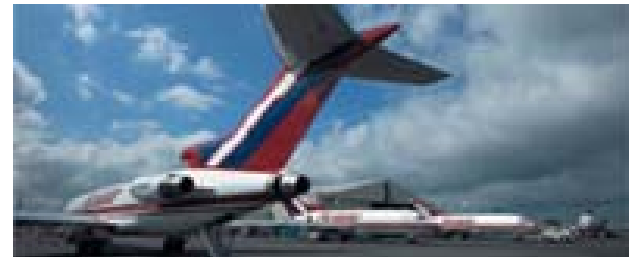




# HAMILTON GOODS MOVEMENT STUDY

## Final Report – Executive Summary



JUNE 2005

*Prepared for the City of Hamilton by:*



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The Hamilton Goods Movement Study is part of the City's on-going Growth Related Integrated Development Strategy (GRIDS). It was undertaken by the City's Economic Development Division with participation from industry and senior levels of government, including: CN Rail, Canadian Pacific Railway, Hamilton International Airport Limited (HIAL), Hamilton Port Authority, Mobile Cartage, Purolator Courier, Southern Ontario Railway, the Ontario Provincial Government, Transport Canada and Human Resources and Skills Development Canada (HRSDC).

Hamilton is at the heart of The Greater Golden Horseshoe Region, which is the immediate hinterland of the Eastern shores of Lake Ontario. The Golden Horseshoe experiences what is perhaps the greatest volume of goods movements per capita in Canada.

The primary objective of this study is to examine the City's technical potential to become an efficient, integrated and sustainable regional intermodal transportation centre within the broadly defined Golden Horseshoe and the Greater Toronto Area-Windsor-Sarnia Trade Corridor. The specific objectives of the study are as follows:

- *Provide understanding of businesses that generate freight flow and opportunities to increase intermodal movements*
- *Develop a perspective on the future of the movement of goods by air, port, road and rail.*
- *Consult with stakeholders to identify current transportation and related human resources issues, challenges and opportunities, including how the private sector can work with governments in planning prioritizing, sharing and funding public/private infrastructure and related workforce development.*
- *Develop and assess strategic policy options to address current issues, efficiencies, supply chain challenges, capacity issues and emerging challenges for the aforementioned in 5, 10 and 15 year timeframes.*

- *Identify the need for further data collection in respect of transportation planning and skills development needs.*
- *Evaluate and make recommendations relating to the aforementioned, and a multi-modal transportation facility.*

The work was carried out over a 4 month period. Analysis of available data such as the Hamilton Business Directory, was supplemented by industry interviews and workshops with stakeholders to document the existing system and to relate it to pertinent experience elsewhere. The work done to geocode the Hamilton Business Directory entries can be useful for subsequent studies.

### HAMILTON'S ECONOMY

Traditionally, the City of Hamilton has been a manufacturing centre, initially its focus was on textile production and later it would transform into Canada's major producer of steel and metal materials. In recent years, however, due to global shifts in the manufacturing industry, Hamilton's economy has been subjected to major structural changes that are dramatically impacting its industrial composition. As US firms relocated to other places with cheaper labour costs, mid-sized manufacturing firms have grown to replace many of the large industrial giants that once dominated the City's economic landscape. Hamilton's advantageous access to markets and relatively inexpensive power has fuelled the emergence of these mid-sized firms. Thus, manufacturing still remains the largest of Hamilton's economic clusters.

The second traditional cluster of Hamilton's economy is an estimated \$1 Billion a year agricultural industry. The rural areas of Hamilton are home to an agricultural/agri-business industry, which generates significant tax revenues while utilizing few municipal services. Closely related to the agriculture/agri-business sector is the food and beverage processing industry. Together, the two sectors pose a significant economic cluster within the City of Hamilton.

The third traditional economic cluster in the City is port related industries and businesses. Hamilton Harbour is a naturally protected body of water that is strategically located at the western tip of Lake Ontario. The Port of Hamilton is accessible via the Burlington Shipping Canal, and has long been a major hub for economic activity. The port also has good rail and road access. It is well situated for access by aviation, water, rail or road for North-South and East-West trade corridors. Hamilton International Airport provides additional facilities for goods movement, and has the largest volume of cargo-only flights among Canadian Airports.

