

## **EXECUTIVE SUMMARY**

### **1. OVERVIEW OF TRANSPORTATION PROBLEMS AND OPPORTUNITIES**

The GTA West Corridor has been identified in the *Growth Plan for the Greater Golden Horseshoe* as a future transportation corridor, representing a strategic link between the urban areas of the northwest Greater Toronto Area (GTA) and the western Greater Golden Horseshoe (GGH).

Future population and employment growth in major urban centres will result in a significant increase in travel demand for both people and goods movement across the Greater Golden Horseshoe. Moreover, much of South-Central Ontario continues to evolve from a Toronto-based employment centre to a region with many centres of economic activity, employment, and population, and thus a more complex transportation system.

To realize the policy directions contained in the Growth Plan and the Greenbelt Plan, the Ontario Ministry of Transportation (MTO) has commenced a GTA West Environmental Assessment (EA) Study to examine long-term inter-regional transportation problems and opportunities, and to develop an integrated, multi-modal Transportation Development Strategy that offers choice for the efficient movement of people and goods.

The identification of future transportation problems and opportunities within the Study Area is a crucial stage for this phase of the study. An understanding of the shortfalls of the transportation system and opportunities to improve its future performance provides a foundation for identifying sustainable transportation solutions. These solutions will become the basis of a technically, environmentally and economically sound multi-modal Development Strategy.

These multi-modal solutions will be developed using a “building-block” approach that starts with optimizing the existing infrastructure, investing in transit as the first priority for moving people, and thorough consideration of other modes before decisions are made for new highway facilities.

Transportation in the Study Area is characterized by a high degree of reliance on the road network as the vast majority of inter-regional trips in the GTA West Corridor are made by automobile and truck. Further, as established by analysis and stakeholder consultation, the road network is of paramount importance to the operation of all travel modes in the Study Area including transit and rail, and connecting to air and marine. All of these modes rely upon and connect to the road network. Although the majority of problems identified relate to the road transportation network, all travel modes will be considered in generating alternative solutions to address the identified transportation problems.

Transportation service providers for rail, air and marine indicate that their systems have sufficient capacity to accommodate future travel growth. Enhancements to these individual modes to accommodate growth and/or changing travel markets (for example, a

further shift to containerization of goods) can generally be made within the existing lands/corridors of the railways, ports and airports. The key transportation issues identified by all of the service providers relate to the following:

- Lack of capacity on the road network to handle growth;
- Need for improved connections between the various travel modes; and,
- Roadway congestion, particularly during the weekday peak period commute, especially in the Regions of York and Peel, and limited road and transit connections to the west of the Study Area.

In addition to the transportation problems, there are also numerous transportation opportunities that can be achieved within the Study Area by providing an efficient multi-modal transportation system. These include:

- Improved multi-modal connections with the GTA and to areas east of the Corridor;
- Improved access to the west, south and U.S. border crossings for tourism and trade;
- Improved access to inter-modal facilities, such as the nearby Toronto Pearson International Airport; and,
- Improved connectivity to the area's planned employment growth lands.
- Support municipal land use planning in accordance with the Growth Plan to facilitate both local and inter-regional transportation objectives.
- Minimized impacts to the natural, social, economic and cultural environments, through measures including optimizing existing transportation infrastructure.

## **2. APPROACH TO DETERMINING FUTURE TRANSPORTATION PROBLEMS AND OPPORTUNITIES**

A multi-step process was implemented that considers the future transportation network in the context of the current provincial policy framework, and the key factors that influence travel demand:

- **Existing and Future Area Transportation System** – A multi-modal overview of existing and planned transportation infrastructure and services (highway, transit, rail, airport and marine services) was conducted through consultation with provincial, municipal and private sector transportation service providers. A range of transportation initiatives are planned for implementation by 2031, with support from the provincial gas tax program, which provides municipalities with funding for expansion and improvement of transit services. This improved transportation system is considered the base case for analysis of future conditions. It includes:
  - The *Metrolinx Regional Transportation Plan* (Metrolinx RTP), which identified a \$50 billion transit investment in the Greater Toronto and Hamilton Area, including new express and commuter rail services, bus and light rail rapid transit services;

