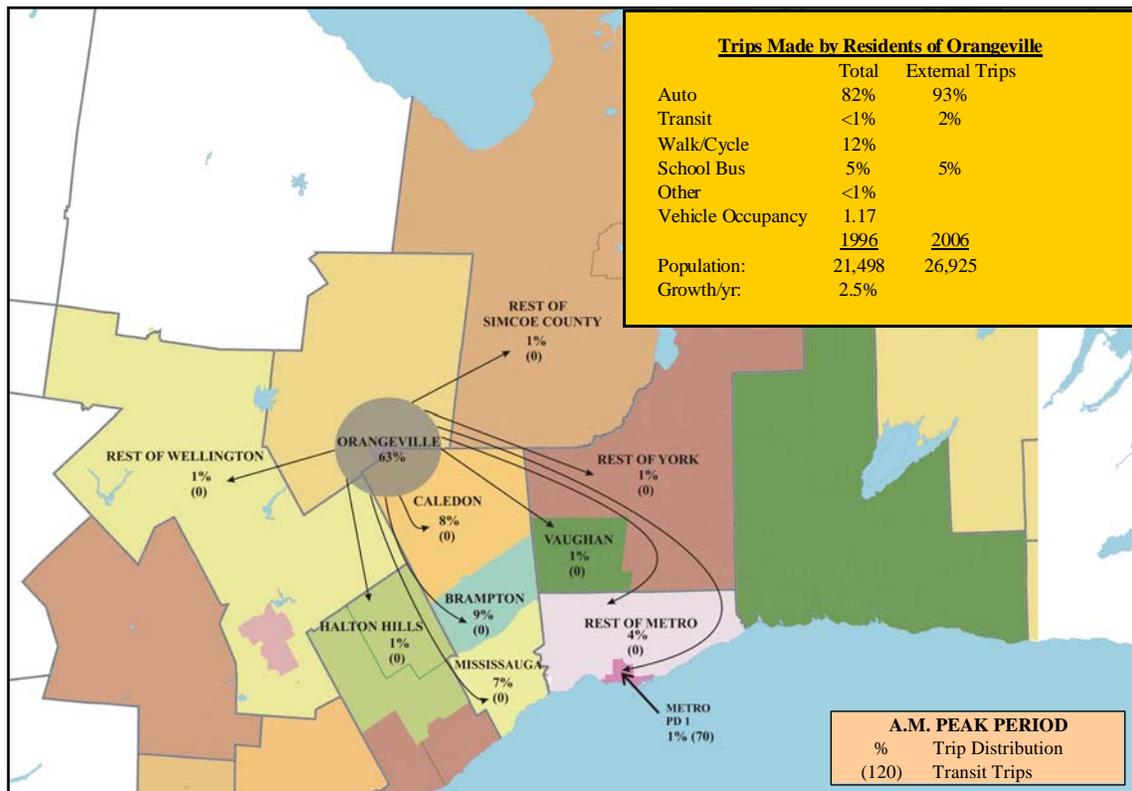
- 60% (7,570 trips) of the morning peak period trips stay within Orangeville;
- 82% of the trips are by automobile; and,
- Less than 1% of the trips are by transit.

The data indicates that 37% of the morning peak period trips leave the Town of Orangeville; approximately 93% of the external trips are by car, and only 2% reflect inter-regional transit use. These inter-regional transit trips are all attracted to Metro PD 1 (70 trips).

The major external destinations for trips leaving the Town of Orangeville during the morning peak period are:

- 1,100 (9%) total person trips to the City of Brampton
- 1,020 (8%) total person trips to the Town of Caledon
- 865 (7%) total person trips to the City of Mississauga
- 425 (4%) total person travel to the Rest of Metro and 155 (1%) total person trips to Metro PD 1.

Exhibit 4.23: 2006 Morning Peak Period Travel Characteristics for the Town of Orangeville



4.6.2 Review of O-D Travel Flows across Guelph Area Screenlines

As noted in Section 4.5.2, analysis screenlines were developed throughout the Preliminary Study Area in order to summarize existing (2005/2006) total vehicle and auto flows. The recent release of the preliminary 2006 TTS database provides an opportunity to review the TTS origin-destination interchanges traversing the north-south screenlines to the west and east of the City of Guelph and to compare survey results to observed traffic volumes. The purpose of this review is to obtain an initial understanding of the proportion of external and interregional trips crossing a selected screenline. This assessment will be further refined in the “Problems and Opportunities” stage of Phase 1.

Morning peak period origin-destination auto flows were obtained from the 2006 TTS database for the 17 study planning districts shown on **Exhibit 4.12**. The corresponding morning peak hour values were estimated from the peak period data by applying an overall peak hour to peak period factor of 0.4, which was derived from a review of available traffic counts. The O-D pairs assumed to cross the analysis screenlines west and east of Guelph Line are summarized below:

West of Guelph Screenline

The eastbound morning peak period demand between origins in Waterloo Region and destinations in the following areas is assumed to cross the screenline west of Guelph:

- Rest of Wellington County
- City of Guelph
- North Halton Region
- Peel Region
- City of Toronto
- York Region
- Simcoe and north
- Durham Region and east

East of Guelph Screenline

The eastbound morning peak period demand between origins in Waterloo Region, the rest of Wellington County and the City of Guelph and destinations in the following areas is assumed to cross the screenline east of Guelph:

- North Halton Region
- Peel Region
- City of Toronto
- York Region
- Simcoe and north
- Durham Region and east

Westbound origin-destination interchanges were assumed to be the reverse of the eastbound assumptions described above. A comparison of the 2006 TTS auto volumes crossing each of the screenlines east and west of Guelph to the observed auto volumes is summarized in **Table 4.18**.

Table 4.18: Comparison of TTS 2006 O-D Flows to Observed Auto Counts

Screenline	2006 AM Peak Hour Auto Trips		
	Total Observed	TTS Total	External
<i>West of Guelph</i>			
Eastbound	9,345	8,700	645
Westbound	4,836	4,600	236
<i>East of Guelph</i>			
Eastbound	5,774	5,100	674
Westbound	3,399	2,600	799

West of Guelph Screenline

Table 4.18 indicates that the observed eastbound (peak direction) demand is 645 auto trips greater than the corresponding demand estimated from the TTS data, implying that the difference reflects external auto traffic.

East of Guelph Screenline

The O-D flow analysis for the screenline east of Guelph indicates that there are 674 fewer eastbound (peak direction) morning peak hour auto trips than the observed screenline demand, implying once again that this difference reflects externally generated and destined traffic.

5. DESCRIPTION OF PRELIMINARY STUDY AREA SOCIO-ECONOMIC CONDITIONS AND OUTLOOKS

5.1 DEMOGRAPHIC OVERVIEW

The GTA West Preliminary Study Area includes the following Municipalities: Vaughan in York Region, Caledon and Brampton in Peel Region, Halton Hills and Milton in Halton Region, the City of Guelph and Wellington County. An overview of the municipal population and employment forecasts as well as discussion related to the urban growth centres is provided below.

5.1.1 Population and Employment Forecasts

Region of York

The Region of York Official Plan (ROP) provides policies, land use designations and criteria to direct economic, environmental and community-building decisions affecting the use of land. This document is revisited every 5 years. The most up to date ROP was consolidated in September 2007.

As there are nine area municipalities within the Region with differing growth objectives, the ROP provides latitude for each area municipality to provide detailed planning policies within the overall framework contained in the ROP.

The City of Vaughan is the main municipality in York Region that falls within the GTA West Preliminary Study Area. A summary of the population and employment projections for Vaughan and the Region of York as presented in the Regional Official Plan and the 2006 Places to Grow document are summarized in **Table 5.1**.

Table 5.1: Region of York and City of Vaughan Population and Employment Forecasts

		Population (in 000's)				Employment (in 000's)			
		2006	2011	2021	2031	2006	2011	2021	2031
Places to Grow	York	N/A	1,060	1,300	1,500	N/A	590	700	780
Regional Forecasts	York	931	1,008	1,195	1,505	455	540	655	801
	Vaughan	243	254	305	433	156	172	202	279

The population and employment of both the Region of York and the City of Vaughan are forecast to grow at an annual rate of between 3% and 4%. Vaughan's population and employment forecasts to 2031 reflect more than double the 2001 levels.

Region of Peel

The Peel Official Plan was last reviewed in 2002, but a currently available Office Consolidation (November 2005) includes June 2007 Schedules and Figures. The municipalities from the Region of Peel that fall within the Preliminary Study Area include the City of Brampton and the Town of Caledon although a small area of Mississauga is located inside the Preliminary Study Area (south of Highway 401).

Table 5.2 summarizes the population and employment projections extracted from the Regional Official Plan and the 2006 Places to Grow document for Brampton, Caledon and the Region of Peel.

Forecast Region of Peel population growth reflects annual growth rates of 2% to 3% and employment growth reflects annual growth rates of 2% to 4%. Although population forecasts for Caledon reflect a rate similar to that for the Region, the population growth in Brampton is projected to be in the order of 4% to 5%. Employment Growth projections for both Brampton and Caledon reflect annual growth rates of 4% to 7%.

Table 5.2: Region of Peel, City of Brampton and Town of Caledon Population and Employment Forecasts

		Population (in 000's)				Employment (in 000's)			
		2006	2011	2021	2031	2006	2011	2021	2031
Places to Grow	Peel	N/A	1,320	1,490	1,640	N/A	730	820	870
Regional Forecasts	Peel	1,154	1,217	1,388	1,571	637	670	762	869
	Brampton	424	469	588	695	177	205	256	310
	Caledon	57	68	84	108	24	26	33	49

Region of Halton

The most up-to-date Official Plan for the Region of Halton was reviewed in 2006. This document includes 2021 and 2031 population and employment forecasts for Halton Region, the Towns of Halton Hills and Milton. **Table 5.3** summarizes the population and employment projections for Halton Hills, Milton and the Region based on the Region's Official Plan and the 2006 Places to Grow report.

Table 5.3: Region of Halton Population and Employment Forecasts

		Population (in 000's)				Employment (in 000's)			
		2006	2011	2021	2031	2006	2011	2021	2031
Places to Grow	Halton	N/A	520	650	780	N/A	280	340	390
Regional Forecasts	Halton	439	504	629	779	231	269	340	386
	Halton Hills	55	61	70	103	21	24	31	33
	Milton	54	83	147	160	34	48	71	96

Population growth forecasts for both the Region and the Town of Halton Hills reflect average annual growth rates of approximately 3%. Population and employment forecasts for the Town of Milton reflect a five-fold increase between 2001 and 2031 as the 2001 population levels increase from approximately 30,000 to 160,000 and employment increases from 20,000 in 2001 to nearly 100,000 in 2031.

City of Guelph and County of Wellington

In 2005, the City of Guelph and County of Wellington undertook the Guelph-Wellington Transportation Study (GWTS) to address the transportation needs in the Guelph-Wellington area to 2021. Table 5.4 summarizes the population and employment projections for Guelph and Wellington County as reported in the Guelph Local Growth Management Strategy (for City of Guelph), the Guelph-Wellington Transportation Study (for Wellington County), and the 2006 Places to Grow document.

Table 5.4: City of Guelph and Wellington County Population and Employment Forecasts

		Population (in 000's)				Employment (in 000's)			
		2006	2011	2021	2031	2006	2011	2021	2031
Places to Grow	Wellington	N/A	91	269	321	N/A	41	137	158
	Guelph	N/A	132			N/A	76		
Regional Forecasts	Wellington	85	96	109	141	34	36	39	60
	Guelph	119	129	154	175	68	75	89	100

The City of Guelph is forecast to increase by over 40% to 175,000 between 2006 and 2031. The combined employment in the City of Guelph and the County of Wellington is forecast to increase by approximately 60,000 between 2006 and 2031.

In general, Regional population and employment forecasts noted in the Official Plan documents are in scope with the Regional population and employment forecasts identified in the 2006 Places to Grow policy document. It is important to note that the municipalities included within the Preliminary Study Area are anticipated to grow at annual growth rate of 3% to 4%, which is substantially higher than the 2% per annum that has been the norm for the GTA.

Exhibit 5.1 graphically illustrates the 2001 GTA land use density (population and employment per gross hectare). **Exhibit 5.2** illustrates a 2031 population and employment density scenario utilizing the population and employment traffic zone allocation from available sources including the Region of York, Region of Peel and Office of Greater Toronto Area databanks. The 2031 population and employment densities indicate that there is a significant increase in the land use density for the municipalities within and adjacent to Preliminary Study Area (Brampton, Halton Hills, Milton, Mississauga, Oakville, Burlington and Hamilton). As intensification occurs, travel patterns and opportunities for intra and inter-regional travel will change and intensify, increasing congestion on the existing transportation (road and transit) system.