The City's economic development strategy identifies three new emerging economic clusters. These emerging clusters are the Aerotropolis, Biotechnology/ Biomedical and the Film and Cultural Industries. Hamilton's desire to diversify its economic base is enhanced by the presence of three major post secondary institutions, McMaster University, Redeemer University College, and Mohawk College.

Proximity to the Niagara Gateway and US markets is a significant advantage now and it can become an even more important consideration in the future. A very large market, about 120 million population, is within a one-day drive of Hamilton.

### *HAMILTON HUMAN RESOURCES*

From 1996 to 2001 the Hamilton labour force grew 7%, while the number of Transportation and Warehousing (T&W) workers increased by 50%. It is clear that Transportation and Warehousing is becoming a more important source of economic growth for the city than it has been in the past. T&W represented 3.1% of the total labour force in 1996 (0.4% below the Ontario average). By 2001 T&W represented 4.4% of the total labour force (only 0.2% below the Ontario average).

There are issues concerning the appeal of T&W as an occupational choice. The image of transportation and the lifestyle choices often required are not attracting young people at an adequate rate. This is an industry-wide problem that could represent an opportunity for

those that are quick to solve the problems and generate significant numbers of qualified and motivated people.

### *FUTURE PROSPECTS*

Global integration of the North American economy will continue at a rapid pace for the foreseeable future. Nevertheless, trade between Canada and the United States will continue to be the most significant relationship, having doubled in volume in the 10 years since the North American Free Trade Agreement (NAFTA) went into effect.

Hamilton is literally at the crossroads of the most intensive traffic lanes in the NAFTA trading relationship. Analyses presented in this report show that Hamilton's participation in the very large trade volumes passing through the City represents a huge potential, but the base is very small, and there are other contenders (e.g. Brantford).

Business logistics will require successful service providers to be increasingly flexible and capable to adjust rapidly to changing demands. Businesses are employing just-in-time and other precision-based inventory management approaches that place greater and greater pressure on the goods and services transportation system; consequently regional mobility and productivity are becoming key contributors to economic development. Proximity to the major highway network, with air, rail and marine direct connections, all functioning well, are significant advantages upon which to build strategies.

On the other side of the coin, employment land inventory is seen as a limitation that Hamilton needs to address. Land use planning and goods movement efficiency are intimately connected. For their part, business logistics service providers will require significant tracts of land to manage and marshal shipments, and even more contiguous land to combine other "value-added" services such as order fulfilment and accessorizing finished goods. "Freight villages" combining all modes of transportation and related functions are springing up at various locations around the world, as evidenced in the examples cited in the report.

Hamilton's work force is strong in numbers, and growing relatively faster in the transportation and warehousing sector than the total work force growth. Skills development is seen as much less of an obstacle than lifestyle issues as a limiting factor right now by the industry. The immediate overall shortage of truck drivers and equipment operators appears to be the primary concern. A longer term approach to make transportation and logistics a more appealing career choice might produce benefits in terms of recruitment to fill vacancies and to nurture further growth. Such an approach might include enriched training to include wider operational and management skills.

The location and modal connections that Hamilton can offer represent an advantage that is conditional upon also being able to assemble the land and to recruit qualified human resources to carry out new and increasingly complex interchangeable functions.

### CENTRAL THEMES

The need for a coordinated and progressive Goods Movement Strategy for Hamilton is large. There are some central themes emerging from stakeholder consultations in the course of this project. These themes are considered important attributes for success of an eventual strategy. The central themes are:

- a sense of urgency and a bias for action to identify, prioritize and act - early improvements on some quick-return projects to relieve congestion and improve access to port and airport facilities would greatly enhance credibility in this area;
- the approach should be future-oriented, proactive and strategic focussing on planning, funding and resource allocations;
- an ongoing collaborative approach to partnerships, involving:
  - public sector jurisdictions working together;

- clarity in communications between private and public sectors concerning commitments and expectations;
- private sector competitors finding common ground for concerted actions.

Policies and plans also should provide clear and consistent guidance so that private sector investors can confidently assess the risks of making significant investments. In some cases, it is important for the public sector to participate and share risks, in recognition of the public benefits from large scale projects and to provide a buffer for risks that would be inherent in delays to public processes.

### GOODS MOVEMENT VISION FOR HAMILTON

How will success be recognized?