- *GO Transit's Strategic Plan, GO 2020* (GO Transit's Strategic Plan), which proposes increased service frequencies and new service extensions to Guelph, Kitchener/Waterloo and Bolton;
  - The Ministry of Transportation's planned highway improvement program, including highway extension and expansion plans and High Occupancy Vehicles (HOV) systems;
  - A range of municipal transportation initiatives for road, transit and active transportation programs identified through Transportation Master Plans and Official Plans of Halton, Peel, York, Wellington and Guelph; and,
  - Rail, air and marine transportation initiatives and programs planned by other service providers, including future freight rail service enhancements and a potential longer term CN rail inter-modal facility in the Milton Area.
- **Goals, Objectives and Functions** – Goals and objectives were developed, based on the government's policy framework, in particular, the *Growth Plan for the Greater Golden Horseshoe*, *Greenbelt Act* and *Plan* and *Provincial Policy Statement*, to guide the identification of problems and opportunities in support of the following three defining pillars: compact, vibrant and complete communities; a prosperous and competitive economy; and a protected environment.
  - **Future Travel Demand** – Future travel demand was identified based on forecast growth in person trips and goods movement, with a focus on travel markets for goods, commuter and tourism and recreation travel. A range of scenarios was developed for sensitivity testing based on alternative land uses and forecasting methodologies.
  - **Other Factors** – Other factors include government policies relating to the economy, trade, land use, tourism and transportation; planned population and employment growth; broader transportation initiatives such as the Ontario-Quebec Continental Gateway and Trade Corridor Study; global and local economic trends and forecasts; and tourism and recreation factors.

Transportation problems for all modes were identified based on the capacity of the future transportation system to accommodate the expected future transportation demands, and input received from public consultation.

### **3. FORECAST OF FUTURE TRAVEL DEMANDS**

Forecasts for the GTA West Study Area show substantial growth by 2031. Population and employment levels are expected to more than double between 2001 and 2031, with growth of over 1 million people and over 450,000 jobs.

Accordingly, Study Area travel is expected to increase significantly, as shown in Table 1:

**Table 1: Projected Growth in the GTA West Corridor, 2001-2031**

	<b>2001</b>	<b>2031</b>	<b>% Change</b>
<b>Population</b>	862,000	1,912,000	122%
<b>Employment</b>	416,000	896,000	115%
<b>Total PM* Peak Period Person Trips</b>	404,815	1,097,322	171%
<b>PM* Peak Period Auto Trips</b>	318,000	766,800	140%
<b>PM* Peak Period Transit Trips</b>	15,700	101,400	547%
<b>PM* Peak Period Transit Mode Share</b>	4%	9%	125%

\* refers to afternoon and evening

Source: GGH Model land use allocation and trip data, October 2008

In addition to the increase in commuting trips, the Greater Golden Horseshoe's growth in population and employment will result in increased tourism and recreation trips to/from and through the GTA West Corridor. The projected growth will also result in increased goods movement throughout the Greater Golden Horseshoe, and trucks will continue to be the dominant mode for moving goods in the Study Area.

Tourism and recreation travel to and from the Study Area occurs throughout the year, peaking in the fall. Over 60% of all tourism and recreation trips to the GTA West Study Area are made to visit friends and relatives, and this type of travel occurs during all seasons. Approximately 30% of tourism and recreation trips originating in the Study Area occur during the summer, with trips occurring in all seasons. Significant tourism and recreation travel also moves through the Study Area, especially during the summer and largely on Highways 401 and 400, contributing to an already congested roadway network.

With regard to commuter travel, the origin-destination analysis reveals significant numbers of trips made internally within the Study Area's upper tier municipalities. Approximately 77% of trips in Wellington, 71% in Peel and 70% in Halton are expected to remain within each respective region during the weekday PM peak hour. This represents a slight reduction from 2006 levels (83% in Wellington, 77% in Peel and 73% in Halton). Trips across municipal boundaries are expected to be more substantial between Peel and Toronto/York/Durham Regions, with the numbers of cross-boundary trips decreasing toward the west.