Exhibit 5.1: 2001 Population and Employment Densities

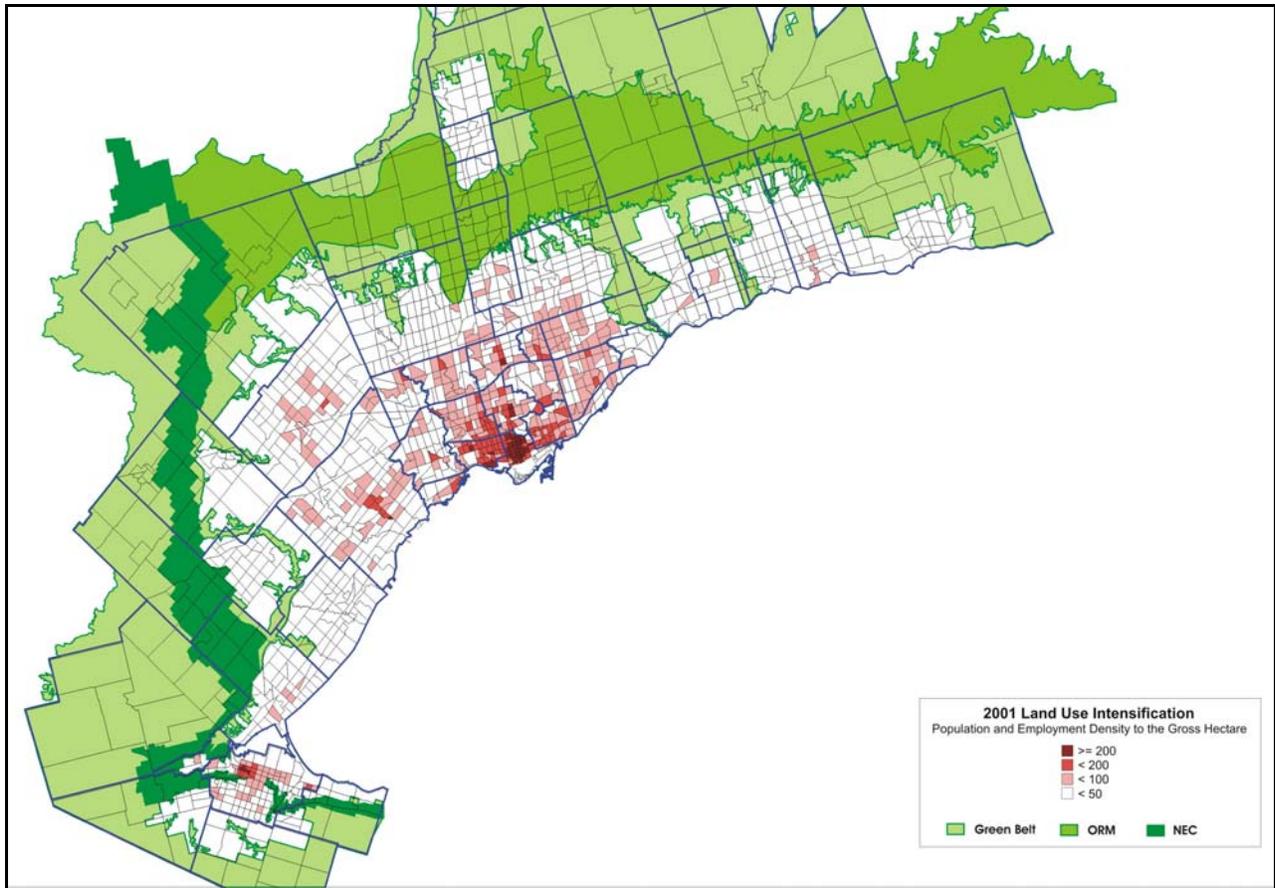
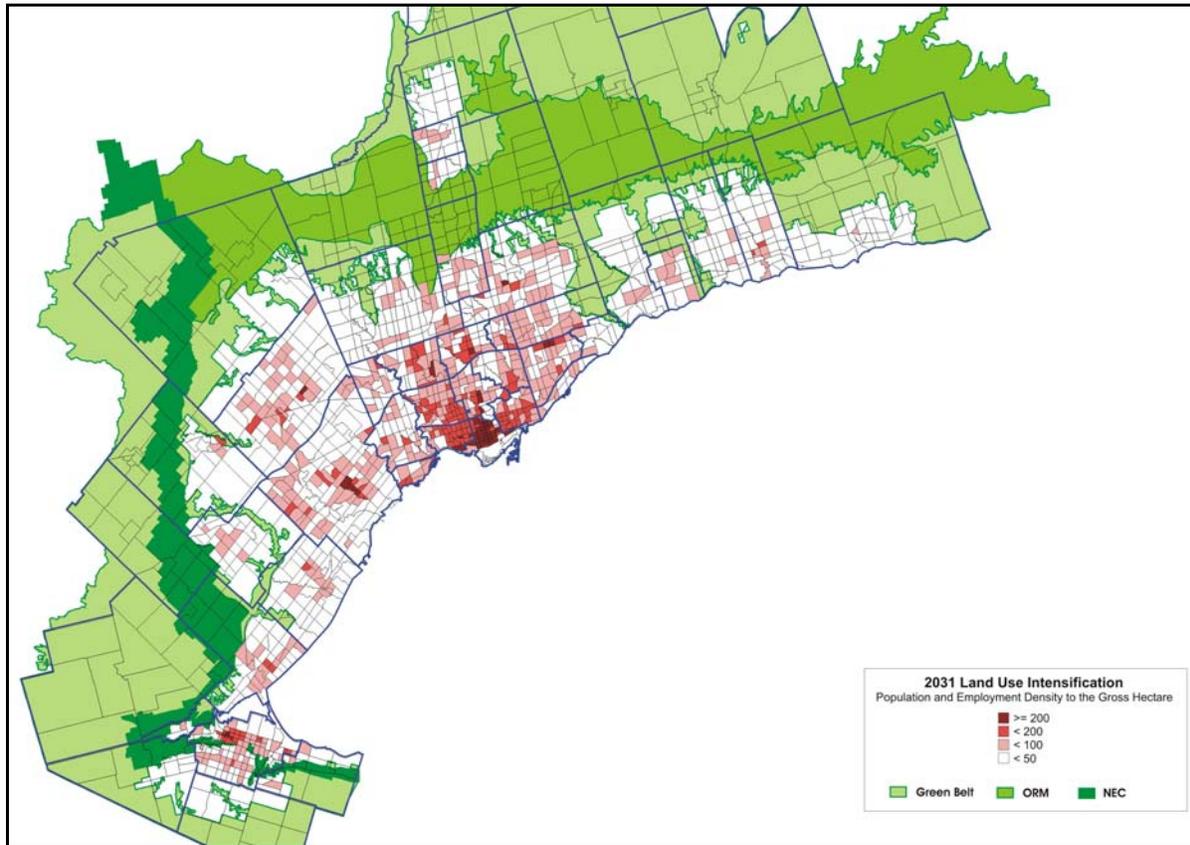


Exhibit 5.2: 2031 Population and Employment Densities



5.1.2 Major Growth Centres

The Growth Plan for the Greater Golden Horseshoe was established to identify areas that required protection and areas where land use intensification is encouraged. Within the Growth Plan, urban growth centres were identified as key areas designated for accommodating future growth and intensification.

Urban growth centres are typically core metropolitan areas and significant economic hubs that serve as destinations with a regional focus. They currently have or are planned to have a composition of high density residential, mixed-use, office, retail and regeneration land uses. They perform a regional services function and therefore have good inter-regional transportation connections (transit and/or automobile). These characteristics ideally position these centres to accommodate significant growth and intensification.

Within and adjacent to the Preliminary Study Area, the following urban growth centres were identified in the Growth Plan: Downtown Brampton; Downtown Milton; Downtown Guelph; the Vaughan Corporate Centre; Downtown Kitchener/Uptown Waterloo; and Downtown Hamilton.

The main urban growth centres within the Preliminary Study Area include Downtown Brampton, Downtown Milton, Downtown Guelph and Vaughan Corporate Centre.

- Downtown Brampton urban growth centre (UGC) is a significant regional transportation and transit node. It covers about 245 hectares and has an approximate

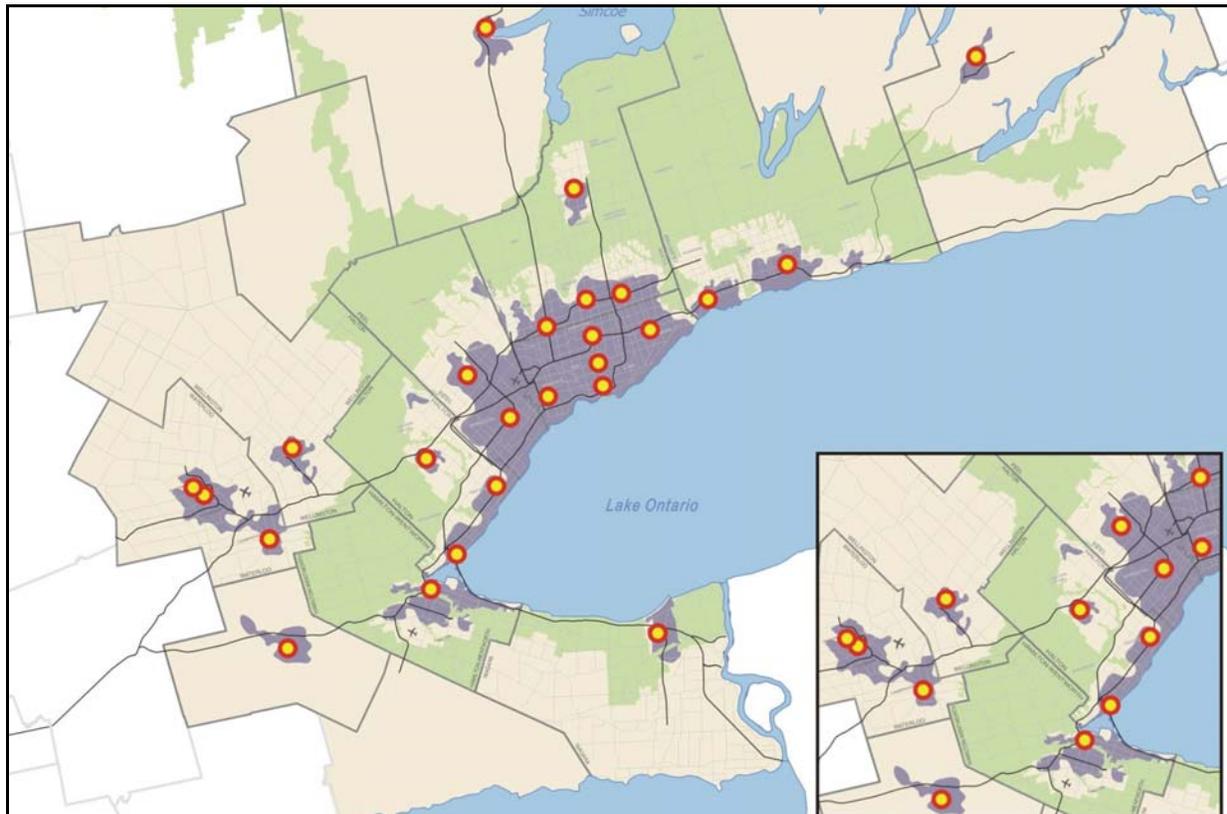
density of 65 people and jobs per hectare in 2001. The density target by 2031 is 200 people and jobs per hectare.

- Downtown Milton UGC covers about 150 hectares with an approximate density of 35 people and jobs per hectare in 2001. The density target by 2031 is 200 people and jobs per hectare.
- Downtown Guelph UGC covers about 115 hectares with an approximate density of 95 people and jobs per hectare in 2001. The density target by 2031 is 150 people and jobs per hectare.
- The Vaughan Corporate Centre UGC covers about 160 hectares with an approximate density of 15 people and jobs per hectare in 2001. The density target by 2031 is 200 people and jobs per hectare.

Each urban growth centre within the Preliminary Study Area is targeted to help increase urban densities in order to revitalize the downtown and encourage the attraction to public transit terminals.

Exhibit 5.3 identifies all of the urban growth centres defined in the Places to Grow Act and the urban growth centres within and adjacent to the Preliminary Study Area are isolated in the map inset.

Exhibit 5.3: Urban Growth Centres in the Greater Golden Horseshoe



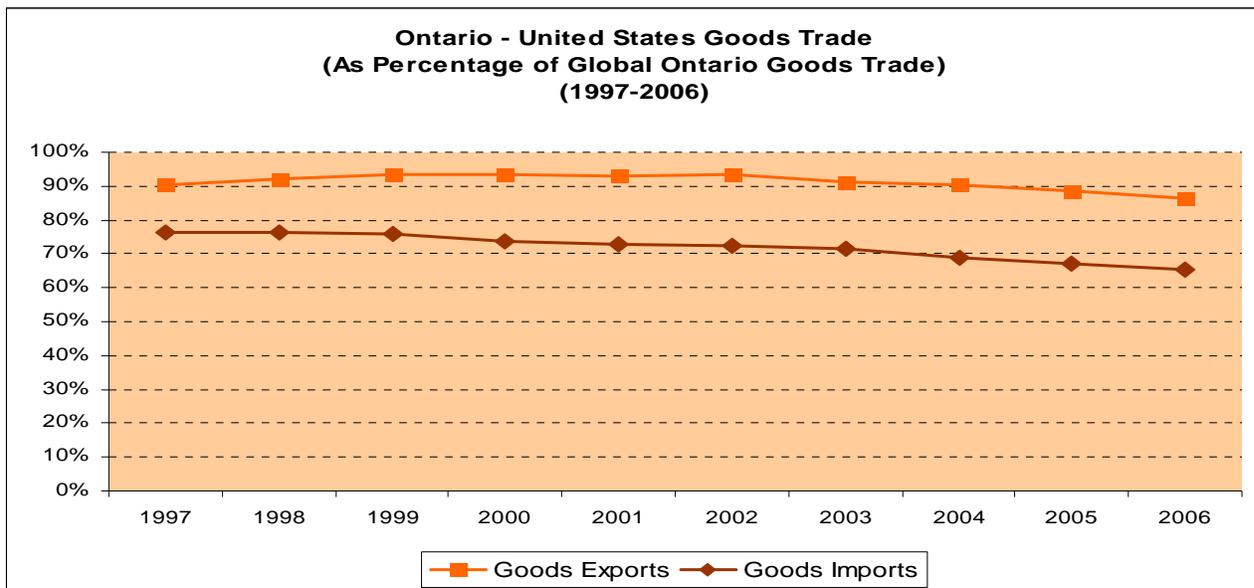
5.2 ECONOMIC OVERVIEW

The Ministry of Finance forecasts for Ontario¹⁹ indicate a positive long-term economic outlook. Municipalities within the Preliminary Study Area have recently experienced significant economic growth and job creation in parallel with the population and employment growth that has occurred over the last decade. The long range land use forecasts maintain and in some cases exceed the current rate of growth which is also an indicator of the positive long-term economic outlook. Consistent with such growth, significant economic-related demands that can be expected on the transportation network are also expected to occur in this area.

5.2.1 Economic Overview of Ontario

The export and import industry is a major economic driver for both Canada and the Province of Ontario as over 37% of the Canadian GDP is from exports to the United States, Canada's major export market. Export and import activity between 1997 and 2006 is summarized in **Exhibit 5.4**. The summary indicates that approximately 90% of Ontario's exports are destined to the United States. Imports from the United States into Ontario have decreased from approximately 75% of Ontario's total goods import in 1997 to approximately 65% in 2006. These trends need to be further explored as part of the next stage addressing "Problems and Opportunities".

Exhibit 5.4: Ontario to USA Trade Trends



An overview of the top 10 commodities/goods exported from Ontario to the United States in 2007 is presented in **Exhibit 5.5**. The breakdown indicates that the automotive manufacturing and parts commodities and the goods transport vehicles commodity group represent 80% of the top 10 commodities/goods exports.

It is interesting to note that these same commodities represent over 70% of the top 10 commodities/goods imports from the United States to Ontario as shown on **Exhibit 5.6**.

¹⁹ Ministry of Finance, *Toward 2025, Assessing Ontario's Long Term Outlook*, 2006