There are many diverse aspects covered in the scope of this study and there are many fields of action. Yet there is the need for an over-arching visionary statement that helps all participants maintain sight of a goal and stay on course. Following are some statements that attempt to articulate at a high level, what the future might contain. These are generally drawn from study participants and the stakeholder consultations.

#### Short Term - 1-5 Years

*All land use planning decisions adequately consider direct and indirect impact on the ability for businesses to move goods and acknowledge the critical importance of supporting and promoting industry as the major generator of employment in Hamilton.*

*The Aerotropolis cluster is established. The port multi-modal logistics cluster land assembly is advanced, and planning for new facilities and services is well into the approvals stage.*

*The City of Hamilton is an advocate for the goods movement industry and is demonstrating this by implementing local roadway*

*improvements, more goods-specific signage and taking an active role in the Southern Ontario Gateway Council.*

*Programs to prepare the workforce to respond to existing and future job opportunities in goods movement and related fields are being implemented by governments, educators and industry working together.*

#### Medium Term 5-10 years

*Industries that rely on just-in-time delivery are moving to Hamilton to take advantage of the availability of 24 hour operations at air, marine and intermodal facilities, placing Hamilton at an advantage compared to its neighbours. Sufficiently large employment lands are assembled, serviced and ready for these new industries comprising a variety of economic clusters.*

*The Aerotropolis cluster has one or two new key establishments; traffic and employment growth outpace the growth of the economy. The port multimodal logistics cluster is established and contributing to growth in employment. Other clusters are also evolving in line with the City's economic development strategy.*

*Certification programs are generating graduates to fill new job opportunities and continuing education is also established to keep the work force prepared to meet new challenges.*

#### Long Term 10-15 Years

*Hamilton is benefiting to full advantage from its transportation network and strategic location which enable goods movement providers, industry and businesses exploit the many cost and time effective transportation modes available while minimizing energy costs and supporting environmental goals.*

*The continuing growth in employment, quality of life and excellence of service make Hamilton a shining example of "best practice" that others attempt to emulate. It enjoys a key role in logistics and distribution of raw materials and finished goods in North America.*

## RECOMMENDATIONS

The central themes, strategic options and geographic focus for significant action, taken all together lead to three major recommendations, plus sub-topics. These are formulated below. Actions and time frames are presented in Section 1-7.