The following sections provide an overview of the anticipated growth by travel mode. In addition, an assessment of key individual facilities was undertaken to identify potential capacity shortfalls in relation to 2031 vehicle demand. This analysis is summarized in Section 5.4 and considered travel patterns for people and goods movement, including travel origins and destinations, times of travel and available modes for trips. While weekday AM and PM peak hour travel on individual facilities is substantial, volumes are expected to continue increasing such that heavy flows are experienced throughout the day.

### **Transit**

Future area transit improvements are expected to result in significant increases in transit trips, varying widely depending on the origin and destination of trips. For example, 2031 transit mode shares for inter-regional trips originating in the Study Area's Urban Growth Centres are forecast to range from as low as 0% from Milton to Guelph, to as high as

12% from Vaughan to Brampton. Transit improvements, such as high-frequency, full-day GO rail services, are expected to result in improvements in transit travel times between the Study Area's Urban Growth Centres. Decreases in transit travel time are forecast to range from 15% (transit trips from Milton to Brampton, and Brampton to Vaughan) to 70% (transit trips from Brampton to Toronto).

### **Automobile**

By 2031, automobile flows are expected to increase substantially. The traffic analysis indicates that weekday PM volumes are forecast to increase by 80% to 95% east of Winston Churchill Boulevard (near the central part of the Study Area), and between 70% and 130% east of Guelph. In the eastern portion of the Study Area, west of Highway 427, volumes are projected to increase by 25% by year 2031.

The analysis also shows that in the Study Area summer average daily traffic volumes (SADT) are generally greater than the annual average daily traffic volumes (AADT) that occur throughout the year. SADT is characterized by longer peak periods and more balance in the direction of travel, as commuter and tourism and recreation trips overlap.

### **Other Travel Modes**

Canadian Pacific (CP) and Canadian National (CN) railways and VIA Rail operate in the Study Area, and rail use is anticipated to steadily increase through to 2031. This increase will be driven largely by the growth in volumes of containerized goods. There is capacity for further growth on the rail system and stakeholder consultation indicated that the existing infrastructure is anticipated to meet demand for the next 10 to 20 years.

There are no major air and marine transportation facilities directly within the Study Area, although Toronto Pearson International Airport lies in close proximity to the southeast. The Ports of Toronto and Hamilton are the closest marine transportation facilities. Expansion is planned for area air and marine transportation services to meet future demand, which will result in increased automobile and truck traffic on the Study Area road network.

## **4. SUMMARY OF FUTURE TRANSPORTATION PROBLEMS**

The overarching problem of the inter-regional transportation system in 2031 relates to the road network. Much of the higher order road system (i.e., highways and inter-regional roads) is expected to be heavily congested during peak periods and increasingly throughout the day. Road congestion in the summer is higher due to the overlay of tourism and recreation travel. The fact that every mode connects to and relies on the road network creates significant issues for the efficient movement of people and goods in the future.

Transportation in the GTA West Study Area in 2031 can be considered in the context of two sub-areas with differing geographic, land use and transportation system characteristics:

### **East Study Area – Milton to Vaughan**

The Study Area's highways (Highways 401, 400, 410, 427 and 407 ETR) are concentrated in the east and south of the GTA West Corridor. While a number of inter-regional road connections are in place, all highways in the Study Area (with the exception of some sections of the 407 ETR) will continue to experience major congestion throughout the day, particularly as population and employment growth intensifies to the west and north of existing built up areas. Highway 401 provides the major east-west connection across the Study Area's southern boundary and continues to be heavily congested.

Inter-regional rail transit service will be provided by GO Transit and will include rail expansion/improvements to Brampton, Bolton and Milton. The Metrolinx RTP identifies Bus Rapid Transit service along the 407 ETR and Other Rapid Transit into the southeast portion of the Study Area.

Major congestion along the area highways constrains commuter travel and trucking transport, and is a major concern for economic growth and prosperity.