Exhibit 5.5: Main Commodities Exported from Ontario to USA

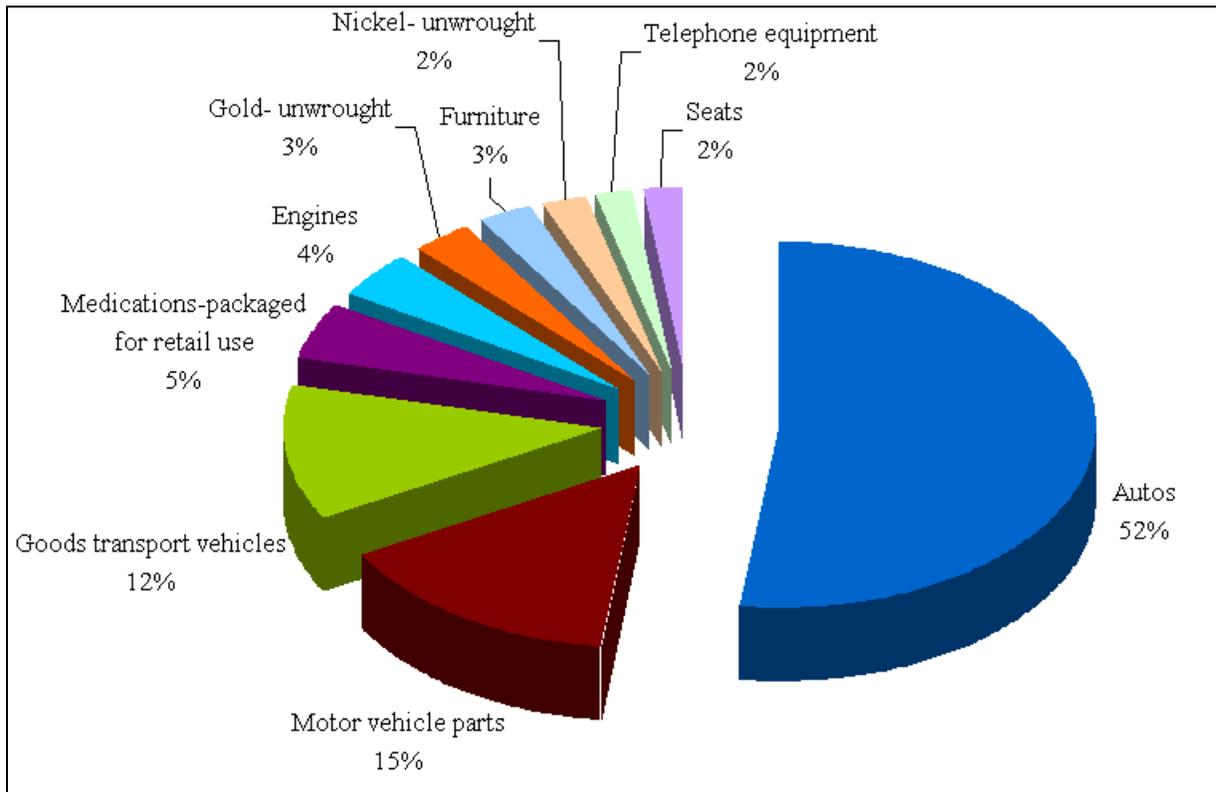
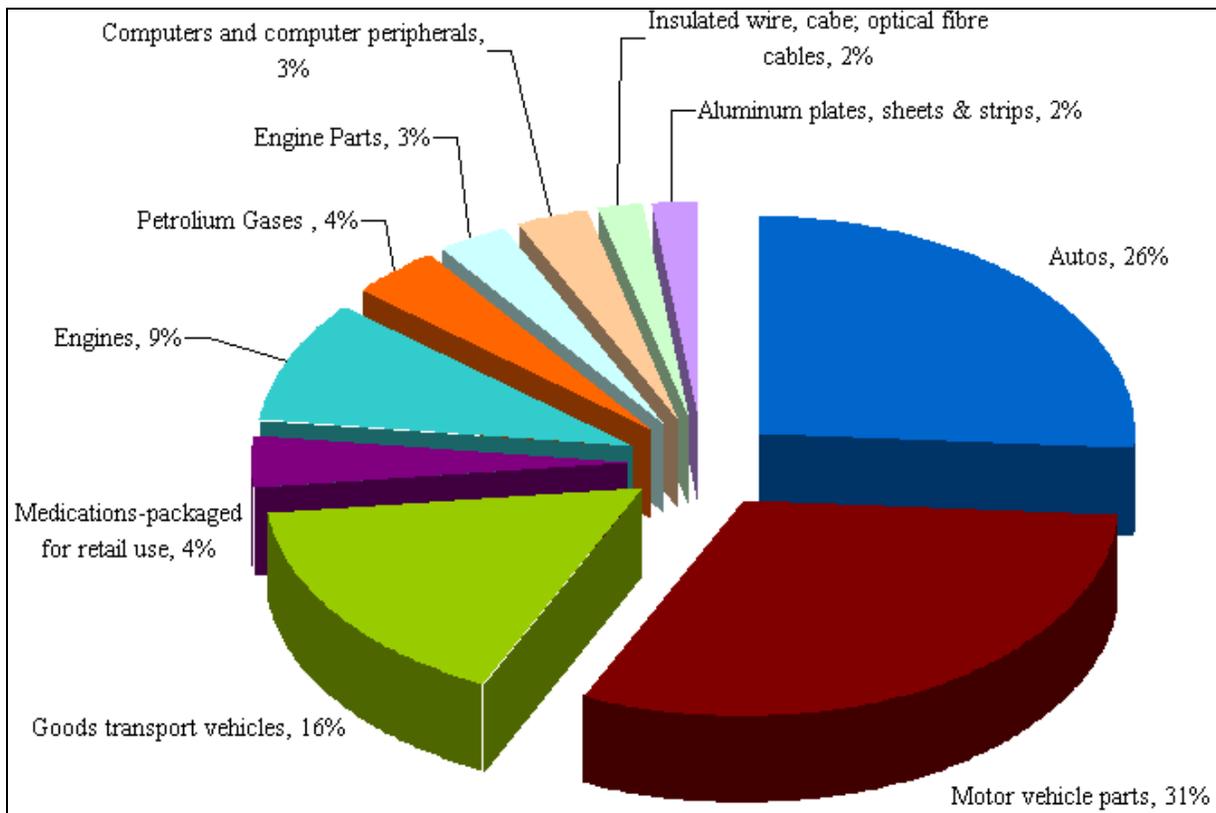
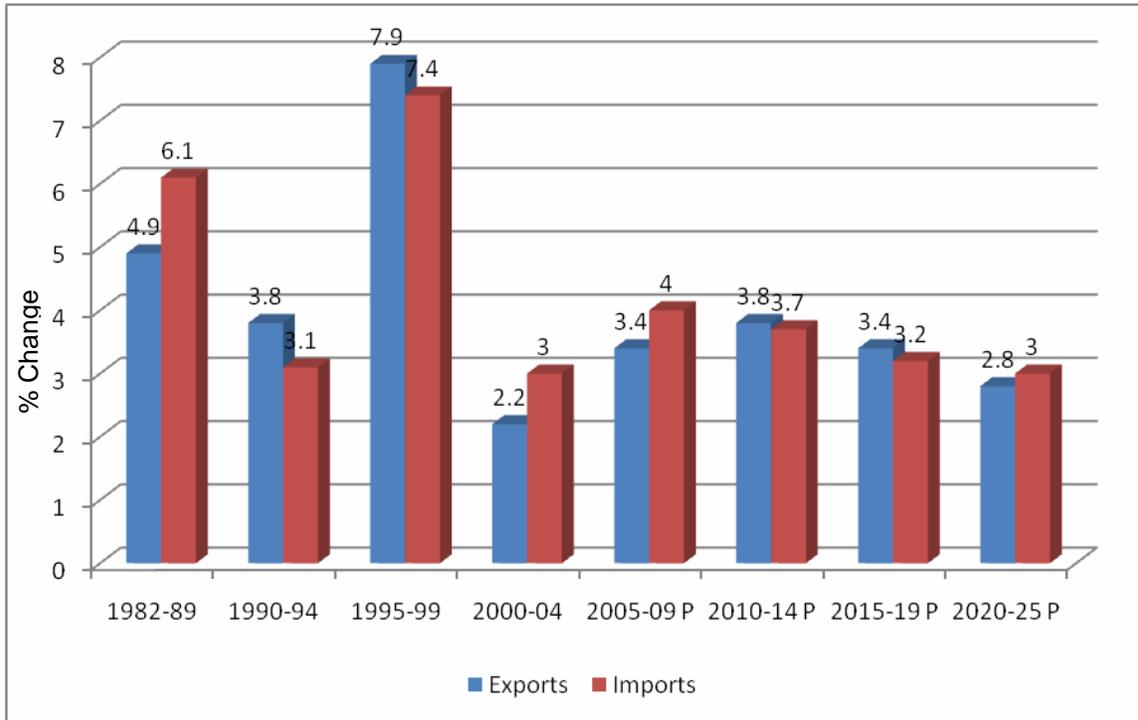


Exhibit 5.6: Main Commodities Imported from USA to Ontario



Recent Ministry of Finance reports suggest that trade flows will drive Ontario's prosperity over the next 25 years.²⁰ Import and export trade forecasts are presented in **Exhibit 5.7**. These forecasts, which were derived from Statistics Canada, Canada Mortgage and Housing Corporation and Ontario Ministry of Finance data bases, suggest continued growth in both import and export trade to year 2025 notwithstanding lower growth rates than those experienced in the 1980's and 1990's.

Exhibit 5.7: Ontario – Trade Import and Export Forecasts



The estimated total value of goods exported and imported in 2006, is approximately US\$375 Billion. The corresponding export and import values are estimated at US\$171 Billion and US\$203 Billion, respectively. The trucking industry moves approximately 66% of the total imports and exports (by value) followed by rail, air and marine at 15%, 12% and 7%, respectively.

5.2.2 Ontario Automotive Industry

As noted in the previous section, the auto manufacturing and auto parts sector in Ontario represent by far the largest trade sector with the United States and, therefore, represent a significant employment base. The location and number of automotive manufacturing plants and automobile parts plants are illustrated in **Exhibit 5.8**. The majority of automotive industry plants are located on or adjacent to Provincial Highways and Class I rail lines. There are over 400 automotive facilities in Ontario and they are primarily located in Southwestern Ontario. This industry resulted in over \$32 billion in shipments of goods in 2003.

²⁰ Ministry of Finance, *Toward 2025, Assessing Ontario's Long Term Outlook, 2006* (Specialist views – Tom MacCormack)

Exhibit 5.8: Automobile Manufacturing Plant Locations in Central & Southwestern Ontario



The automotive sector provides employment for upwards of 90,000 employees in Central and Southwestern Ontario. A summary of major automotive assembly plant locations and estimated number of employees at each of the plants is presented in **Exhibit 5.9**. The major automobile plants within or adjacent to the Preliminary Study Area are:

- Brampton Chrysler Plant
- Honda Alliston Plant
- Toyota Cambridge Plant

A new Toyota plant is currently being constructed in Woodstock, Ontario with a planned opening during 2008. The new automotive manufacturing assembly plant will employ a workforce of approximately 1,300 to manufacture upwards of 100,000 units annually. The location was chosen in part to the proximity of its existing operations in Cambridge as well as the proximity to suppliers on both sides of the border.

It is of note that during the spring and summer of 2008, the automotive industry has announced major automotive plant closings that are planned to occur over the next few years which have in turn resulted in specific automotive part plants to close.

Exhibit 5.9: Automobile Manufacturing Plant Locations and Employees



5.2.3 Employment Sector Overview

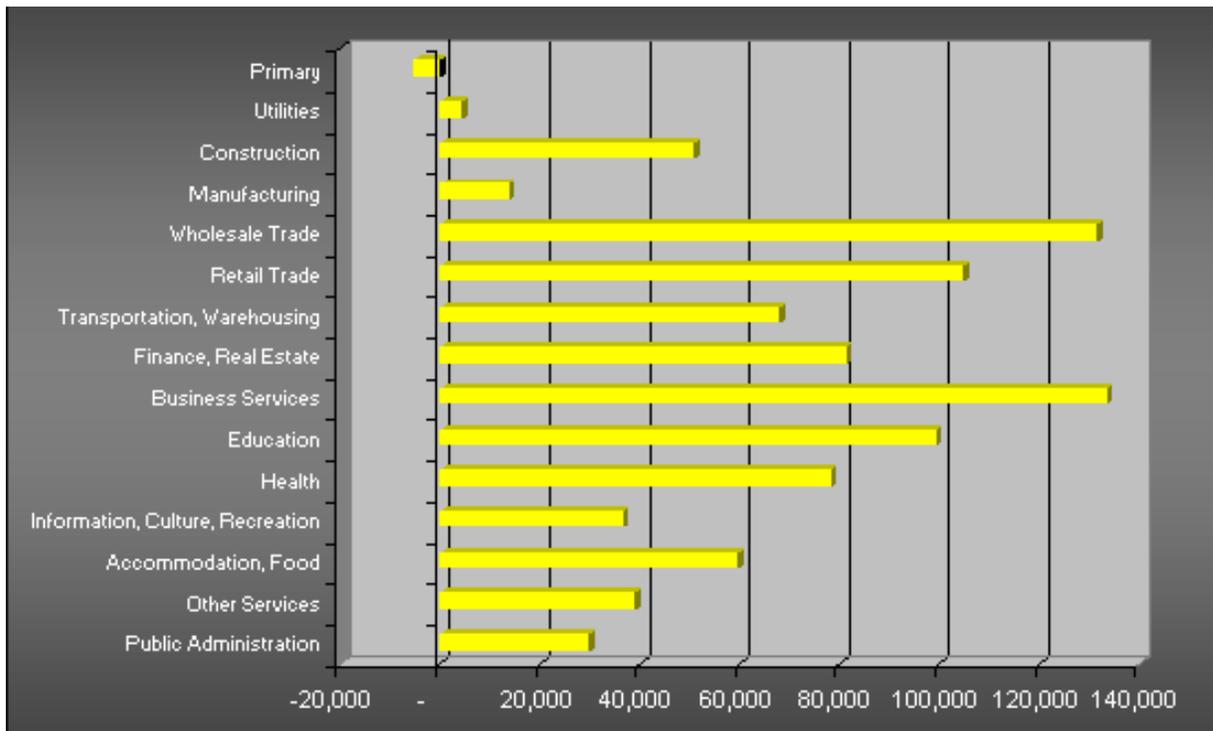
Economic profiles and drivers for the following municipalities within and adjacent to the Preliminary Study Area were reviewed to provide an overview of key employment sectors for both the existing and future conditions:

- York Region – Vaughan and Township of King
- Peel Region – Brampton, Caledon and Mississauga
- Halton Region – Halton Hills and Milton
- County of Wellington – Township of Puslinch, Town of Erin, and Township of Guelph-Eramosa
- City of Guelph

Employment is anticipated to more than double for the municipalities within and adjacent to the Preliminary Study Area by 2031. **Exhibit 5.10** indicates the forecast jobs between 2001 and 2031 for each employment sector within the Preliminary Study Area based on information from the Centre for Spatial Economics.

The employment sectors with the largest growth anticipated include the Business Services and Wholesale Trade sectors followed by the Retail Trade and Education sectors.

Exhibit 5.10: Study Area Employment Sector New Jobs – 2001 to 2031



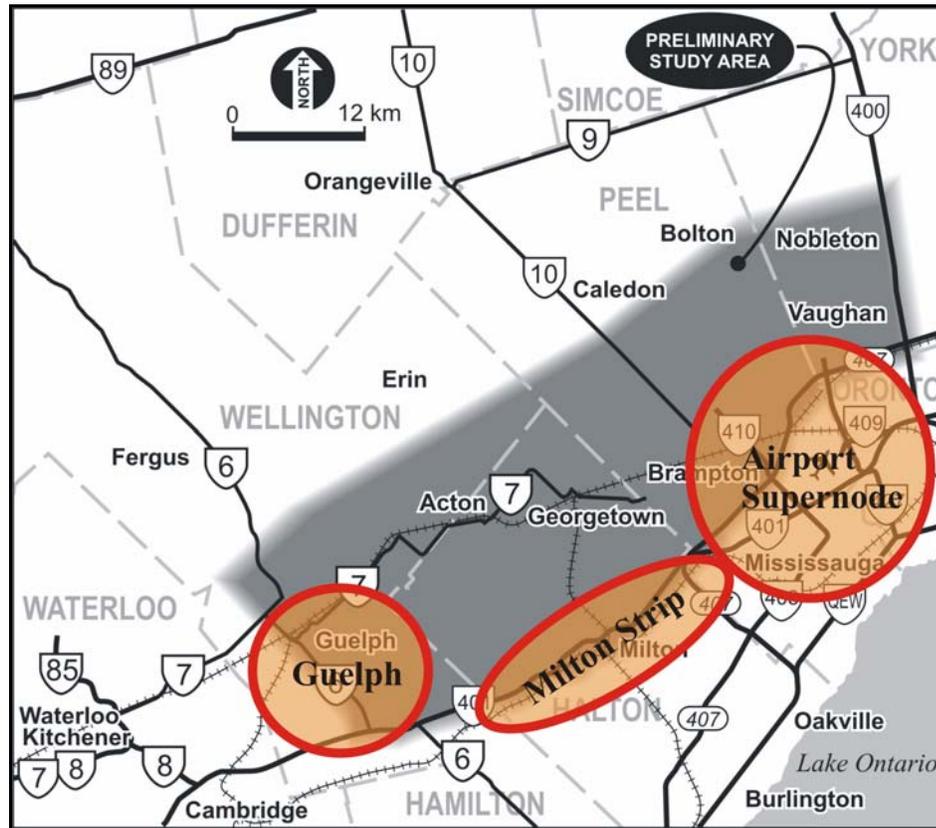
The growth of employment in the Business Services, Education, Health and Retail Trade sectors suggest increased mobility in both automobile and transit use as a larger proportion of these types of trips are generally shorter distance and travel within the community.