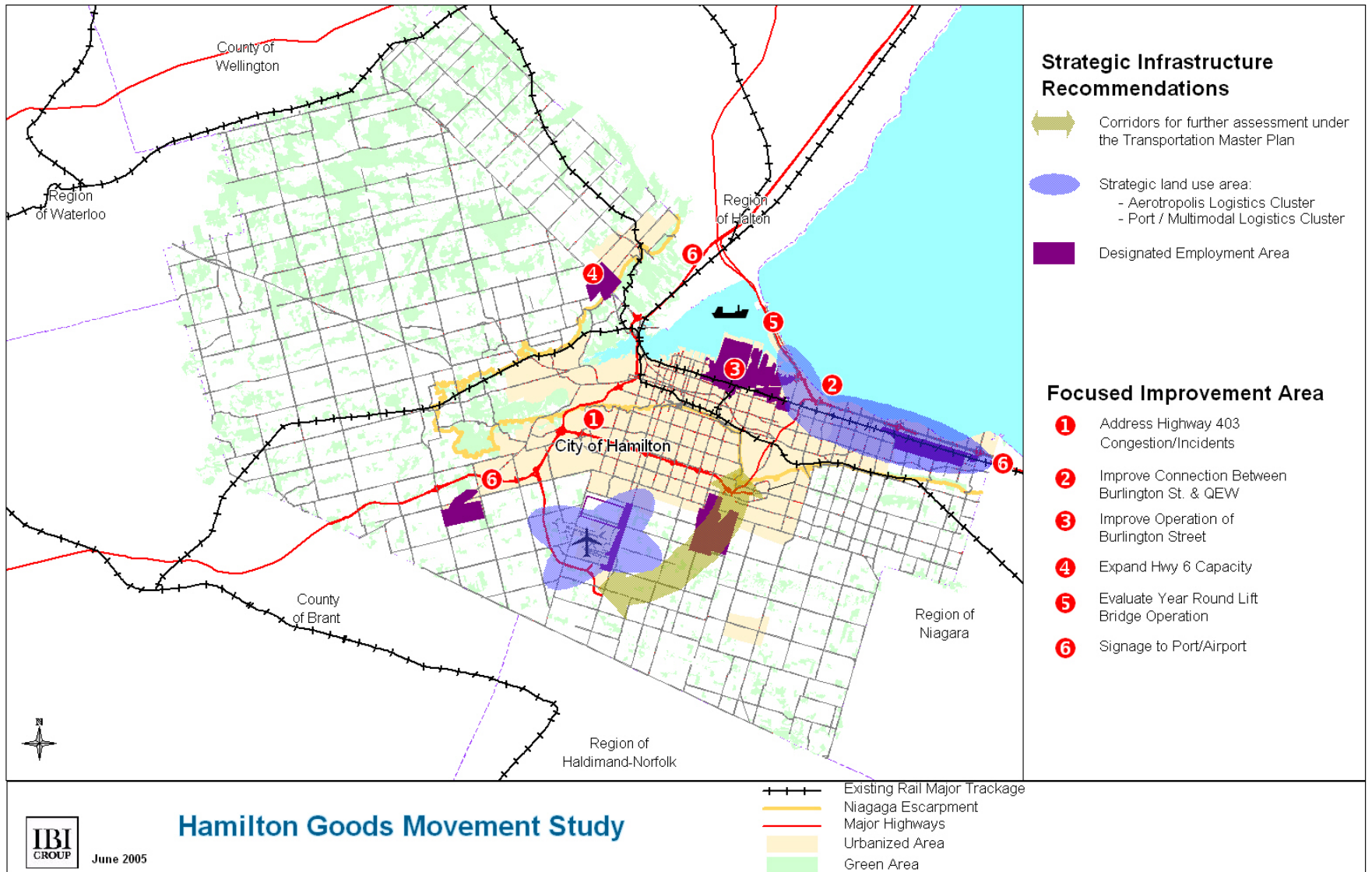
### ***Recommendation No. 1 – Establish On-going Private-Public Collaboration***

The workshops that have been carried out to date in this study have been well received by all stakeholders. Participants are willing to be involved if there is something concrete accomplished that can be translated into value for them. Establishment of an ongoing forum for consultation and collaboration with stakeholders in the goods movement sector, including agreed accountability for all parties, would firmly establish the channel of communication and continue to build credibility.

The Southern Ontario Gateway Council provides an excellent way to link interests within the City to broader initiatives in the Greater Golden Horseshoe. Active participation, continuing support and collaboration, would provide more specific guidance as to how to set up a local consultation group to support regional activities while also serving local economic development priorities.

This is a preferred approach to addressing one of the top needs; which is obtaining data by sharing and establishing new collection initiatives. This data are required to establish measures of transportation and logistics activity in the City and to maintain timely and reliable information on a continuously improving basis. This will be an expensive undertaking if done well, and sharing the effort, risk and cost will be required.

Exhibit 1: Strategic Infrastructure Recommendations



June 2005

Hamilton Goods Movement Study

***Recommendation No. 2 – Promote Economic Development Initiatives***

The essence of Recommendation No. 2 is to forward specific recommendations for consideration in the City’s planning process. Exhibit 1 provides a high level view of the locations of all key sub-recommendations in this section.

- a) Recommend the role of a **port multimodal logistics cluster** for the east Hamilton location. The lands in question border Dofasco lands in the port and include all the industrial lands east to the city limits incorporating port, highway and rail modes of transportation.
- b) Recommend the specific focus for the **Aerotropolis logistics cluster** incorporating the lands around Hamilton International Airport illustrated in Exhibit 1.1, and taking due consideration of the land use implications in the airport master plan document.
- c) Adopt conservative values in establishing noise contours around goods movement facilities (e.g. airport, port, rail and trucking terminals) designated in the fulfilment of a) and b), above including existing rail yards as appropriate.
- d) In the case of both the port multimodal logistics cluster and the Aerotropolis logistics cluster, the specific actions to be undertaken include:
  - identify boundaries (i.e. zoning);
  - identify existing occupants, employment and inputs/outputs;
  - consider ways to make buffers between these industrial commercial lands and residential developments;

- provide for future growth both in terms of new lands to accept new opportunities and for expansion of existing businesses established in the area;
  - establish performance criteria for development, taking into account the overall economic development goals and the central features for the logistics cluster;
  - identify transportation infrastructure requirements and industrial servicing needs to successfully market these lands to target customers.
- e) consider the Port multi-modal logistics cluster as preferred location for development of a multi-modal terminal.

