The following corrections are made to the report dated April 2005

**Figure 4.1a, Figure 4.1b and Figure 4.1c**

These figures are amended by adding the following text:

“Subject to Section 4.2.1. – Primary Mobility Streets”

**Figure 5.4d - Special Character Streets**

This figure is amended by adding the following phrase:

“This option is currently not supported by City staff due to the offset lanes at the intersections created by the on-street parking switching from one side to the other.”
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## APPENDIX A

Hamilton Perimeter Road Needs Assessment

Trip Generation Rate Table

Trip Tables For Each Area of Change Based on the Preferred Land Use Strategy

Existing Traffic Volumes

Trip Distribution and Assignment for Each Area of Change based on the Preferred Land Use Strategy

Total Traffic Volumes based on the Preferred Land Use Strategy

Total Traffic Volumes Compared to the Existing Traffic Volumes based on the Preferred Land Use Strategy

## APPENDIX B

CHAPTER 1—STAKEHOLDER INTERVIEWS

List of Stakeholders to be interviewed: August 29th, 2002

Stakeholder Interview Summaries (2003) for
CHAPTER 2—PUBLIC INFORMATION CENTRES

October 3rd, 2002
January 16th, 2003: Opportunities and Challenges Report
April 14th, 2003
December 3rd, 2003
March 23rd & 25th, 2004
November 8th, 2004
June 26th & 27th, 2004: Port Days Booth on West Harbour Planning Area Study

CHAPTER 3—COMMUNITY LIAISON COMMITTEE (CLC) MEETINGS

October 3rd, 2002
November 26th, 2003
June 21st, 2004
August 9th & 26th, 2004: Process Advisory Group
September 23rd, 2004
September 30th, 2004
October 14th, 2004
October 21st, 2004
November 18th, 2004
December 2nd, 2004
December 8th, 2004: Supplementary Meeting on Traffic
December 16th, 2004: Supplementary Meeting on Ecological Issues
January 4th, 2005
Consolidated CLC Issues and Reply Document
CLC Terms of Reference
General CLC Correspondence

CHAPTER 4—NEWSLETTERS

December 2002
Spring 2003
November 2003
June 2004
CHAPTER 5—CORRESPONDENCE FROM AGENCIES & GROUPS

   Provincial Government Agencies

   Federal Government Agencies

CHAPTER 6—GENERAL PUBLIC CORRESPONDENCE

CHAPTER 7—OUTGOING GENERAL CORRESPONDENCE

CHAPTER 8—PROJECT UPDATES TO COUNCIL

   August 14th, 2002
   September 25th, 2002
   January 6th, 2003
   March 1st, 2003
   June 9th, 2003 – Memo
   March 24th, 2004

CHAPTER 9—CITY COUNCIL MEETINGS

   September 24th, 2003
   October 29th, 2003
   April 19th, 2004
   February 7th, 2005

CHAPTER 10—REPORTS AND PRESENTATIONS
1.0 Introduction

Stantec in association with Urban Strategies Inc. and Paradigm Transportation Solutions Inc. was retained by the City of Hamilton to develop and evaluate transportation alternatives for the West Harbour Planning Area Study.

1.1 BACKGROUND

The City of Hamilton, in August 2002, initiated an Integrated Land Use, Transportation and Infrastructure Master Plan Study for the area bounded by York Boulevard to the west, Cannon Street to the south, Wellington Street to the east and Hamilton Harbour to the north. The study, known as the West Harbour Planning Area Study or “Setting Sail”, is being completed under the Municipal Class Environmental Assessment process.

Urban Strategies Inc., Stantec and Paradigm Transportation Solutions Inc. completed a report (Setting Sail: Preferred Land Use Strategies) in July 2003 describing the preferred land use strategies for the study area. The report describes the study’s principles and planning framework. Land use options, preferred land use strategy and transportation and servicing impacts are presented for the three “areas of change” in the study area as follows:

- The Waterfront
- The Barton-Tiffany Area
- The Ferguson-Wellington Corridor

This study outlines the process of assessing transportation impacts and developing transportation network alternatives for the preferred land use strategies. A recommended transportation network is presented that was verified to be consistent with the Setting Sail—Secondary Plan for the West Harbour Planning Area land use plan (Schedule M-2).

1.2 BACKGROUND DOCUMENTS

The following documents were reviewed for guidance in developing the West Harbour Planning Area transportation alternatives:

INTRODUCTION


1.3 PERIMETER ROAD

As part of the *Setting Sail* study, the need and justification for the Hamilton Perimeter Road along with the need to protect the lands for the transportation facility was reassessed. Since the location and impact of this transportation facility would have a major impact on the secondary plan and the connectivity of the land uses, this assessment was carried out early in the study process. The *Needs Assessment for the Hamilton Perimeter Road* (July 29, 2003), a copy is provided in Appendix A, concluded that the Perimeter Road is not required for traffic capacity reasons, under existing and forecast future conditions. The traffic impacts of the preferred land use strategy were included and assessed in the needs assessment. Furthermore, a Perimeter Road, which would be subject to an individual Environmental Assessment, would likely have significant environmental and social impacts on the study area. It would create a visual and physical barrier between Downtown and the waterfront and alter travel patterns and volumes on existing roadways.

The *Needs Assessment* recommends the concept of a Perimeter Road be abandoned and attention focused instead on creating a vibrant waterfront, strengthening north-south connections through the area, and dealing realistically with the issue of goods movement. A copy of the *Hamilton Perimeter Road Needs Assessment* is in the Appendix.