The growth in the Wholesale Trade sector suggests that increased freight movements will need to be accommodated by the transportation sector using road, rail, marine and air.

Specific to the Preliminary Study Area the following three major economic focus areas (see **Exhibit 5.11**) require further investigation during the “Problems and Opportunities” phase to assess the changes in employment sectors and the impacts on transportation:

- Airport “Supernode”
 - Wholesale Trade Sector
 - Transportation / Warehouse Sector
 - Business Services
- Milton Strip
 - Emerging Distribution Cluster
- Guelph
 - Auto Parts Sector
 - Food Processing Sector

Exhibit 5.11: Economic Focus Points within the Study Area



5.2.4 Tourism Overview

Ontario's Tourism Industry

Due to the strengthening of the Canadian dollar against the U.S. dollar, travel patterns to and from Ontario have undergone a shift over the last few years. The stronger Canadian dollar together with solid economic growth in the province has resulted in increased outbound travel to the U.S. by Ontarians, while inbound U.S. visits to the province has been weak. U.S. visitation to Ontario is expected to continually decline at a compounded annual rate of 2.7% until year 2010, as Ontario and in particular the Greater Golden Horseshoe, continues to face a number of challenges within the U.S. market, including declining value of US dollar, Western Hemisphere Travel Initiative, increased gas prices and possible economic slowdown of the U.S. economy.

Intra-provincial travel (Ontarians travelling within Ontario) represents over 75% of all tourist travel in the province. The five-year outlook for intra-provincial travel is positive due in part to the impacts of the Western Hemisphere Travel initiative.

Inter-provincial travel following a major decline in 2005 has started to rebound and is projected to continue to grow over the next five years.

Overseas travel which only equates to 2% of the total travel to the province, but represents over 14% of the tourism expenses within Ontario, is forecast to continue to increase provided there are positive economic conditions overseas.

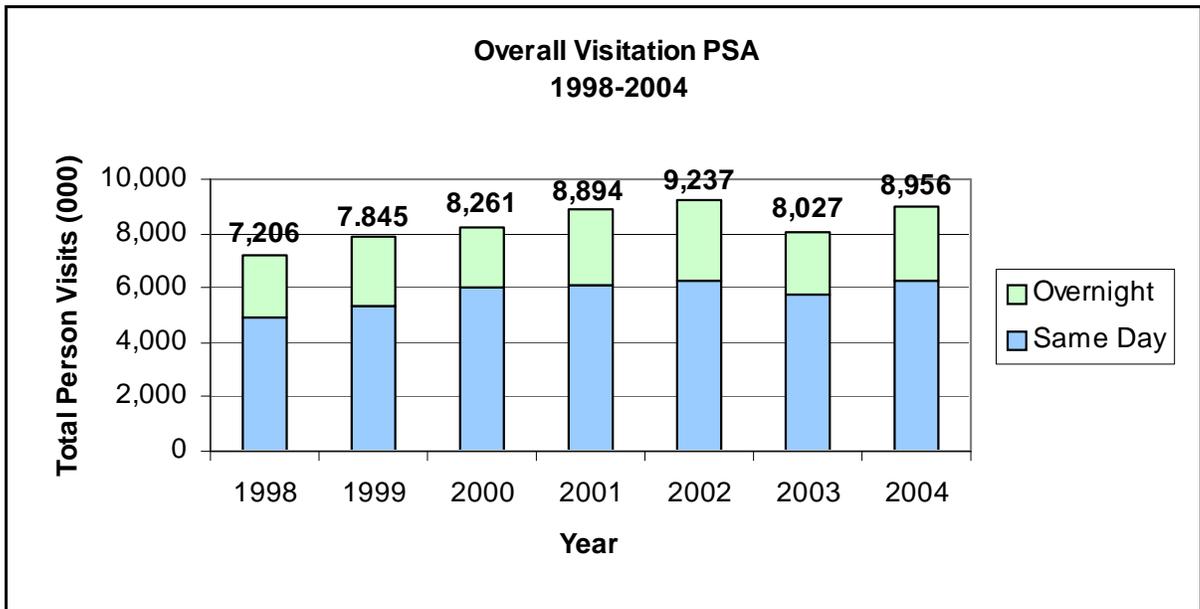
Over the next 5 years total inbound visitation to Ontario is expected to grow at an average rate of 1.7% per annum whereas the number of visitors from Ontario to the U.S. is expected to grow at a compounded growth rate of 3.4% annually.

Preliminary Study Area Tourism

In 2004, there were a total of 9.0 million domestic, US and overseas person visits to the Preliminary Study Area with upwards of \$700 million in total visitor spending. Domestic visitation accounted for approximately 91% (8.2 million) and US visitors accounted for approximately 7% (575,000) of the overall visitation. Although overseas visitation accounted for only 131,000 visits or 2% of the visits, the overseas visitation to the PSA represented approximately 15% of total spending. A summary of tourist visitation to the PSA is presented on **Exhibit 5.12**.

Over 94% of the visitors used the automobile as their primary mode of transportation followed by bus (approximately 2%) and plane (approximately 1.5%). Train and boat transportation accounts for less than 1% of the overall visitor transportation.

Exhibit 5.12: Historical Tourist Visitation to the Preliminary Study Area



6. SUMMARY OF EXISTING CONDITIONS AND FUTURE TRENDS

6.1 EXISTING CONDITIONS

A number of key factors that influence the 'Area Transportation System' needs have been identified through this preliminary assessment. The majority of the identified issues will be addressed in subsequent reports through Phase 1 of the Environmental Assessment Study.

The summary of key factors driving 'Area Transportation System' needs have been summarized into the following themes:

- Policy Framework;
- Existing Travel Characteristics;
- Existing Transportation System;
- Historical Traffic Flows;
- Existing Traffic Flows;
- Traffic Operations and Level of Service;
- Demographic Growth; and
- Future Trends.

6.1.1 Policy Framework

The policies developed by various levels of government are consistent with respect to the direction on land-use planning and transportation to promote strong communities, a clean and healthy environment, and a strong economy. The policies recognize the complex inter-relationships among economic, environmental and social factors in planning.

From a provincial perspective, a new transportation corridor has to be multi-modal and function within the provincial transportation network, connect to major economic centres and trade corridors as well as provide community linkages.

Better use of land and infrastructure can be made by directing growth to the existing urban areas. The provincial policy, including the Greenbelt Plan and Places to Grow, envisages increasing intensification of the existing built-up areas, with a focus on urban growth centres, intensification corridors, major transit station areas, brownfield sites and greyfields. Concentrating intensification in these areas provides a focus for transit and infrastructure investment to support growth.

6.1.2 Existing Travel Characteristics

The preliminary 2006 TTS database indicates that the municipalities west of the Greater Toronto Area (GTA) within and adjacent to the Preliminary Study Area currently exhibit a high proportion of self sufficiency and high proportion of automobile usage.

- In Waterloo Region, 90% of the morning peak period trips stay within Waterloo with upwards of 82% of the trips using the automobile.

- In the City of Guelph, 80% of the morning peak period trips stay within Guelph with upwards of 78% of the trips using the automobile.

The municipalities within the GTA have a higher proportion of trips leaving the municipality in the morning peak period to travel to neighbouring municipalities. The automobile is the primary mode used for the majority of these trips:

- In the City of Brampton, 57% of the morning peak period trips stay within Brampton with upwards of 81% of the trips using the automobile;
- In the Town of Caledon, 39% of the morning peak period trips stay within Caledon with upwards of 82% of the trips using the automobile

Municipal transit service is currently available within the urban areas of Waterloo Region, the City of Guelph, the Town of Milton, the City of Brampton and the City of Vaughan. Transit usage in these municipalities range from 1% to 8% of the trips made in the morning peak period.

The majority of the inter-regional transit trips are currently destined to Downtown Toronto (PD 1). The preliminary 2006 TTS data indicates that approximately 500 transit person trips are made to Downtown Toronto in the morning peak period collectively from Waterloo Region, Wellington County and the City of Guelph.

6.1.3 Existing Transportation System

Provincial, Regional and Municipal roads in the Greater Golden Horseshoe serve a growing demand for transportation services on an intercity network of links used for the transport of goods and people. The automobile continues to be the preferred mode of travel and auto ownership has been increasing at a faster rate than population growth over previous decades with the popularity of suburban life being a major contributor.

Inter-regional transit services are generally limited to connecting urban centres and major gateways that are either integrated with local transit service or integrated with park-and-ride facilities. A prominent example of inter-regional transit meeting these criteria is GO Transit which currently serves 92% of the corridor markets to downtown Toronto.

Currently, public (GO Transit) and privately controlled (Greyhound, Coach Canada, etc.) inter-regional bus services are available throughout Southern and Central Ontario. The currently available bus services fall on the boundaries of the GTA West Corridor Preliminary Study Area, along Highway 6 on the west boundary, along Highway 401 and Highway 407 on the south boundary and along Highway 400 on the east boundary.

GO Transit operates an extensive network of bus services as far west as Guelph, Milton and Hamilton. The GO Transit bus service to Guelph operates along the Highway 7 corridor through Rockwood and Acton to the Georgetown GO Station and continuing through Brampton and on to the York Mills Subway Station in Toronto.

In September 2007, GO Transit introduced two new bus routes in the Guelph area to complement the GO Bus service operating along the Highway 7 corridor through Rockwood and Acton to Georgetown GO Station continuing through Brampton to the York Mills Subway Station in Toronto. The new GO Bus routes area:

- Route between University of Guelph, the Guelph Park-and-Ride Lot (Highway 410 and Aberfoyle), Square One Mall in Mississauga and the Cooksville GO Station; and,
- Route between the University of Guelph, the Guelph Park-and-Ride Lot (Highway 410 and Aberfoyle) and the Meadowville GO Station.

In late June 2008, GO initiated a new weekday bus service between Milton and Bronte GO Stations that serves the Milton GO Station, the carpool lot at Bronte Road and Highway 407, and the Bronte GO Station to connect with the Lakeshore West GO Train service.

In addition to the inter-regional bus service, rail service is available throughout Southern and Central Ontario. VIA Rail does not serve a specific origin/destination within the Preliminary Study Area, but does pass through the area in an east-west service between Toronto and Kitchener.

GO Transit provides commuter rail service between Georgetown and Toronto Union Station with stations in Brampton and the northwest area of Toronto. This service currently includes four Toronto-bound trains during the weekday morning peak period and four Georgetown-bound trains during the weekday afternoon peak period.

GO Transit also provides commuter rail service between Milton and Toronto Union Station with stations in Mississauga and the west area of Toronto. This service currently includes six Toronto-bound trains during the weekday morning peak period and six Milton-bound trains during the weekday afternoon peak period.

Trucks are a principal means of goods transport in Central Ontario with highways linking to all major manufacturing centres and international border crossings. The demand for truck transport remains a competitive mode of goods distribution for the majority of shippers. Trucking provides intermodal goods transport connectivity between rail and marine transport facilities using provincial freeways and arterial road networks.

Rail services within and adjacent to the Preliminary Study Area (PSA) transport both people and goods on the Class 1 mainlines and goods only on the Class 2 short haul rail lines. Intermodal rail terminals in Brampton and Vaughan provide rail to truck transfer locations for both domestic and international freight.

Canada's busiest airport served 31 million passengers in 2006 and is currently expanding under its 10-year, \$4.4 billion Airport Development Program. This plan has set out four major projects: terminal development, airside development, infield development and utilities and airport support. In the year 2020, the number of passengers passing through Toronto Pearson International Airport (LBPIA) is projected to reach 50 million. Other airports in the vicinity of the Preliminary Study Area include Waterloo International, Hamilton International, Buttonville Municipal and Toronto City Centre. Each of these airports serves to move people and goods.

Continued expansion of the Hamilton Marine Port will also have an influence on both goods and people movement service to the Preliminary Study Area.

6.1.4 Historical Traffic Flows

Traffic volumes have grown significantly along all of the roadways within Southwestern Ontario and especially within the Greater Golden Horseshoe over the last 45 to 50 years, particularly along the 400 Series Highways.

Traffic volumes on Highway 401 west of Highway 10, have increased more than 13 fold since 1960 as a result of the substantial growth in the GTA and the continued capacity expansion of the Highway 401 corridor throughout the GTA. Highway 401 traffic growth west of the GGH and to the east of London (west of Putnam Road) has increased 8 fold since 1960 and the growth around Woodstock (west of Drumbo Road) has been similar.

The current average daily travel demand on Highway 400 north of Major Mackenzie Drive within the city of Vaughan (113,000 vehicles) has grown 10-fold since 1960. This section of Highway 400 experienced an average annual growth of 4% between 2001 and 2007 due to continued development within York Region and significant growth in and around Barrie.

Regional Road 7 is a four-lane urban arterial road south of Maple Avenue in the community of Georgetown. The current average daily traffic volume (22,000 vehicles) has increased more than five-fold since 1960. Increases in demand since 1980 reflect an average annual growth rate of just over two percent relative to the current demand level.

6.1.5 Existing Traffic Flows

The review of daily traffic flows within and adjacent to the Preliminary Study Area indicates that the Provincial 400 Series Highways carry significant daily traffic volumes ranging from 100,000 to 300,000 vehicles per day. Highway 401 carries upwards of 100,000 vehicles daily in the vicinity of Highway 6/Hanlon Expressway and daily demand increases to over 300,000 vehicles east of Highway 410 and over 400,000 immediately west of Highway 400 at the east limit of the Preliminary Study Area. Highway 410 carries a daily traffic volume of upwards of 160,000 vehicles between Highway 401 and Queen Street while Highway 400 carries a daily demand approaching 130,000 vehicles.

Arterial and highway facilities such as Highway 6 and Regional Road 27 carry upwards of 45,000 vehicles daily and sections of Regional Road 7 in west Brampton and Regional Road 50 carry upwards of 60,000 vehicles daily. Some sections of major east-west arterial roadways, including Bovaird Drive, Queen Street and Steeles Avenue in Brampton also carry upwards of 60,000 vehicles daily. Major Mackenzie Drive in the City of Vaughan carries daily traffic volumes of upwards of 20,000 vehicles and Highway 10 carries upwards of 25,000 vehicles daily north of Mayfield Road.

The rural arterial roadways within and adjacent to the Preliminary Study Area carry daily traffic volumes ranging from less than 5,000 to upwards of 20,000 vehicles. The daily traffic flow along Highway 6 south of Guelph is approximately 25,000 vehicles while the corresponding demand along Highway 6 north of Guelph is over 10,000 vehicles. The daily travel demand along Highway 7/Regional Road 7 between Guelph and urban Brampton increases from approximately 10,000 to over 40,000 vehicles.

Truck traffic reflects a significant proportion of the daily traffic flows. This commercial vehicle demand can account for upwards of 20% of the total traffic on some highway sections and, as expected, the Provincial 400 Series highways carry the majority of the commercial vehicle traffic.

6.1.6 Traffic Operations and LOS

The review of peak hour travel demands crossing key analysis screenlines within the Preliminary Study Area indicate that there are good existing operating conditions crossing all analysis screenlines with the exception of the screenlines immediately west of Winston Churchill Boulevard and immediately east of Highway 400. These screenlines are currently operating with a level-of-service D during the afternoon peak hour, reflecting unstable flow conditions.

Although screenline operating characteristics provide a good indication of how the transportation network is generally operating within the GTA West Preliminary Study Area, a more in-depth review of the operating characteristics of individual facilities crossing screenlines indicates that the Highway 401 corridor currently has significant congestion in the peak travel periods throughout the Preliminary Study Area. In addition to the Highway 401 corridor the following road corridors are currently experiencing congestion at peak travel times:

- Highway 410 is operating in a congested state where it crosses the Brampton/Mississauga boundary with morning and afternoon peak hours operating at LOS E and LOS F respectively.
- Regional Road 24 is currently operating at LOS E west of Guelph, reflecting congested travel conditions during the morning and afternoon peak hours.
- Regional Road 50 currently operates at LOS F (significant congestion) south of Mayfield Road during both the morning and afternoon peak-hours.