In the case of the port multimodal cluster, the challenge will be to reorient the vocation of the lands and to assist businesses that might thrive better elsewhere to relocate while freeing up strategic lands for logistical functions and value-added services.

***Recommendation No. 3 – Carry Out Transportation Improvements***

There are several transportation improvements that will foster economic development and employment growth:

- a) Resolve freight bottlenecks including short term measures such as improving signage for truck routes to and from major industrial areas, to and from the port and to and from the airport.
- b) Re-examine specifications for truck routes within the City to ensure that clearances are appropriate for traffic entering and leaving the port area in particular. This would involve more routine operation of oversized loads from the port to eastbound and westbound destinations.

- c) Establish policies to accommodate 24-hour freight operations in the port, airport, and rail freight facilities.
- d) Support Hamilton Port Authority initiatives concerning establishment of 12 month operations, which involves eliminating or minimizing the three month closure of the Burlington Lift Bridge each winter for maintenance.
- e) Ensure that the identified focused areas (See Exhibit 1-1) are referred to the appropriate study process in the Transportation Master Plan.
- f) Evaluate strategic infrastructure options through GRIDS:
  - an east-west link connecting the Highway 6 extension from the airport to Red Hill Creek or to the Queen Elizabeth Way to the east of the City;
  - set up more detailed consultations with the railway and the port to accommodate long term growth potential of bulk transfer facilities that now appear to be operating at capacity;
  - assess needs for expansion of Highway 403 connecting the QEW and Highway 6 (i.e. the Freeman Interchange). It is possible that when Red Hill Creek Expressway opens, some traffic that now crosses the Skyway and then turns west on the 403 may be rerouted through the southern part of the City and provide some relief for a period of time;
  - in conjunction with the Province, evaluate the need and justification for a GTA-Niagara Corridor, including alternatives that would connect Hamilton directly to Highway 401.

#### ***Recommendation No. 4 – Develop Human Resource Skills***

There are several immediate actions that the city, in partnership with others, could undertake to address human resource issues in Hamilton and beyond. These are:

- a) Extend transit to airport and other major employment lands in order to increase the size of the employment market.
- b) Participate in development of recruitment and training programs for logistics workers.
- c) The immediate need is for drivers and equipment operators. Problems to solve include lack of attraction of the industry from a recruitment point of view. The image of the occupation suffers. Programs should be considered for high school level orientation and technical training.
- d) Collaborate with the industry to develop joint certification programs that include commercial driver training, operations of related equipment and instruction in management and administration. Broadening the knowledge base could help to improve attractiveness and would also be helpful for those contemplating becoming owner-operators.

Knowledge transfer from other sectors that have addressed similar challenges in the Hamilton area should be considered. In particular, the initiative of the Mechanical Contractors Association in Hamilton has been mentioned as a model that could provide helpful guidance.

#### ***TIME FRAMES FOR ACTION***

A vision is only meaningful if it provides a focus for action and motivation in a common cause. For this vision to be realized, then concerted actions by various parties are required in each of the respective time frames. For the sake of simplicity, the parties are grouped into the following categories:

- The City of Hamilton (Council, staff and agencies)
- The Province of Ontario
- The Federal Government
- Industry Stakeholders