### **West Study Area – Milton to Guelph**

There are few highway and transit connections to the west and north of the Study Area. Highway 7 provides a lower capacity east-west connection to Guelph, and is expected to operate with minor congestion by 2031. Highway 6 runs north-south along the Study Area's western boundary, and is expected to operate with major congestion south of Guelph. Higher order inter-regional GO Transit service is being examined to extend to Guelph/Kitchener but there are limited inter-regional transit services between communities north and west of Toronto. There are opportunities in this portion of the Corridor for improved roadway and transit connections to Toronto and to areas farther west and south toward Hamilton, Niagara and the U.S. border in the Niagara to GTA Corridor.

## **5. TRANSPORTATION PROBLEMS BY TRAVEL MARKETS AND MODES**

### **5.1 Moving People – Commuter**

The movement of people in the Study Area is predominantly comprised of trips for commuting and for tourism and recreation. Although these trips have different characteristics, many of the future transportation problems are similar. In general, the limited choice of alternate travel modes in the Study Area increases reliance on the automobile.

#### **Transit**

The implementation of the Metrolinx RTP will substantially improve inter-regional transit services in the east and south of the Study Area, through new GO rail connections and Rapid Transit services. Transit provisions in some parts of the Study Area will remain limited.

- Future inter-regional transit connections, as provided in the Metrolinx RTP, will generally be oriented toward Toronto, including radial links to Vaughan, Brampton, Milton and Guelph. However, orbital inter-regional connections, such as Milton-Brampton and Milton-Guelph, are more limited and indirect, requiring transfers and indirect travel routes.

Other transit issues include the following:

- There is a lack of integration between local and inter-regional transit services, particularly beyond corridors served by GO Transit, in terms of physical connections, timetables and hours of service, fare structures and payment methods;
- Roadway congestion limits the efficiency of bus transit services, and increases unreliability and travel times; and,
- The expansion of passenger and freight rail services within existing rail corridors creates potential for conflicts, particularly during peak commuting periods, as well as issues of scheduling and integration of rail services.

### **Automobile**

The road transportation system is the main mode used for commuting in the Study Area, especially where trips are not served by a higher order transit alternative. As traffic volumes increase throughout the day, the traditional AM and PM peak commuting periods are becoming longer, resulting in highways such as Highways 401, 400, 410 and 427 being congested throughout much of the day.

- Major congestion issues are anticipated on the main highways in the Study Area, along the lengths of Highways 401, 400, 410 and 427 within the Study Area's boundary.
- The expected capacity shortfall will increase automobile travel times between the Study Area's Urban Growth Centres. Delays that occur due to collisions, inclement weather conditions, road maintenance and construction will contribute to congested conditions.
- There is a lack of alternate higher order inter-regional routes to avoid congested conditions, particularly for travellers using the Highway 400/ Highway 401 corridors.

## **5.2 Moving People – Tourism and Recreation**

The problems for tourism and recreation travel are somewhat similar to those for commuter travel. Summer travel, when roadway congestion is greatest, is a particular issue for tourists.

### **Transit**

The vast majority of tourism trips to, from and through the Study Area are forecast to continue to be by automobile, as limited transit systems are in place to serve tourist destinations and travel schedules, and in many instances there is no reasonable alternative to the automobile. Further to this:

- There are inadequate transit connections between urban centres, tourist gateways such as Toronto Pearson International Airport, and tourist destinations. Limited multi-modal connections are likely to increase car use even for those who travel to the Study Area by rail or air.
- Where publicly funded transit services are in place or planned, schedules tend to cater to commuters rather than tourists, with services focused on AM and PM commuting times and limited weekend services.

### **Automobile**

The problems for road-based tourism and recreation travel include congestion, increased travel times, limited travel routes and modal options. The automobile is the transportation mode of choice for more than 90% of visitors to the Study Area. Tourism and recreation travellers also pass through the Study Area to destinations in Toronto, Niagara Region, and elsewhere in Ontario and beyond.