In addition to these inter-regional arterial roads, several major urban arterial road corridors within the Brampton/Mississauga/Vaughan area are operating with congested conditions during the morning and afternoon peak hours. Specific east-west urban arterial corridors that are operating at LOS E or F include Steeles Avenue, Queen Street, Bovaird Drive, Mayfield Road, Regional Road 107 and King Street in Bolton.

6.1.7 Demographic Growth

Significant growth in population and employment is forecast within the Preliminary Study Area with the Waterloo Region, Halton Region, Peel Region, and York Region anticipated to account for above-average amounts of population growth and generate above-average employment growth. The population is forecast to increase by over 750,000 between 2006 and 2031. During this same planning horizon, the employment is forecast to increase by approximately 390,000 jobs.

Currently the largest cluster of warehouse / distribution uses in Canada is within the Preliminary Study Area. This employment segment is forecast to continue to grow and generate additional goods movement access along with the trend of service jobs migrating from Toronto to the Preliminary Study Area. It is also interesting to note that between year 2000 and year 2006, nearly 40 million square feet of industrial space was

absorbed in the Regions of Peel and Halton, whereas the industrial space absorption in York Region has been flat with negative absorption in the Region of Durham and City of Toronto. These trends indicate that the employment growth will continue to push west, due in part to transportation accessibility and increased labour force.

The employment sectors with the largest growth anticipated include the Business Services and Wholesale Trade sectors followed by the Retail Trade, Education and Health sectors.

The growth of employment in the Business Services, Education, Health and Retail Trade sectors suggest increased mobility in both automobile and transit use as a larger proportion of these types of trips are generally shorter distance and travel within the Community. The growth in the Wholesale Trade sector suggests that increased freight movements will need to be accommodated by the transportation sector using road, rail, marine and air.

To address forecast population and employment, specific Urban Growth Centres (UGC), where land use intensification is encouraged, have been identified in the Growth Plan for the Greater Golden Horseshoe. The UGC's are typically core metropolitan areas and significant economic hubs that serve as destinations with a regional focus. They currently have or are planned to have a composition of high density residential, mixed-use, office, retail and regeneration land uses. They perform a regional services function and therefore have good inter-regional transportation connections (transit and/or automobile). These characteristics ideally position these centres to accommodate significant growth and intensification.

The four main urban growth centres within the Preliminary Study Area include Vaughan Corporate Centre, Downtown Brampton, Downtown Milton and Downtown Guelph.

- Downtown Brampton urban growth centre (UGC) is a significant regional transportation and transit node. It covers about 245 hectares and has an approximate density of 65 people and jobs per hectare in 2001. The density target by 2031 is 200 people and jobs per hectare.
- Downtown Milton UGC covers about 150 hectares with an approximate density of 35 people and jobs per hectare in 2001. The density target by 2031 is 200 people and jobs per hectare.
- Downtown Guelph UGC covers about 115 hectares with an approximate density of 95 people and jobs per hectare in 2001. The density target by 2031 is 150 people and jobs per hectare.
- The Vaughan Corporate Centre UGC covers about 160 hectares with an approximate density of 15 people and jobs per hectare in 2001. The density target by 2031 is 200 people and jobs per hectare.

Each urban growth centre within the Region is targeted to help increase urban densities in order to revitalize the downtown and encourage the development of public transit terminals.

6.1.8 Future Trends

Economy

- The Conference Board of Canada forecasts to year 2030 indicate that the Ontario economic growth will be slow but steady.
- The Ontario Ministry of Finance forecasts the Ontario Real GDP to be approximately 3% between 2006 and 2015 reducing to 2.4% for the decade between 2015 and 2025.
- Automotive industry is a major component of Ontario economy and will remain a key component notwithstanding current manufacturing plant restructuring including plant closures.
- Approximately 90% of Ontario exports are destined to the U.S. with upwards of 65% of Ontario imports originating from the U.S. This trend is expected to continue.

Population Growth

- Over the next 25 years the population within the Preliminary Study Area is forecast to increase by over 750,000. A large component of the population growth will be allocated to Urban Growth Centres where intensification of land use is proposed to revitalize the land use and encourage development of public transit terminals.

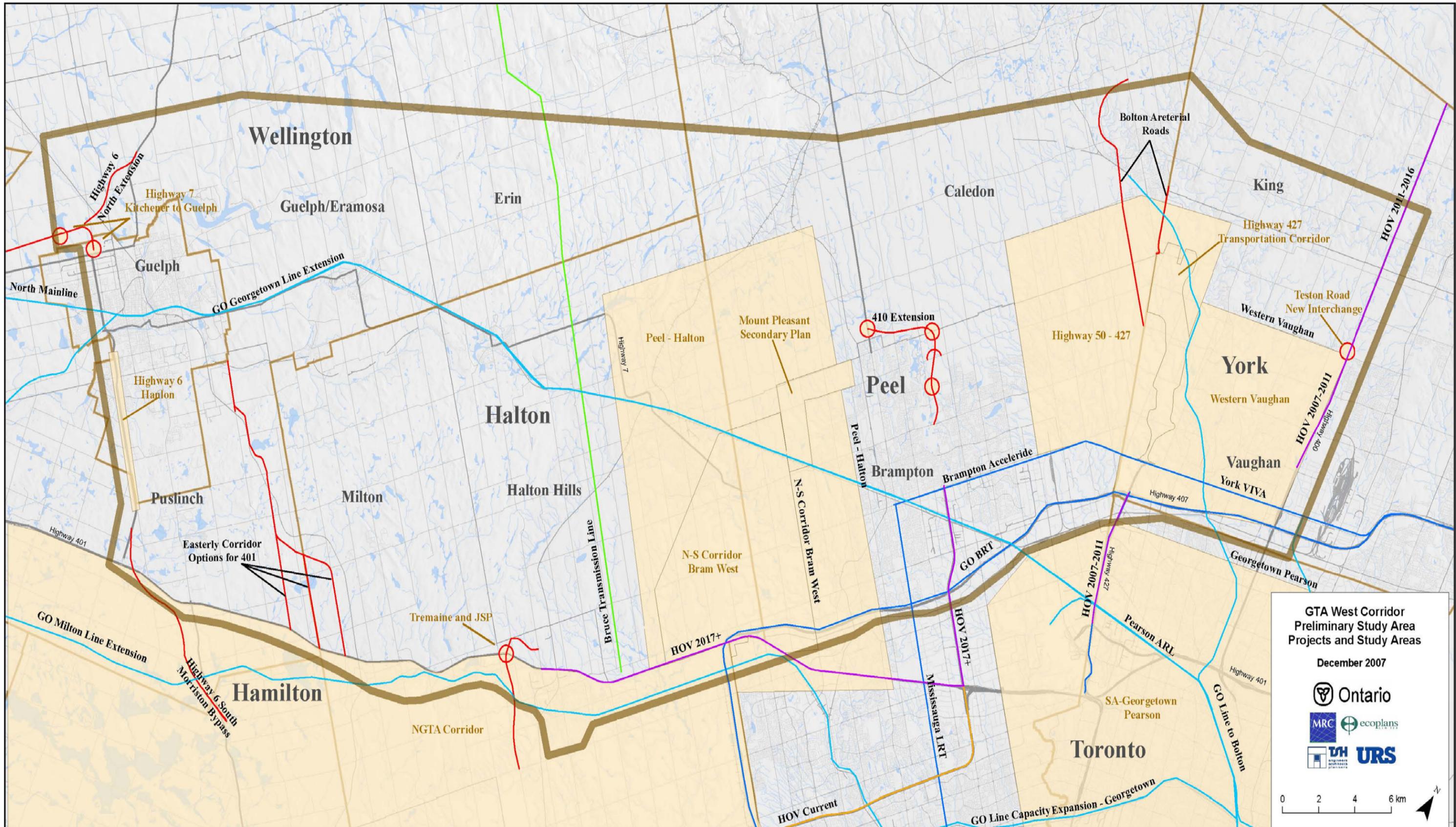
Employment Growth

- Employment opportunities within the Preliminary Study Area are forecast to increase by approximately 390,000 jobs. The employment sectors experiencing the most growth are the Business Services, Education, Health, Wholesale Trade and Retail Trade sectors.
- The changes in employment sectors will impact transportation services. Currently, industries and services are leaving the Airport Supernode area and relocating to the west along Highway 401 to the Milton “Strip” or to the City of Guelph. The trucking logistic firms and terminals are also shifting west and relocating to the City of Guelph or Waterloo Region.

Traffic / Transit Growth

- Historically, the traffic volumes on major inter-regional facilities within the Preliminary Study Area have grown at around 1.5% to 2% per annum over the last 40 years. These historic traffic growth trends are in line with the population growth in Ontario that has occurred over a similar time frame. General traffic growth trends of approximately 2% per annum can be expected for the PSA over the next 25 years.
- Since the signing of NAFTA, commercial vehicle traffic has increased by upwards of 3% to 4% per annum on the Provincial highway system and international border crossings. This growth appears to be levelling, indicating slightly lower growth rates over the next 25 years.
- Over the past two years, transit ridership in Ontario has been increasing annually at a rate of 3.4%. Further increased growth in transit ridership is anticipated given the MoveOntario 2020 initiatives.

APPENDIX A - Exhibit



Wellington

Highway 7
Kitchener to Guelph

GO Georgetown Line Extension

Highway 6
North Extension

North Mainline

Guelph

Guelph/Eramosa

Erin

Caledon

King

Highway 427
Transportation Corridor

Teston Road
New Interchange

Western Vaughan

Peel - Halton

Mount Pleasant
Secondary Plan

410 Extension

Highway 50 - 427

York

Western Vaughan

Vaughan

York VIVA

Halton

Halton Hills

Peel

Brampton

Brampton Acceleride

Highway 407

Puslinch

Milton

Easterly Corridor
Options for 401

N-S Corridor
Bram West

N-S Corridor
Bram West

GO BRT

HOV 2007-2011
Highway 427

Georgetown Pearson

GO Milton Line Extension

Highway 6 South
Morriston Bypass

Hamilton

NGTA Corridor

Tremaine and JSP

HOV 2017+

Mississauga LRT

HOV 2007-2011

SA-Georgetown
Pearson

Toronto

GO Line to Bolton

HOV Current

GO Line Capacity Expansion - Georgetown

HOV 2011-2016

HOV 2007-2011
Opr. Available

**APPENDIX B – Part 1: Summary of
Comments**

APPENDIX B – PART 1: Summary of Comments
GTA West Corridor Planning and Environmental Assessment Study
Revised Draft Overview of Transportation and Economic Conditions

Correspondence	Chapter / Page in Draft	Comments Received/ Concerns Identified	Response & Actions Taken / Planned	Change to Transportation and Economic Conditions Report
Ministry of Energy and Infrastructure, Ontario Growth Secretariat Letter of September 18, 2008		<ul style="list-style-type: none"> In general, the <i>Overview of Transportation and Economic Conditions</i> is consistent with the Growth Plan for the Greater Golden Horseshoe. However, some specific comments are provided below: <ul style="list-style-type: none"> - For your information, the former Ministry of Public Infrastructure Renewal is now the Ministry of Energy and Infrastructure. Please make the changes accordingly throughout the Growth Plan. 	Comment Noted.	Change references.
	Page 10	- On page 10, the 1 st paragraph under 2.3.2 <i>Growth Plan for the Greater Golden Horseshoe</i> , it states that the GGH region is the fastest-growing region in Canada. This should be verified as it is arguable (e.g. Calgary region). Otherwise, please revise it to "one of the fastest-growing regions in Canada."	Comment Noted.	Change to "one of..."
	Section 2.3.2	- Please remove the 2 nd paragraph re: Sub-Area Growth Strategies under 2.3.2 <i>Growth Plan for the Greater Golden Horseshoe</i> , as this is based on an old draft version of Growth Plan.	Comment noted.	2.3.2, pg 10, delete 2 nd paragraph.
	Page 11	- On page 11, the 2 nd paragraph, the 2nd sentence: Typo: "The Growth Plan identifies that . . ."	Comment noted.	Pg 11, now 1 st paragraph. Capitalize Growth Plan.
	Page 14	- On page 14, 2.4 <i>Municipal Policy</i> : For your information, all the municipalities are currently undertaking a conformity exercise to bring their official plans into the conformity with the Growth Plan. As you may know, the deadline for this exercise is June 2009. Please note that in case of any conflict between an official plan and the Growth Plan, the latter prevails.	Comment noted.	No change.

APPENDIX B – PART 1: Summary of Comments
GTA West Corridor Planning and Environmental Assessment Study
Revised Draft Overview of Transportation and Economic Conditions

Correspondence	Chapter / Page in Draft	Comments Received/ Concerns Identified	Response & Actions Taken / Planned	Change to Transportation and Economic Conditions Report
	Page 14	- On page 14, under <i>2.4.1 County of Wellington Official Plan</i> , the total population number, 85,000, is a 2001 figure, yet the figure used for Guelph under <i>2.4.2</i> , is not a 2001 figure. It will be helpful to use comparable figures.	Comment noted.	No change.
	Page 84	- On page 84, under <i>5.1.2 Major Growth Centres</i> : In the 2nd paragraph, the 2nd sentence: Remove the word, "medium." In the 3rd paragraph, replace "the Places to Grow Report" with "the Growth Plan.	Comment noted.	Pg 84, 5.1.2 Delete the words 'and medium' in paragraph 2, and replace with "the places to grow report" with "the Growth Plan" in paragraph 3
	Page 85	- On page 85, <i>Exhibit 5.2: Urban Growth Centres in the Greater Golden Horseshoe</i> : Please replace the map with the Schedule 4 - Urban Growth Centres of the Growth Plan, and add a zoom-in box to highlight the preliminary study area for the GTA-West Transportation Corridor EA Study.	Exhibit as presented is from Growth Plan discussions of urban growth centres during P&O analysis. Will consider showing study area boundaries.	No change
	Page 98	- On page 98, under <i>6.1.7 Demographic Growth</i> : it is not clear how the population number of 750,000 and the employment number of 390,000 between 2006 and 2031 are calculated. The numbers should be consistent with Schedule 3 of the Growth Plan, and an explanation should be provided.	Schedule 3 of the Growth Plan provides population & employment forecasts for 2001 and 2031 on a regional and county basis. Information provided in Section 6.1.7 discusses population & employment growth within the preliminary study area and uses 2006 as a basis. The figures shown in section 6.1.7 are calculated from municipal summaries presented in Section 5.1.1.	No change.

APPENDIX B – PART 1: Summary of Comments
GTA West Corridor Planning and Environmental Assessment Study
Revised Draft Overview of Transportation and Economic Conditions

Correspondence	Chapter / Page in Draft	Comments Received/ Concerns Identified	Response & Actions Taken / Planned	Change to Transportation and Economic Conditions Report
	Page 85	<p>- On page 85, the information regarding the four urban growth centres is misleading. Urban growth centres are generally part of the downtowns and smaller in scale. The proposed UGC boundary delineations are provided in the technical paper, titled, <i>Proposed Size and Location of Urban Growth Centres in the Greater Golden Horseshoe</i> (Spring 2008). The Ministry of Energy and Infrastructure and the municipalities are currently working together to finalize the UGC boundaries. At the meantime, please use the information provided in the above noted technical paper, and revise the bullets as follow:</p> <ul style="list-style-type: none"> • Downtown Brampton <u>UGC</u> is a significant regional transportation and transit node. It covers about <u>245 hectares</u> and has an <u>approximate density of 65 people and jobs per hectare</u> in 2001. <u>The density target by 2031 is 200 people and jobs per hectare.</u> • Downtown Milton UGC covers about <u>150 hectares</u> with an approximate density of <u>35 people and jobs per hectare</u> in 2001. <u>The density target by 2031 is 200 people and jobs per hectare.</u> • Downtown Guelph <u>UGC</u> covers about <u>115 hectares</u> with an <u>approximate density of 95 people and jobs per hectare</u> in 2001. <u>The density target by 2031 is 150 people and jobs per hectare.</u> • The Vaughan Corporate Centre <u>UGC</u> covers about <u>160 hectares</u> with an <u>approximate density of 15 people and jobs per hectare</u> in 2001. <u>The density target by 2031 is 200 people and jobs per hectare.</u> 	Comment noted.	Update pg 85 bullets.