Short Term - 1-5 Years

<p>City of Hamilton</p>	<ul style="list-style-type: none"> <li>• Develop specifications and plans for logistics clusters</li> <li>• Implement changes to land use policies to facilitate logistics clusters and 24 hour operations</li> <li>• Encourage and support Southern Ontario Gateway Council, and work collaboratively with neighbouring municipalities through the Council</li> <li>• Continue consultation with Hamilton industry to generate mutual undertakings to enhance:             <ul style="list-style-type: none"> <li>❖ Safety</li> <li>❖ Data Completion and Performance Indicators</li> <li>❖ Logistics Opportunities</li> <li>❖ Responses to Supply Chain and Capacity Challenges</li> <li>❖ Environmental Issues</li> <li>❖ Regulatory</li> </ul> </li> </ul>
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	<p>Effectiveness and Efficiency</p> <p>(While recognizing that these are evolving issues requiring ongoing collaboration)</p> <ul style="list-style-type: none"> <li>• Assist facility operators in gaining approvals for signage on provincial infrastructure</li> <li>• Resolve freight bottlenecks and specify clearance requirements for truck routes</li> <li>• Conduct research to determine specific skill needs over the next 5 to 10 years for rail, marine, road and aviation</li> <li>• Collaborate with industry and educators to establish career orientation and certification programs</li> </ul>
<p>Province of Ontario</p>	<ul style="list-style-type: none"> <li>• Facilitate cross-jurisdictional collaboration through support of Gateway Council</li> <li>• Provide leadership and funding for improvement in data quality regarding freight activity, costs and congestion</li> <li>• Provide funding and Educational support for Human Resource development initiatives</li> <li>• Adapt policies regarding highway signage for port,</li> </ul>

	<p>airport and rail intermodal terminals</p> <ul style="list-style-type: none"> <li>• Plan network investments in conjunction with Hamilton Master Plan development, and provide funding for designated infrastructure improvements</li> <li>• Support the Hamilton Economic Development Strategy financially and with compatible policies (e.g. Green Belt)</li> <li>• Initiate Environmental Assessment for strategic provincial infrastructure (to be finalized through GRIDS)</li> </ul>
Government of Canada	<ul style="list-style-type: none"> <li>• Resolve issues concerning the future of the St. Lawrence Seaway, and Shortsea shipping</li> <li>• Provide leadership and funding for improvement in data quality regarding freight activity, costs and congestion</li> <li>• Participate with the City in resolving the seasonal closing of Burlington Ship Channel</li> <li>• Provide support for Human Resource Development - funding and design of training and outreach programs</li> <li>• Provide incentives for strategic investments</li> <li>• Collaborate with local and</li> </ul>

	<p>regional stakeholders through the Gateway Council and other means</p>
Industry Stakeholders	<ul style="list-style-type: none"> <li>• Collaborate with Public Sector through input to planning processes</li> <li>• Find ways to collaborate and share information on business activity</li> </ul>

Medium Term 5-10 years

City of Hamilton	<ul style="list-style-type: none"> <li>• Implement recommendations of Transportation Master Plan regarding strategic infrastructure</li> <li>• Continue focus on creating employment lands and logistics corridors</li> <li>• Continue to link industry consultation to implementation of transportation system improvements</li> <li>• Participate in development of recruitment and training programs for key positions</li> <li>• Integrate data sources from governments and industry with planning processes</li> </ul>
Province of Ontario	<ul style="list-style-type: none"> <li>• Expand provincial highway system where needed and established through Environmental Assessment Master Plan process</li> <li>• Continue to link industry con-</li> </ul>

	<p>sultation to implementation of transportation system improvements</p> <ul style="list-style-type: none"> <li>• Enhance programs to collect and share goods movement information</li> <li>• Continue active consultation through organisms like the Gateway Council</li> <li>• Continue to participate in development of recruitment and training</li> </ul>
Government of Canada	<ul style="list-style-type: none"> <li>• Encourage information sharing across regions and jurisdictions</li> <li>• Provide continuing support for Human Resource Development</li> <li>• Provide incentives for strategic investments</li> <li>• Collaborate with local and regional stakeholders through the Gateway Council and other means</li> </ul>
Industry Stakeholders	<ul style="list-style-type: none"> <li>• Continue Collaboration with Public Sector</li> <li>• Improve the sharing of information on business activity</li> </ul>

**CONCLUSION**

The recommendations formulated above are strategic directions to promote economic development through excellence in goods movement and development of human resources.

Some of these recommendations are low cost and can be implemented immediately while others require further evaluation to identify and specify capital requirements and implementation feasibility. The on-going Transportation Master Plan is the appropriate mechanism to ensure that this analysis is comprehensive and that the recommendations are included in the City’s capital plan.

Data gathering and possible primary data surveys would be essential to this Goods Movement Strategy. Measures of social, environmental and economic impacts of the goods movement industry and potential improvements would be important to quantify benefits and costs for later more substantial investments.

**Long Term 10-15 Years**

All parties should continue to make improvements in collaborative development and problem solving, with a balanced approach for reaping and reinvesting profits/surpluses.