- For the most part, the Study Area's tourism and recreation destinations are connected to urban centres by Highway 401 and Highway 400 that regularly experience major congestion and heavy truck volumes. These trips through the Study Area are more likely to be oriented to the summer season.
- There are inadequate connections between tourist gateways (e.g., airports) and tourism and recreation destinations.
- Congestion results in increased and unpredictable travel times for tourists, and can negatively affect the tourist trip experience.
- High volumes of trucks on the major highway corridors can be a deterrent to tourist travel, especially during the summer months.

## **5.3 Goods Movement**

The Study Area includes road and rail facilities for goods movement. There are no major air or marine transportation facilities located directly in the GTA West Corridor; however the Study Area is adjacent to Toronto Pearson International Airport and within 50 km of the Ports of Toronto and Hamilton.

There are a number of multi-modal facilities within and in the vicinity of the Study Area. Multi-modal movement of goods and inter-modal connections are a critical element of the transportation system. Stakeholder consultation with rail, air and marine transportation operators revealed that there is capacity for future growth of goods movement by these individual modes. The collective issue for rail, air and marine sectors relates to the limitations associated with the inter-regional road network from the perspective of access and/or congestion.

Suppliers and distributors of goods generally decide how goods are shipped at the global, continental, and inter-regional scale. Certain goods are better suited to particular modes (i.e. truck – consumer goods, rail – bulk goods / containers). Goods shipment methods depend on type and character, origin and destination, travel distance, and urgency and reliability.





Generally, goods movement relies on the road system at least once during the delivery of a product.

### **Truck**

The inter-regional road system is the primary distribution mode for goods movement in the area, shipping almost 70% of Canada-U.S. trade by value and 45% by tonnage. By 2031, commercial vehicle volumes in the Study Area will generally be concentrated on Highways 401, 400, 410 and 427. By 2031, all of these road linkages are expected to experience major congestion throughout the day. While the problems for goods movement by the inter-regional road system are largely similar to those for automobile commuters, they can result in significant economic impacts to shippers, distributors, local businesses and industries. These problems include:

- Increased congestion and travel times;
- Unpredictable travel times;
- Inadequate connections between Urban Growth Centres, commercial centres and inter-modal facilities; and,
- Diversion of trucks to regional and local roads, which results in out-of-way travel with associated community, social, noise and safety concerns.

### **Rail**

CN and CP operate mainline freight services through the GTA West Study Area. The GTA West Corridor includes the Vaughan (CP) and Brampton (CN) inter-modal terminals, as well as the Trafalgar Road (CP) and MacMillan Yard road-rail terminals (CN). Rail services provide connections for goods movement in the Study Area, including inter-modal facilities with the road network. Much of the strong growth in rail and inter-modal goods movement has been driven by the growth in marine transport of containers.

- The key problems for rail transportation involve inter-modal connections to higher order roadways, as well as issues relating to congestion on the area road network.

Other problems include:

- Limited connectivity of inter-modal facilities, which can increase the difficulty of moving containers and other goods by rail and produce bottlenecks at the trucking interface.

- Operational constraints on the rail network, including potential conflicts between rail-based transit and freight services, especially during peak AM and PM commuting periods. As growth in both freight and passenger traffic occurs on existing shared infrastructure, these problems will increase, potentially causing track capacity constraints.

### **Air**

Canada's busiest airport, Toronto Pearson International Airport, is located approximately 3 km to the southeast of the Study Area. Passenger and air cargo movements at this airport are expected to grow significantly over the next 25 years, which will increase runway capacity issues and pressure on the area road network.

- The key problem for air transportation as it relates to the GTA West Study Area is congestion on the inter-regional road network.

### **Marine**

Marine port facilities are located to the south of the Study Area, in Toronto and Hamilton. Marine movement of goods can be affected by bottlenecks at inter-modal facilities and by limitations of the St. Lawrence Seaway to handle ocean vessels on a year-round basis.

- The major problem for marine transportation relates to congestion on the inter-regional roadway connections into the GTA West Study Area. Increased use of containers for shipping will also impose increased pressure on the road distribution network.