APPENDIX B – PART 1: Summary of Comments
GTA West Corridor Planning and Environmental Assessment Study
Revised Draft Overview of Transportation and Economic Conditions

Correspondence	Chapter / Page in Draft	Comments Received/ Concerns Identified	Response & Actions Taken / Planned	Change to Transportation and Economic Conditions Report
	Page 99	- On page 99, the 4th paragraph, the 3rd sentence: Remove the word, "medium."	Comment noted.	Pg 99, 4 th paragraph, 3 rd sentence, delete "and medium"
	Page 99	- On page 99, make the changes to the four bullets regarding the four urban growth centres according to the comments on page 85.	Comment noted.	Update numbers on pg 99 to be consistent with bullets on pg 85.
		<u>Overall Comments:</u> <ul style="list-style-type: none"> Are glad to see the progress of this project that you have made so far, and look forward to continuing participation in this important EA study process 	Comment noted.	No change.
		<ul style="list-style-type: none"> For your information, the Ontario Growth Secretariat has released a background paper, <i>Planning for Employment in the Greater Golden Horseshoe</i>, in May 2008. This background paper is a first step in the assessment of land use planning for employment that was committed to in the Growth Plan. The Secretariat is currently reviewing all the comments received on the background paper, and moving forward with developing the next pieces in the assessment. We will keep you posted on the progress of this initiative as the issue of employment lands has implications to the work of GTA-West Corridor EA Study. 	Comment noted.	No change.
		<ul style="list-style-type: none"> To access any of the Growth Plan documents listed in this memo, please visit our website at www.placestogrow.ca. 	Comment noted.	No change.

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Region of Peel Letter September 12, 2008		<ul style="list-style-type: none"> Report does a good job of laying the groundwork for the EA Study (setting the stage for the identification of alternatives). No major concerns or issues with the report, only some minor corrections and additions. 	Comments noted.	No change.
	Page 3	<ul style="list-style-type: none"> P. 3 – It is noted, within the “Support and Implementation of Growth Plan and Greenbelt Plan” section, that MTO will coordinate its planning with other major transportation initiatives being carried out in the study area such as the Metrolinx Regional Transportation Plan. Given the role of Metrolinx in developing a seamless, integrated transportation network in the GTHA it will be very important to involve Metrolinx in all stages of the EA process. This warrants being more explicitly stated in the report. 	Agree with comment.	Add to report.
	Page 24	<ul style="list-style-type: none"> P. 24 – Main Street/Hurontario Street becomes Highway 10 north of Mayfield Road at the City of Brampton/Town of Caledon boundary (not in the City of Brampton). 	Comment Noted.	Add Town of Caledon boundary to pg 24, 3.2.4, 2 nd paragraph.
	Page 25	<ul style="list-style-type: none"> P. 25 – The list of recent municipal network studies/projects should include the Caledon Transportation Needs Study Update (CATS). North-south corridors through Caledon carry significant volumes of inter-regional traffic (and are potential interchange locations with the GTA West Corridor). A description for the CATS Update is “The CATS Update will determine the existing and future travel demands within the Town of Caledon and identify transportation improvements required to accommodate these travel demands. The study will also review the transportation implications of 	Comment Noted.	Add CATS Update paragraph on pg 25, 3.2.6, 2 nd last paragraph.

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		proposed development in the Mayfield West and Bolton areas. The CATS Update is a joint study between the Region of Peel and the Town of Caledon.”		
	Page 25	<ul style="list-style-type: none"> P. 25 – The correct name for the Highway 50/Highway 427 Extension Area Study is “Peel-Highway 427 Extension Area Transportation Master Plan Study”. The reference to “east-west” in “new/improved east-west road connections” should be removed (the Study is not limited to east-west connections). Finally, the Study is being undertaken by Peel Region, City of Brampton and Town of Caledon (not just Peel Region). 	Comment Noted.	Change name of study. Delete east/west reference and add city of Brampton and town of Caledon to who is undertaking the study. Pg 25, 3.2.6, 5 th paragraph
	Page 25	<ul style="list-style-type: none"> P. 25 – The northern limit for the North-South Corridor Bramwest Parkway EA Study should be changed to “the Mayfield Road area in Caledon”. 	Comment noted.	In “the Mayfield road in Brampton”, delete “Brampton” and change to “area in Caledon”, pg. 25, 3.2.6, 4 th paragraph.
	Page 28	<ul style="list-style-type: none"> P. 28 – The text notes that “VIA Rail does not serve a specific origin/destination within the Preliminary Study Area, but does pass through the area in an east-west service between Toronto and Kitchener”. VIA Rail stops in Brampton (the station is on Railroad Street west of Main Street). 	Comment Noted.	Update report with suggested change.
	Page 56	<ul style="list-style-type: none"> P. 56 – Data is presented for the Vaughan intermodal terminal. It would be helpful to see comparable data for the Brampton and Milton intermodal terminals. 	We will attempt to obtain this information as part of the Problems & Opportunities analysis.	No change.

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	Pages 64, 65	<ul style="list-style-type: none"> P. 64 and 65 – Tables 4.16 and 4.17 reference Highway 407 east of Highway 10 as having 3 lanes in the peak direction. This section of Highway 407 was widened from 3 to 4 lanes in each direction in Spring 2008. 	We acknowledge this change to 407 ETR cross-section but change was done after draft report was submitted.	No change. Any reference to 407 ETR in P&O analysis will provide current lane cross sections.
	Page 65	<ul style="list-style-type: none"> P. 65 – The text notes that “Highway 401 is operating at LOS E west of Guelph in both the morning and afternoon peak periods”. Should the text reference peak hours instead of peak periods? Also, Table 4.17 indicates that the LOS for this section of Highway 401 in the afternoon peak hour is B, not E. 	Correct.	Change to “hour”. Change 1 st sentence. Highway 401 is separating at LOS E west of Guelph in the morning peak hour.
	Page 66	<ul style="list-style-type: none"> P. 66 – The text notes the widening of Highway 407 to 6 lanes east of Highway 401 in 2007. This section of Highway 407 was widened to 8 lanes in Spring 2008. 	Comment Noted.	Change report as per comment.
	Page 66	<ul style="list-style-type: none"> P. 66 – The text notes that “Regional Road 50 currently operates at LOS F south of Mayfield Road during both the morning and afternoon peak hours”. Table 4.16 shows LOS E for the morning peak hour. 	“Regional Road 50 currently operates at LOS F south of Mayfield Road during the morning peak hour and LOS F during the afternoon peak hour”	Change report.
	Page 101	<ul style="list-style-type: none"> P. 101 (map) – (1) Reference should be made to the Caledon Transportation Needs Study Update. (2) The capacity expansion project on the Milton GO Rail line is incorrectly labeled “GO Line Capacity Expansion – Georgetown”. (3) The correct name for the Highway 50 - 427 Study is “Peel-Highway 427 Extension Area Transportation Master Plan Study”. 	Comments noted. Suggested revision will be made as part of Problems & Opportunities analysis and reporting.	No change.

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County of Wellington Letter of October 3, 2008	Section 3.2.6	<u>1. Major Points:</u> <ul style="list-style-type: none"> • a. "Section 3.2.6 Recent Municipal Network Studies/Projects": the Guelph/Wellington Transportation Study (Final Report prepared July 2005 by TSH, Paradigm and GSP Group) should be documented here 	Comment Noted.	Same change as noted by Guelph.
	Section 5.1.1	<ul style="list-style-type: none"> • b. "Section 5.1.1 Population and Employment Forecasts" and Table 5.4: Table 5.4 shows aggregated population and employment in Guelph and Wellington at the years 2021 and 2031. In June, the Ministry of Public Infrastructure Renewal (now Infrastructure and Energy) set out a disaggregated forecast for Guelph and Wellington. A recent Wellington Planning and Development Committee report with this correspondence is attached. A copy of County OPA 61, which allocated growth within Wellington to the year 2031, was provided to your study team consultant Mr. Robert Lehman in August. 	Land use information received and will be used in subsequent stages of the analysis process.	No change.
	Page 6	<u>2. Minor Points:</u> <ul style="list-style-type: none"> • a. Exhibit 1.3 Area Municipalities should be relabeled with "Township of Guelph/Eramosa" 	Comment Noted.	Change report as per comment.
	Section 2.4.1	<ul style="list-style-type: none"> • b. "Section 2.4.1 County of Wellington Official Plan": the first paragraph, 4th sentence should go on to say "and includes the community of Rockwood" 	Comment noted.	Pg 14, add "and includes the community of Rockwood" after, "Surrounding the northwestern boundary of the City of Guelph, the Township of Guelph-Eramosa is

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				a community of approximately 12,600 people ¹ ”.
	Section 3.1	<ul style="list-style-type: none"> c. “Section 3.1 Highway Network”: Highway description should add “Rockwood” between “Guelph” and “Acton” 	Comment noted.	Pg 21, 3.1, Highway 7 paragraph. Add Rockwood, between Guelph and Acton.
	Section 3.3.2	<ul style="list-style-type: none"> d. “Section 3.3.2 Inter-Regional Transit” and “Section 4.4.1 Transit Service Characteristics”: should change references to Guelph Park-and-Ride Lot to “Aberfoyle Park-and-Ride Lot”, as shown on the GO Transit System Map attached 	Comment noted.	3.3.2 –pg 27 2 nd bullet & 4.4.1 pg 55, end of page, 2 nd bullet. Change Guelph Park and Ride Lot to “Aberfoyle Park-and-Ride Lot”.
Town of Caledon Email September 12, 2008	Page 19, Section 3	1. P.19, 3rd bullet under section 3: Both Bolton in Caledon and Halton Hills are identified "Transit interchange and potential gateway hubs" by Metrolinx in its Regional Transportation Plan policy papers. This should be recognized in the assessment of "Area Transportation System".	Comment Noted.	Add to report.
	Page 25, Section 3.2.6	2. P. 25 under section 3.2.6: Add "Brampton Transportation and transit Master Plan Update" and "Caledon Transportation Needs Study Update". Both are part of the provincial policy conformity exercise.	Comment Noted.	Add to report.

¹ County of Wellington Official Plan

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	Page 48	3. P. 48 regarding Highway 10: If the data for Highway 10 reflects only spring conditions, as indicated on page 45, the following statement is wrong: "The apparent drop in demand in 2007 may in part be a reflection of the increased capacity related to the ongoing expansion of Highway 410, ...", because the opening of Highway 410 from Highway 7 to Mayfield Road happened only in the fall.	Comment Noted. The statement is confusing.	Remove last sentence of discussion on Highway 10 (page 48).															
	Page 53	4. P.53 5th paragraph: Since September 2, 2008, GO Transit has added three mid-day bus services to its Bolton-Malton line along Hwy 50. Service to Malton from Bolton is now offered 6 times and service from Malton to Bolton is offered 8 times per work day. The GO bus service (twice a day) from Bolton to Toronto along Highway 27 remains.	Comment Noted.	Replace 5 th paragraph with suggested wording.															
	Page 82	5. P. 82: The population and employment numbers for the Town of Caledon, currently endorsed by Council, are: <table style="margin-left: 40px; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">2006</td> <td style="text-align: center;">2011</td> <td style="text-align: center;">2021</td> <td style="text-align: center;">2031</td> </tr> <tr> <td>Population:</td> <td style="text-align: center;">57</td> <td style="text-align: center;">68</td> <td style="text-align: center;">84</td> <td style="text-align: center;">108</td> </tr> <tr> <td>Employment:</td> <td style="text-align: center;">24</td> <td style="text-align: center;">26</td> <td style="text-align: center;">33</td> <td style="text-align: center;">49</td> </tr> </table>		2006	2011	2021	2031	Population:	57	68	84	108	Employment:	24	26	33	49	Comment Noted.	Revise Table 5.2.
	2006	2011	2021	2031															
Population:	57	68	84	108															
Employment:	24	26	33	49															
	Page 88	6. P. 88: Exhibit 5.7 should provide the measurement unit.	Agreed.	Graph to be updated to show value of trade (y axis).															
Town of Halton Hills Email September 12, 2008	Section 2.4	• Section 2.4: Consider including a review of local official plan policies in addition to Regional policies.	Local OP policies will be reviewed in subsequent stages of study.	No change.															
	Page 15	• P.15: Section 2.4.3: Should use the 2006 Census data, not 2001 data. The 2006 Halton Region population is: 439,256	Comment Noted.	Change report as per comment.															

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	Page 15	<ul style="list-style-type: none"> P.15: Section 2.4.3: Regarding the sentence in the third paragraph which reads “The Sustainable Halton Plan confirms the Region’s consistency with the provincial policies....”, this sentence should be changed to reflect the fact that the Sustainable Halton Plan exercise is still on going and that it has not yet confirmed any growth options. Hence the word “confirms” should be changed to “will confirm”. Similarly, in the subsequent sentence, the words “The plan guides...” should be changed to “The plan will guide...” or “The outcome of the Sustainable Halton Plan will...” 	Comment noted.	Pg 15 2.4.3, 3 rd paragraph: Change word “confirms” to “will confirm” & “The plan guides” to “the plan will guide”.
	Page 16	<ul style="list-style-type: none"> P.16: Second paragraph. The first sentence is unclear and implies that the Town of Halton Hills is surrounded by natural areas, and Acton and Georgetown. In fact, Acton and Georgetown are located within the Town of Halton Hills. 	Comment Noted. We will revise sentence structure.	Change report. Add a comma after “..... rural area,”
	Page 16	<ul style="list-style-type: none"> P.16: Second paragraph. There are three urban areas in Halton Hills (i.e. 401/407 Employment Area, Georgetown and Acton), not two. 	Comment noted.	Change report as per comment.
	Page 16	<ul style="list-style-type: none"> P.16: Second paragraph. The population of the Town of Halton Hills is not “51,300”. According to the 2006 Census, the Town’s population is: 55,289. In addition, this information should be consistent for all municipalities. Perhaps the 2006 Census data can be used. Currently there are inconsistencies. For example, while Mississauga’s population is cited for 2005, for York Region it is cited for October 2006. 	When the draft report was prepared the 2006 census information was not available. In subsequent work the 2006 values will be used.	Updated Town of Halton Hills with 2006 Census population.
	Page 22	<ul style="list-style-type: none"> P.22: Section 3.1.1: Should include a consideration / coordination of the Niagara-GTA EA. 	Comment Noted.	Add as requested.

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	Page 50	<ul style="list-style-type: none"> P. 50, Section 4.4.1: Should this section include a discussion of the Town of Halton Hills' ActiVan service? 	This is a specialized transit service.	No change.
	Page 67	<ul style="list-style-type: none"> P. 67, Section 4.6.1: Should this section include data specific to the Town of Halton Hills, especially since data is provided for some other local municipalities such as Milton and Caledon? 	Add to report.	Add similar information for Town of Halton Hills.
	Page 82	<ul style="list-style-type: none"> P. 82, Table 5.3: The Town's official plan only includes population and employment forecasts to the year 2021. Population and employment growth beyond 2021 (to 2031) is being studied through the Sustainable Halton Plan exercise. Therefore, it is not clear what the information contained in Table 5.3 is based on. This applies to Halton Region, Milton and Halton Hills. It is presumptuous to include any population and employment information for Halton Region, Milton and Halton Hills beyond 2021 prior to the outcome of the Sustainable Halton Plan. The same is true for the 3% growth assumption cited below Table 5.3. Reference should be made to the Sustainable Halton Plan process and the currently available growth concepts. Please note that addressing the aforementioned comment will require changes throughout this paper wherever reference is made to growth rates, and population and employment densities within the Primary Study Area. 	The preparation of this document preceded the Sustainable Halton Plan exercise. Therefore, we used population and employment data available from the Region of Halton circa 2006. The next stage of Problems & Opportunities analysis will include the more up to date information.	No change.

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Gamsby and Mannerow Limited (on behalf of the Township of Puslinch) Fax of October 3, 2008		<ul style="list-style-type: none"> To this point of the EA process, we have no specific concerns or issues to bring to the Township Councils attention for consideration. We expect that more specific comments would be provided to the Ministry of Transportation when alternative solutions have been generated for public review and consultation. 	Comments noted.	No change.
City of Guelph Letter of January 26, 2009	Section 3.2.1	<u>Section 3.2.1 County of Wellington</u> In the second sentence of the second paragraph, “Eramosa Road” should be replaced by “Wellington Street/Woolwich Street/Eramosa Road”.	Comment noted.	Pg 24, 3.2.1, 1 st paragraph on page. Replace wording as mentioned.
	Section 3.2.2	<u>Section 3.2.2 City of Guelph</u> The first sentence should add “Speedvale Avenue” between Woodlawn Road and College Avenue. Also, delete “St.” before Clair Road.	Comment noted.	Pg 24, 3.2.2, add & delete mentioned wording.
	Section 3.2.6	<u>Section 3.2.6 Recent Municipal Network Studies/Projects</u> Please add to the list, the 2005 “Guelph-Wellington Transportation Study”.	Comment Noted.	Add change to report.
	Section 4.5.4	<u>Section 4.5.4 Existing Screenline Operating Characteristics</u> The continuous north-south screenlines, 8002 and 8003, may not be capturing the volume-capacity differences between the road systems in the north and south areas of Guelph. It is likely that roads in the north have a low V/C ration as opposed to roads in the south.	We agree with this comment and will consider shorter and more corridor specific screen lines as part of problems and opportunities analysis.	Comment carried forward to problems and opportunities analysis.
	Section 4.5.5	<u>Section 4.5.5 Summary of Key Facility Operating Characteristics</u> Highway 401 (p. 65) – According to Tables 4.16 & 4.17, eastbound Hwy 401 has LoS E in the AM and LoS B in the PM.	Discrepancy noted. Report will be changed.	Change as per comment.

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	Section 4.6.1	<p><u>Section 4.6.1 Review of Municipal Origin – Destination Travel Characteristics</u> City of Guelph (p. 70) – We note that the analysis is based on 6:00 to 9:00 AM Peak Period. But the AM Peak Hour data for the City of Guelph would indicate different breakdown of ‘internal’ trips and trips either starting or ending outside Guelph.</p>	The assessment of peak hour flows will be addressed in subsequent analysis stages.	No change.															
	Section 5.1.1	<p><u>Section 5.1.1 Population and Employment Forecasts</u> The City of Guelph has recently adopted the Guelph Local Growth Management Strategy. The population is projected to reach 175,000 and employment is estimated to be 100,000 by 2031. The forecasts at future horizon years are shown below:</p> <table border="1" data-bbox="655 836 1268 1019"> <thead> <tr> <th></th> <th>2006</th> <th>2011</th> <th>2021</th> <th>2031</th> </tr> </thead> <tbody> <tr> <td>Population (000’s)</td> <td>119</td> <td>129</td> <td>154</td> <td>175</td> </tr> <tr> <td>Employment (000’s)</td> <td>68</td> <td>75</td> <td>89</td> <td>100</td> </tr> </tbody> </table>		2006	2011	2021	2031	Population (000’s)	119	129	154	175	Employment (000’s)	68	75	89	100	Comment Noted.	Add change to report.
	2006	2011	2021	2031															
Population (000’s)	119	129	154	175															
Employment (000’s)	68	75	89	100															
<p>Solmar Development Corporation Fax of October, 17, 2008</p>		<ul style="list-style-type: none"> We are aware that the GTA West Corridor Environmental Assessment has not yet determined what if any solution is proposed. However, we are extremely concerned that numerous public agencies including the Region of York appear to have a preconceived notion that a “400 Series Highway” is the proposed solution and subject matter of the GTA West Corridor Environmental Assessment. This apparent public perception needs to be “nipped in the bud” to ensure that the EA Process you are embarked on is not in any way tarnished. 	<p>Response letter sent June 25, 2009:</p> <p>With respect to your comments on to the two draft Overview Reports, please be assured that they will be considered when the reports are finalized. The Project Team is currently preparing to generate and assess a range of transportation options to address the identified transportation problems and</p>	No change.															

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		<ul style="list-style-type: none"> With regards to the 2021 planning horizon and in particular, residential development prior to the year 2021; the study team must be cognizant of the ongoing Places to Grow conformity exercise currently being undertaken by both the lower tier and upper tier municipalities in the Region of Peel. As part of the Places to Grow conformity exercise such matters as distribution of population and designation of future residential lands will be reviewed. Accordingly, given that the conformity exercise is not scheduled for completion until June of 2009, it is premature to state that no residential development will occur in Area #4 prior to the year 2021. 	<p>opportunities presented at the second round of Public Information Centres in March 2009. It is anticipated that this work will lead to the identification of a preferred multi-modal Transportation Development Strategy by Spring 2010 and will end Stage 1 of the EA.</p> <p>With respect to your other comments:</p> <p>Areas of Interest (or ‘Development Pressure Areas’) In order to ensure study land-use information is kept current, the Project Team has maintained discussions with municipal staff in order to remain up-to-date with their Official Plan (OP) designations, current OP information and pending development applications. Following a review of available information, a Municipal Advisory Group meeting on February 3, 2009 and municipal workshops held in February / March 2009, the Project Team has revised the Areas of Interest (or ‘Development Pressure Areas’) identified in the <i>Draft Overview of Environmental Conditions and Constraints Report</i>. The Areas of Interest were identified based on a number of factors, including:</p> <p>A. Lands outside the current built-up area that are under pressure for re-designation</p>	
		<ul style="list-style-type: none"> Through review of the said reports prepared by your study team, our office has noted that the <i>Mayfield West Planning Area</i> is not considered as a ‘Development Pressure Area’. The <i>Mayfield West Planning Area</i> is bounded by Mayfield Road to the south, Dixie Road to the West, Chinguacousy Road to the east and Old School Road to the north (See Attached Diagram). The Town of Caledon is currently undertaking several background studies in support of a second urban boundary expansion as part of the <i>Mayfield West Phase 2 Secondary Plan</i> which includes additional residential development with limited employment lands. Included within the <i>Mayfield West Planning Area</i> is the intersection of Hwy 410 (Extended) and Hwy 10; a major goods movement corridor within the Region of Peel serving the Golden Horseshoe and beyond. Accordingly, given the significance of this area as a major goods movement corridor, the <i>Mayfield West Planning Area</i> must be 		

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		<p>identified as an additional 'Development Pressure Area' as part of the <i>GTA West Corridor Environmental Assessment</i>.</p>	<p>B. Lands that logically link Urban Growth Centres and/or linking with other interregional transportation corridors; C. Lands that are adjacent to a potential passenger rail corridor and considered potential station sites by GO Transit on the basis of offset to other potential or existing station locations; D. Lands that are of suitable offset to other freeway infrastructure such as interchanges, that would accommodate freeway-to-freeway interchanges, given limited distances permitted between such facilities; E. Lands that are within areas of active development activity, either inside or outside of designated urban areas as defined by the upper tier municipality or the lower tier municipality; F. Lands that are being considered for future development through current Official Plan designations and policies or as the result of studies being undertaken by upper or lower tier municipalities. G. Lands that are outside of designated Greenbelt, Oak Ridges Moraine, Niagara Escarpment, Provincially Significant Wetlands lands that already are</p>	
		<ul style="list-style-type: none"> Further, the study team must be cognizant and updated on the ongoing planning initiatives being undertaken by the Town of Caledon within this secondary planning area as to ensure that the land use planning being undertaken supports the function of the Hwy 410 and Hwy 10 corridor as a major goods movement corridor. 		
		<ul style="list-style-type: none"> Metrolinx, a Provincial agency, has recently released a 'draft' Regional Transportation Plan (RTP) which sets out various transportation improvement projects throughout the Greater Toronto Area. Amongst many projects geared towards transit improvements, the RTP contemplates a GO Transit station to serve the Bolton Community forming part of the Town of Caledon. Such transit initiatives have been development in accordance with the Places to Grow plan which calls for sustainable modes of transportation to move people and sustainable development with the aim of limiting travel patterns while encouraging 'live/work' communities. The study team must work with <i>Metrolinx</i> to ensure that the <i>GTA West Corridor Environmental Assessment</i> is consistent with the RTP as to not hinder land use planning near 		

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		transit projects like the Bolton GO Transit project.	<p>protected from development; H. Lands that are in the vicinity of a narrow development “gap” that is anticipated to offer opportunity for a potential new transportation corridor with little impact to adjacent existing or approved future community or designated natural feature.</p> <p>Mapping displaying the revised Areas of Interest has been shared with municipalities but has yet to be incorporated into the final versions of the Overview Reports or placed on the project website. A copy of the current Land Use Constraint Map, with the revised Areas of Interest, has been attached for your reference.</p> <p>Mayfield West Planning Area Based on the input from Town Staff at the Peel Corridor Protection Workshop on February 24, 2009 and as is shown on the attached Land Use Constraint Map, the Project Team has added the Mayfield West Secondary Plan Area as an Area of Interest (Area of Interest #5). The area is bounded by Old School Road to the north, Mayfield Rd to the south, Hurontario Street to the east and Chinguacousy Boulevard to the west. The Project Team continues to keep in contact with the Town of Caledon in regards</p>	
		<p><u>Closing comments:</u></p> <ul style="list-style-type: none"> Our office strongly encourages the study team to be mindful of all pending development approval applications within the ‘Preliminary Study Area’ and is strongly opposed to the hindrance of development approval applications prior to identifying a potential transportation corridor or alternative solution(s). 		
		<ul style="list-style-type: none"> Our office wishes to re-emphasize that we are extremely concerned that numerous public agencies, including the Region of York, appear to have a preconceived notion that a “400 Series Highway” is the proposed solution and subject matter of the GTA West Corridor Environmental Assessment. This apparent public perception needs to be “nipped in the bud” to ensure that the EA Process you are embarked on is not in any way tarnished. 		

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			<p>to the progress of the Secondary Plan Study and development activity in this area.</p> <p>Coordination with the Metrolinx Regional Transportation Plan (RTP) Metrolinx has developed a transportation plan for the GTA and Hamilton region. All of the transit improvements recommended by Metrolinx will be considered as a part of the base network for this study. Representatives from Metrolinx are members of the study’s Regulatory Agency Advisory Group and are kept up-to-date on study developments.</p> <p>In the coming months, a Draft Area Transportation System Problems and Opportunities Report will be prepared for the GTA West Corridor EA Study and made available to the public via the project website (www.gta-west.com). The Report will incorporate the materials presented at the second round of Public Information Centres (held in March 2009) and the public comments received. As your name is included on the project mailing list, you will receive notification of the completion of this document by direct email.</p>	

APPENDIX B – PART 1: Summary of Comments
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Community of Valleywood (Town of Caledon) Email September 12, 2008	Chapter 2	<u>1. Overview of Relevant Federal, Provincial and Municipal Policies:</u> <ul style="list-style-type: none"> • a. excellent idea to link Transportation Study back to the Policies at all levels of government, but concerned that some Federal Policies were established as far back as 10+ years ago, and hope that the GTA West Study would not be limited to the outdated portion of these Policies. 	Comments noted and will be considered when finalizing the reports.	No Change.
		<ul style="list-style-type: none"> • b. Need to consider infrastructure maintenance as this is a serious issue throughout both the Provincial and Municipal governments. 		
		<ul style="list-style-type: none"> • c. Suggest to obtain updated population and employment forecasts information (to 2031) from each municipality since each municipality is required to file the next phase of their Growth Plan by June 16, 2009, and therefore, should be “well along the path to ensure completion by 2009. 		
		<ul style="list-style-type: none"> • d. Limitation of the existing transportation corridors be considered (e.g. limited GO Transit services) 		
		<ul style="list-style-type: none"> • e. Report did not reference the most current Town of Caledon’s Official Plan (i.e. as of 2004, many changes to the plan has been made). Suspect information from other municipalities might also be out of date. 		
	Chapter 3	<u>2. Definition and Description of the “Area Transportation System”:</u> <ul style="list-style-type: none"> • a. There is minimal, limited transportation services in Caledon generally, and none to the Valleywood community. 		

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	Chapter 4	<p><u>3. Description of Current "Area Transportation System":</u></p> <ul style="list-style-type: none"> • a. Traffic volume information may be out of date. Through involvement in the 410 Extension Phase III project, aware that the traffic volume studies done by MTO at the time indicated the current volumes were higher than projected for 2011. • b. There are many new initiatives or activities within the immediate area of the Valleywood community, including: <ol style="list-style-type: none"> 1. Highway 410 – Phase III projected to be completed by Fall 2009, and expected to draw much more traffic to the area adjacent to the community on Highway 10. 2. Town of Caledon Councillor has advised a mall of approximately 100 – 140 acres in size has been proposed for the west side of Highway 10, just across from the community and significantly increasing the traffic volumes to the area. 3. Sources tell us (although not proven) that there are new, or expansions to current, aggregates which will result in approximately 600 additional trucks per day per new or expanded aggregate to our area. This is significant in that the number of new or expanded aggregates has been stated as between 2 – 8. 4. Completion of Highway 410 Extension, Phase III will bring much more traffic to Highway 10 north of Mayfield Road, and the widening of Mayfield Road (currently in progress) will also bring more traffic to Highway 10. 		

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		<p>5. Current new development in North West Brampton, plus the planned Mayfield West development in Caledon (adjacent to the community) will also bring more traffic to Highway 10 and arterial roads within this area.</p> <p>As the area adjacent to Hwy 10 developed, the speed limit on Hwy 10 has been reduced but more traffic signals are implemented. This slows down the flow of traffic. This might be a future concern and developments move north into Caledon. This must be considered when looking at the possible transportation alternatives and corridors.</p>		
	Chapter 5	<p><u>4. Description of Preliminary Study Are Socio-Economic Conditions and Outlook:</u></p> <ul style="list-style-type: none"> • a. Information in this section appears to be out of date. The numbers for the 2031 Population Projection and Employment Forecast are, Population Projection: 108,000 Employment Forecast: 48,622 		
		<ul style="list-style-type: none"> • b. Acknowledge the significant presence and impact of the auto industry to the area, but should also consider the recent announcements regarding this industry (layoffs, reductions, relocation of work to other regions). 		
		<p><u>5. Closing Comments:</u></p> <ul style="list-style-type: none"> • a. report is very comprehensive and representative of the areas to be considered as part of the GTA West Corridor Study Project. 		
		<ul style="list-style-type: none"> b. some of the “information” seems to be out of date – not current. 		
		<ul style="list-style-type: none"> c. the GTA West Corridor Study Project will be ongoing for years, and is important to either stay on 		

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		top of the change occurring and reflect it in the project or make sure assumptions and projections include sufficient latitude such that the impact of upcoming changes have minimal impact to the results of the project.		