## **5.4 Transportation Problems on the Inter-Regional Road Network**

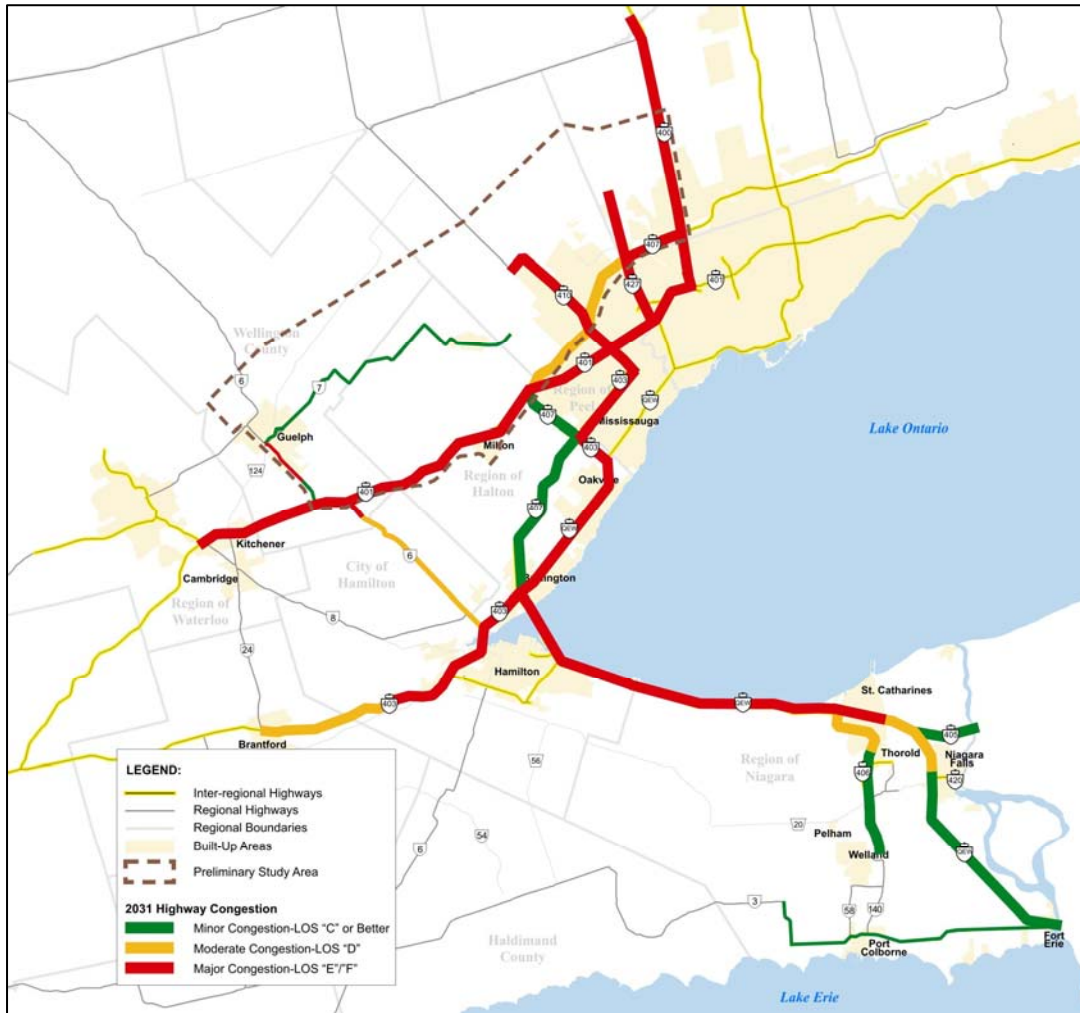
A quantitative analysis of capacity deficiencies for major highway corridors was undertaken based on the future travel demands in relation to future capacity, considering the planned improvements to the transportation network, including transit improvements as set out in the Metrolinx and GO Transit and municipal plans.