**APPENDIX B – Part 2: Summary of
Revisions**

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GTA West Corridor Planning & Environmental Assessment Study
Revised Draft Overview of Transportation and Economic Conditions

Chapter 1	
Section 1.1 Background, Support and Implementation of Growth Plan and Greenbelt Plan	Add to 2 nd paragraph: <ul style="list-style-type: none"> Given the role of Metrolinx in developing a seamless, integrated transportation network in the GTHA it will be very important to involve Metrolinx in all stages of the EA process.
Section 1.2 Preliminary Study Area and Area of Influence	Replace Exhibit 1.3 with updated graphic.
Chapter 2	
Section 2.3.2 Growth Plan for the Greater Golden Horseshoe	Revise 1 st paragraph, 1 st sentence: <ul style="list-style-type: none"> The Greater Golden Horseshoe (GGH) region of Ontario, which encompasses the GTA and a large part of south central Ontario, including the Preliminary Study Area for the GTA West corridor, is considered one of the fastest growing regions in Canada on the basis of recent Statistics Canada census data. Remove 2 nd paragraph: <ul style="list-style-type: none"> The Growth Plan also establishes sub-area plans...thus addressing the policy issues and specific needs of each sub-area. Revise 5 th paragraph, 2 nd sentence: <ul style="list-style-type: none"> The Growth Plan identifies that overall transportation planning must support opportunities for multi-modal use where feasible; prioritizing transit and goods movement needs over those of single occupant automobiles.
Section 2.4.1 County of Wellington Official Plan	Revise 1 st paragraph, 4 th sentence: <ul style="list-style-type: none"> Surrounding the northwestern boundary of the City of Guelph, the Township of Guelph-Eramosa is a community of approximately 12,600 people⁴ and includes the community of Rockwood.
Section 2.4.3 Region of Halton Official Plan	Revise 1 st paragraph, last sentence: <ul style="list-style-type: none"> The 2006 Census population data for the Region of Halton is 439,256. Revise 3 rd paragraph, 2 nd and 3 rd sentence: <ul style="list-style-type: none"> The Sustainable Halton Plan will confirm the Region's consistency with the provincial policies found in the Growth Plan, the Greenbelt Plan and the Provincial Policy Statement. The plan will guide the municipal initiatives that will outline the population and employment growth, the required infrastructure to support growth and the necessary policies that need to be in place to protect natural as well as heritage lands. Revise 5 th paragraph, 1 st sentence: <ul style="list-style-type: none"> Surrounded predominantly by a natural rural area, with three urban areas – Georgetown, Acton and the 401/407 Employment Area, the Town of Halton Hills is home to 55,289 people (2006 Census).
Chapter 3	
Section 3 Definition and Description of the "Area Transportation System"	Add before last bullet: <ul style="list-style-type: none"> Cities and other major centres of population that contain designated transit interchanges and potential gateway hubs; and
Section 3.1 Highway	Revise 10 th paragraph, 1 st sentence:

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Network	<ul style="list-style-type: none"> • Highway 7 provides relatively direct connections between the urban areas of Kitchener-Waterloo, Guelph, Rockwood, Acton, and Georgetown.
Section 3.1.1 Recent Highway Network Studies/Projects	<p>Add after 1st paragraph:</p> <ul style="list-style-type: none"> • Highway 400 from Langstaff Road to South Canal Bridge – This project received EA approval under two reports: (1) the Environmental Study Report (December 1998) for Langstaff Road to Major Mackenzie Drive which includes the widening of Highway 400 from 6 to 10 lanes and the replacement of the Highway 400 / Major Mackenzie Drive interchange; and (2) Transportation Environmental Study Report (December 2002) for north of Major Mackenzie Drive to South Canal Bridge which includes the widening of Highway 400 from 6 to 10 lanes with provisions for HOV lanes in the median. <p>Add after 2nd paragraph:</p> <ul style="list-style-type: none"> • Highway 401 from 1.0 km west of Hespeler Road easterly to Halton Region Boundary – This Class EA and Preliminary design study includes capacity, operational and geometric improvements (widening to 8 or 10 lanes) as well as interchange improvements. <i>Note that EA approval has been received for the section of Highway 401 between Hanlon Expressway and Highway 6 South.</i> <p>Add before last paragraph:</p> <ul style="list-style-type: none"> • Niagara to GTA Corridor Planning and EA Study – This study intends to examine existing and future anticipated transportation capacity deficiencies within the Niagara to GTA corridor and to provide additional capacity for a 30 year planning horizon and beyond. The study completion is anticipated for late 2010.
Section 3.2.1 County of Wellington	<p>Revise 2nd paragraph, 2nd sentence:</p> <ul style="list-style-type: none"> • It runs through the City of Guelph as Wellington Street/Woolwich Street/Eramosa Road and provides east-west connections through the Town of Guelph-Eramosa.
Section 3.2.2 City of Guelph	<p>Revise 1st sentence:</p> <ul style="list-style-type: none"> • The primary east-west roadways under the jurisdiction of the City of Guelph include Woodlawn Road, Speedvale Avenue, College Avenue, Stone Road, and Clair Road.
Section 3.2.4 Region of Peel	<p>Revise 2nd paragraph, 1st sentence:</p> <ul style="list-style-type: none"> • Main Street/Hurontario Street becomes Highway 10 north of Mayfield Road at the City of Brampton / Town of Caledon boundary.
Section 3.2.6 Recent Municipal Network Studies/Projects	<p>Revise 4th paragraph:</p> <ul style="list-style-type: none"> • The North-South Corridor Bramwest Parkway EA Study examines potential new north-south corridors between Highway 401 in Halton and the Mayfield Road area in Caledon as well as connections to Highway 401 and Highway 407. <p>Revise 5th paragraph:</p> <ul style="list-style-type: none"> • The Peel-Highway 427 Extension Area Transportation Master Plan Study will build upon previous municipal road needs studies for new/improved road connections in the Peel/York boundary area. This Master Plan Study undertaken by Region of Peel, City of Brampton and Town of Caledon will

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	<p>consider local road connections to the Highway 427 Transportation Corridor to the west.</p> <p>Add before last paragraph:</p> <ul style="list-style-type: none"> • The Brampton Transportation and Transit Master Plan Sustainable Update is a platform to move forward with the implementation of the transportation vision defined in City’s first TTMP in 2004. The Study was completed in November 2009. • The Caledon Transportation Needs Study Update is a joint project by Region of Peel and the Town of Caledon. It is a reference document to help identify and assess the potential transportation improvements needed to accommodate future traffic demand with Caledon. The Study was completed in 2009. • The Guelph-Wellington Transportation Study addresses the transportation needs in Guelph-Wellington for the planning period from 2001 to 2021. The Study was completed in 2005.
Section 3.3.2 Inter-Regional Transit	<p>Revise 5th paragraph, 1st and 2nd bullet:</p> <ul style="list-style-type: none"> • Route between University of Guelph, the Aberfoyle Park-and-Ride Lot (Highway 401 and Aberfoyle), Square One Mall in Mississauga and the Cooksville GO Station; and, • Route between the University of Guelph, the Aberfoyle Park-and-Ride Lot (Highway 401 and Aberfoyle) and the Meadowvale GO Station. <p>Revise 9th paragraph, 2nd sentence:</p> <ul style="list-style-type: none"> • VIA Rail has an east-west service between Toronto and Kitchener through the study area, and a station in the City of Brampton
Chapter 4	
Section 4.3.1 Average Daily Traffic Volumes, Highway 10	<p>Remove last sentence:</p> <ul style="list-style-type: none"> • The apparent drop in demand in 2007 may in part be a reflection of the increased capacity related to the ongoing expansion of Highway 410, which will be completed to Highway 10 by 2009.
Section 4.4.1 Transit Service Characteristics and Flows, GO Bus Service Characteristics	<p>Revise 2nd paragraph, 1st and 2nd bullet:</p> <ul style="list-style-type: none"> • Route between University of Guelph, the Aberfoyle Park-and-Ride Lot (Highway 401 and Aberfoyle), Square One Mall in Mississauga and the Cooksville GO Station; and, • Route between the University of Guelph, the Aberfoyle Park-and-Ride Lot (Highway 401 and Aberfoyle) and the Meadowvale GO Station. <p>Revise last paragraph:</p> <ul style="list-style-type: none"> • GO Transit has added three mid-day bus services to its Bolton-Malton line along Highway 50. Service to Malton from Bolton is offered 6 times and service from Malton to Bolton is offered 8 times per work day. The GO bus service from Bolton to Toronto along Highway 27 is offered twice a day.
Section 4.5.5 Summary of Key Facility Operating Characteristics,	<p>Revise 1st sentence:</p> <ul style="list-style-type: none"> • Highway 401 is operating at LOS E west of Guelph in the morning peak hour.

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Highway 401																
Section 4.5.5 Summary of Key Facility Operating Characteristics, Highway 407	<p>Revise 1st sentence:</p> <ul style="list-style-type: none"> • Prior to the widening of Highway 407 ETR to 6 lanes (and subsequently to 8 lanes in Spring 2008) east of Highway 401 in 2007, the section of Highway 407 ETR between Winston Churchill Boulevard and Highway 410 was operating at capacity during the morning and afternoon peak-hours. 															
Section 4.5.5 Summary of Key Facility Operating Characteristics, Regional Road 50	<p>Revise 1st sentence:</p> <ul style="list-style-type: none"> • Regional Road 50 currently operates at LOS F south of Mayfield Road during the morning peak hour and LOS F during the afternoon peak hour. 															
Section 4.6.1 Review of Municipal Origin – Destination Travel Characteristics	<p>Add after Region of Halton (page 72):</p> <ul style="list-style-type: none"> • Town of Halton Hills The 2006 TTS morning peak period travel characteristics for the Town of Halton Hills as well as the population growth between 2001 and 2006 are presented in Exhibit 4.18. The 2006 TTS data indicates that: <ul style="list-style-type: none"> • 52% (13,860 trips) of the morning peak period trips stay within the Town of Halton Hills; • 82% of the trips are by automobile; and • 2% of the trips are by transit. <p>The data indicates that 48% of the morning peak period trips leave the Town of Halton Hills; approximately 92% of these external trips are by car and 5% reflects inter-regional transit use. The majority of these inter-regional transit trips are attracted to Metro PD 1 (540 trips). The major external destinations for trips leaving the Town of Halton Hills during the morning peak period are:</p> <ul style="list-style-type: none"> • 4,280 (16%) total person trips to the City of Mississauga • 2,816 (10%) total person trips to the City of Brampton • 1,117 (4%) total person trips to the City of Milton • 1,159 (4%) total person trips to the Rest of Metro and 771 (3%) total person trips to Metro PD 1 															
Chapter 5																
Table 5.4 City of Guelph and Wellington County Population and Employment Forecasts	<p>Revise row 'Regional Forecasts', 'Guelph':</p> <table border="0"> <tr> <td></td> <td style="text-align: center;">2006</td> <td style="text-align: center;">2011</td> <td style="text-align: center;">2021</td> <td style="text-align: center;">2031</td> </tr> <tr> <td>Population:</td> <td style="text-align: center;">119</td> <td style="text-align: center;">129</td> <td style="text-align: center;">154</td> <td style="text-align: center;">175</td> </tr> <tr> <td>Employment:</td> <td style="text-align: center;">68</td> <td style="text-align: center;">75</td> <td style="text-align: center;">89</td> <td style="text-align: center;">100</td> </tr> </table>		2006	2011	2021	2031	Population:	119	129	154	175	Employment:	68	75	89	100
	2006	2011	2021	2031												
Population:	119	129	154	175												
Employment:	68	75	89	100												
Section 5.1.1 Population and Employment Forecasts, City of Guelph and County of Wellington	<p>Revise 1st paragraph, 2nd sentence:</p> <ul style="list-style-type: none"> • Table 5.4 summarizes the population and employment projections for Guelph and Wellington County as reported in the Guelph Local Growth Management Strategy (for City of Guelph), the Guelph-Wellington Transportation Study (for Wellington County), and the 2006 Places to Grow document. <p>Revise 2nd paragraph:</p> <ul style="list-style-type: none"> • The City of Guelph is forecast to increase by over 40% to 175,000 between 2006 and 2031. The combined employment in the City of Guelph and the County of Wellington is forecast to increase by approximately 60,000 between 2006 and 2031. 															

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<p>Section 5.1.2 Major Growth Centres</p>	<p>Revise 2nd paragraph, 2nd sentence:</p> <ul style="list-style-type: none"> • They currently have or are planned to have a composition of high density residential, mixed-use, office, retail and regeneration land uses. <p>Revise 3rd paragraph:</p> <ul style="list-style-type: none"> • Within and adjacent to the Preliminary Study Area, the following urban growth centres were identified in the Growth Plan: Downtown Brampton; Downtown Milton; Downtown Guelph; the Vaughan Corporate Centre; Downtown Kitchener/Uptown Waterloo; and Downtown Hamilton. <p>Revise bullets after 4th paragraph:</p> <ul style="list-style-type: none"> • Downtown Brampton urban growth centre (UGC) is a significant regional transportation and transit node. It covers about 245 hectares and has an approximate density of 65 people and jobs per hectare in 2001. The density target by 2031 is 200 people and jobs per hectare. • Downtown Milton UGC covers about 150 hectares with an approximate density of 35 people and jobs per hectare in 2001. The density target by 2031 is 200 people and jobs per hectare. • Downtown Guelph UGC covers about 115 hectares with an approximate density of 95 people and jobs per hectare in 2001. The density target by 2031 is 150 people and jobs per hectare. • The Vaughan Corporate Centre UGC covers about 160 hectares with an approximate density of 15 people and jobs per hectare in 2001. The density target by 2031 is 200 people and jobs per hectare. 															
<p>Table 5.2 Region of Peel, City of Brampton and Town of Caledon Population and Employment Forecasts</p>	<p>Revise row 'Caledon':</p> <table border="1"> <tr> <td></td> <td>2006</td> <td>2011</td> <td>2021</td> <td>2031</td> </tr> <tr> <td>Population:</td> <td>57</td> <td>68</td> <td>84</td> <td>108</td> </tr> <tr> <td>Employment:</td> <td>24</td> <td>26</td> <td>33</td> <td>49</td> </tr> </table>		2006	2011	2021	2031	Population:	57	68	84	108	Employment:	24	26	33	49
	2006	2011	2021	2031												
Population:	57	68	84	108												
Employment:	24	26	33	49												
<p>Exhibit 5.7 Ontario – Trade Import and Export Forecasts</p>	<p>Add label to Y-axis:</p> <ul style="list-style-type: none"> • % Change 															
<p>Chapter 6</p>																
<p>Section 6.1.7 Demographic Growth</p>	<p>Revise 5th paragraph, 3rd sentence:</p> <ul style="list-style-type: none"> • They currently have or are planned to have a composition of high density residential, mixed-use, office, retail and regeneration land uses. <p>Revise bullets after 6th paragraph:</p> <ul style="list-style-type: none"> • Downtown Brampton urban growth centre (UGC) is a significant regional transportation and transit node. It covers about 245 hectares and has an approximate density of 65 people and jobs per hectare in 2001. The density target by 2031 is 200 people and jobs per hectare. • Downtown Milton UGC covers about 150 hectares with an approximate density of 35 people and jobs per hectare in 2001. The density target by 2031 is 200 people and jobs per hectare. • Downtown Guelph UGC covers about 115 hectares with an approximate density of 95 people and jobs per hectare in 2001. The density target by 2031 is 150 people and jobs per hectare. 															

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	<p>The Vaughan Corporate Centre UGC covers about 160 hectares with an approximate density of 15 people and jobs per hectare in 2001. The density target by 2031 is 200 people and jobs per hectare.</p>
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