Highways 401, 400, 410 and 427 are expected to experience major congestion throughout the day by 2031. The 407 ETR is expected to experience major congestion between Highways 400 and 427, and moderate congestion between Highways 427 and 401. Other major roadways such as Regional Road 124, Highway 7 and Highway 6 are also expected to experience growing congestion.

The 2031 SADT conditions in the Study Area are anticipated to be more congested than AADT conditions, with the 407 ETR experiencing major congestion on the segment between Highways 410 and 400 during the summer season.

Exhibit 1 highlights the substantial AADT daily congestion forecast for 2031, even with the planned provincial and municipal road network and transit improvements and the planned improvements included in the Metrolinx RTP and GO Transit's Strategic Plan.

### 2031 Weekday (AADT) Inter-Regional Congestion Levels



Source: GGH Model, October 2008

## 5.5 Community, Environment and Economic Effects

The transportation problems associated with inter-regional movement of people and goods in the GTA West Study Area have broader implications for the implementation of provincial policies relating to the community, environment and economy.

### Community

- Road congestion results in increased costs (i.e. travel time, fuel costs) for goods movement which is passed on to consumers.
- Congested roadways increase potential for traffic collisions.
- Trucks using secondary routes impact communities, increase deterioration of infrastructure and increase conflicts with cyclists and pedestrians.

- Reduced quality of life from time lost to commuting.
- Lack of transit services and large volumes of heavy trucks on the inter-regional road system may deter tourists/recreation travellers.
- Potential for job losses with reduced tourism.

### **Environment**

- Congestion increases fuel consumption and increases air and noise emissions

### **Economic**

- Congestion and travel time uncertainty reduces economic competitiveness of local businesses and industries and results in excessive wear on vehicles.
- Businesses are less likely to expand or be attracted to areas with major congestion.
- Congestion negatively impacts the shipping industry and the effectiveness of all inter-modal travel.
- Reduced tourism negatively affects the economies of the GTA and surrounding areas.

## **6. FUTURE TRANSPORTATION OPPORTUNITIES**

In addition to identifying the transportation problems, an equally important aspect of this study is the identification of transportation opportunities. The ability of this study to address the transportation problems and to capitalize on the significant opportunities to provide an efficient and reliable transportation system will be a key measure of success.

In the context of this study, “transportation opportunities” refers to the “big picture” strategic benefits of an efficient transportation system. These opportunities within the GTA West Study Area are summarized as follows:

### **1. Support Future Municipal Land Use Planning in Accordance with the Growth Plan**

The opportunity exists to co-ordinate multi-modal transportation and land use planning with municipal land use planning to support and conform to the requirements of the Growth Plan, while at the same time accommodating both the local and inter-regional future travel demands. This would include:

- Co-ordinating with municipal land use planning by developing a corridor protection strategy that calls on both the province and municipalities to work collaboratively to keep all reasonable options open while the EA is underway;
- Co-ordinating with the Region of Halton during the development of the transportation alternatives as the Region identifies a recommended land use option;
- Co-ordinating with and improve developing land use scenarios to be compatible with potential inter-modal facilities. Co-location of warehouse/ distribution centres in proximity to a potential inter-modal facility would support industrial/employment development in the municipality and optimize function of the inter-modal facility, improving the efficiency of goods movement; and,

- Considering improved connections to the Study Area's designated Urban Growth Centres (Vaughan Corporate Centre, Downtown Brampton, Downtown Milton and Downtown Guelph) and co-ordinating with municipal transportation initiatives.

**2. Maintain the Character and Integrity of Rural and Agricultural Lands**

There is an opportunity to avoid or minimize potential impacts to rural, agricultural and archaeological/heritage areas. This would include:

- Co-ordinating with municipal land use planning throughout the Growth Plan conformity exercise that will focus population and employment growth in Urban Growth Centres, Built Up Areas, and Designated Greenfield Areas, thereby serving to preserve key agricultural lands; and,
- Having due regard for the preservation principles embedded in various policy documents, including the *Greenbelt Act* and *Plan, Niagara Escarpment Act* and *Plan*, and the *Oak Ridges Moraine Conservation Act* and *Plan*.

**3. Provide Transportation Choice, Improved Connections and Increased Reliability for Commuters**

The opportunity exists to build upon the Metrolinx RTP and GO Transit's Strategic Plan to provide a robust transportation system that offers commuters real alternatives to automobile travel throughout the GTA West Study Area. This would include:

- Providing expanded transit services, as well as improved connections between inter-regional transit services and local transit services;
- Enabling commuter choice, convenience and flexibility in making travel decisions during weekday morning and afternoon peak periods, especially between the Study Area's urban centres and to Toronto; and,
- Facilitating healthier lifestyles by incorporating active transportation considerations into the development of the transportation alternatives (e.g., bicycle storage facilities at transit terminals, and aboard transit vehicles).

**4. Provide Transportation Choice, Improved Connections and Increased Reliability for Goods Movement**

While trucks will continue to play an integral role in moving goods throughout and beyond the Study Area, there is an opportunity to encourage increased utilization of other modes of travel for goods movement, including rail, marine and air, as well as to provide better connections between these modes. This would include:

- Improving transportation system performance and connections between Toronto Pearson International Airport, CN and CP railway hubs, inter-modal terminals, area ports, international gateways and related clusters of logistics uses, industries and urban centres in and in the vicinity of the Study Area;
- Improving access to inter-modal transportation yards located in the Vaughan, Milton, and Brampton areas to increase transportation efficiency throughout the Study Area;
- Improving highway and rail system connections between border crossings and the GTA to foster economic growth, including the availability of choice and reliability; and,

- Co-ordinating with other area initiatives, including the Ontario-Quebec Continental Gateway and Trade Corridor.

In summary, a more balanced utilization of available transportation modes, coupled with better interconnection between the modes and international gateways, will serve to enhance the level of trade within the GTA West Study Area, and by extension, the economic competitiveness of the province of Ontario.

**5. Provide Improved Transportation Service for Tourists**

There is an opportunity to enhance the growth of tourism and recreation trips and the overall travel experience to the Study Area. This would include:

- Providing improved connections between tourist gateways (e.g., Toronto Pearson International Airport), urban centres and tourism and recreation destinations, including connections to local transportation services;
- Facilitating active transportation through provision of bicycle storage and promotion of other forms of active transportation in these services; and,
- Improving transportation system operations to enhance tourism and recreation trip experience.

**6. Optimize Existing Transportation Infrastructure**

There are opportunities to use Transportation Demand Management (TDM) and Transportation Systems Management (TSM) strategies to reduce/shift trip making and automobile usage while optimizing use of the existing system. This would include:

- Considering TDM strategies, such as HOV lanes and carpool lots on provincial highways to encourage increased vehicle occupancy;
- Considering TSM strategies to achieve greater reliability and enable improved decision making and distribution of travel (e.g., Intelligent Transportation Systems (ITS) use of changeable message signs, highway cameras, and “real time” adaptive transportation systems to provide “real time” information on traffic conditions);
- Considering other strategies, including speed harmonization, high occupancy toll lanes (HOT) and road pricing, to optimize the existing transportation infrastructure; and,
- Considering upgrades to at-grade rail-to-rail and road-to-rail crossings, which can serve as operational constraints within the transportation system, to improve travel flows and safety.

**7. Minimize Impacts to the Natural, Social, Economic and Cultural Environments to the Extent Possible**

There is an opportunity to minimize, and potentially avoid, impacts to important natural, social, economic and cultural features at the earliest planning stages. This can be done through planning that optimizes the use of existing infrastructure, and gives due regard to the requirements of approved provincial environmental protection policies, other relevant policies such as those contained within the Conservation Authorities Act, heritage resources and First Nations lands when developing, assessing and evaluating all reasonable transportation alternatives.

## **7. NEXT STEPS**

The purpose of this report is to summarize the process and methodology that was used to identify transportation problems and opportunities, and to document the key findings of this work. The identified transportation problems and opportunities will serve as the basis for generating and evaluating transportation alternatives in the next stage of this study.