Based on the *Needs Assessment*, City Council at its meeting on August 13, 2003 approved Section 23 (c) of the Committee of the Whole Report of August 5, 2003 as follows:

That the Hamilton Perimeter Road Transportation Corridor be excluded from the Secondary Plan and Master Infrastructure Plan for Setting Sail

The remainder of the Transportation Master Plan is based on the fact that the Hamilton Perimeter Road will not be constructed.
1.4 MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT PROCESS

The Environmental Assessment Act and the Class Environmental Assessment set out a framework for a systematic, rational and re-producible environmental planning process that is based on five key principles, as follows:

- **Consultation with affected parties.** Consultation with the public and government review agencies is an integral part of the planning process. Consultation allows the proponent to identify and address concerns cooperatively before final decisions are made. Consultation should begin as early as possible in the planning process.

- **Consideration of a reasonable range of alternatives.** Alternatives include functionally different solutions, “alternative” to the proposed project and “alternative methods” of implementing the preferred solution. The do nothing alternative must also be considered.

- **Identification and consideration of the effects of each alternative on all aspects of the environment.** This includes the natural, social, cultural technical and economic environments.

- **Systematic evaluation of alternatives** in terms of their advantage and disadvantages, to determine their net environmental effects. The evaluation shall increase in the level of detail as the study moves from the evaluation of “alternatives to” to the evaluation of “alternative methods”.

- **Provision of clear and complete documentation of the planning process followed, to allow “traceability” of decision-making with respect to the project.** The planning process must be documented in such a way that it may be repeated with similar results by others.

Based on the five environmental planning principles outlined above, the Class Environmental Assessment sets out a five phase planning process, as follows:

- **Phase 1 Problem Definition**
- **Phase 2 Identification and Evaluation of Alternative Solutions to determine a Preferred Solution**
- **Phase 3 Examination of Alternative Methods of Implementation of the Preferred Solution**
- **Phase 4 Documentation of the Planning, Design and Consultation Process**
- **Phase 5 Implementation and Monitoring**

The Municipal Class Environmental Assessment five phase planning process is illustrated on Figure 1.1.
EXHIBIT A.2
MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA

**Figure 1.1**
Municipal Class Environmental Assessment Planning and Design Process
Projects subject to the Class Environmental Assessment are classified into three possible “schedules”, dependent on the degree of expected impacts. Schedule A projects are minor, operational and maintenance activities and are approved without the need for further assessments. Schedule B projects require a screening of alternatives for their environmental impacts and Phases 1 and 2 of the planning process must be completed.

Provided no significant impacts are identified and no requests for Part II Orders are received by the Ministry of Environment, Schedule B projects may proceed to implementation. If outstanding issues remain after the public review period, any party may request that the Minister of Environment consider issuing a Part II Order. The Minister may issue an order requiring the proponent to comply with Part II of the Environmental Assessment Act (e.g., prepare an individual Environmental Assessment), seek a mediated solution or deny the request.

Schedule C projects must satisfy all five phases of the Class Environmental Assessment planning process shown on Figure 1.1. These Schedule C projects have the potential for greater environmental impact. Phase 3 involves the assessment of alternative methods of carrying out the projects (“alternative design concepts”) and includes public consultation. Phase 4 includes the documentation of the planning process. In this case, the documentation for all projects is compiled in this Master Plan document. Schedule C projects are open to a request by any party for a Minister’s Part II Order at Phase 4 of the process. Phase 5 of the process addresses implementation and monitoring.

The Master Plan approach to satisfying the five phase planning process is set out in the Municipal Class Environmental Assessment (Section A.2.7 and Appendix 4). Master Plans are “comprehensive plans … undertaken for projects which have some common elements such as geography or function. Master planning provides the municipality with a broad framework through which the need and justification for specific projects can be established and the environmental assessment process can be satisfied” (Municipal Class Environmental Assessment, 2000).

The Setting Sail Study has been prepared under the Environmental Assessment Act Municipal Class Environmental Assessment (EA) process addressing Phases 1 and 2 of this process as a Master Plan (see Figure 1.1).

PHASE 1—PROBLEM OR OPPORTUNITY

Step 1 of this phase of the process provides identification and description of the problem or opportunity. Municipalities generally undertake projects in response to certain identified problems or deficiencies. City staff and a team of consultants created a document dated December 2002 called Opportunities and Challenges
which identified a wide number of challenges and opportunities for the study area related to existing conditions, land use and transportation. The report identified where there were opportunities for significant land use change. These areas are:

- The waterfront
- Barton/Tiffany Industrial Area
- Ferguson-Wellington streets Corridor

As part of this report, transportation opportunities and challenges were also identified. The remainder of the study area is made up of stable residential neighbourhoods.

Step 2 of this phase allows for a discretionary public meeting for projects that are expected to generate considerable public interest. On October 3, 2002 an Open House was held presenting work to the community that had been completed at a Community Liaison Committee (CLC) workshop in the afternoon and on January 16, 2003 a Public Information Centre/Open House was held to present the Opportunities and Challenge report to the public.

PHASE 2—ALTERNATIVE SOLUTIONS

Phase 2 consists of five steps that are described below.

- Step 1—addresses the identification and evaluation of alternative solutions to the problem or opportunity. Preliminary Evaluation Criteria were developed which were intended to guide the principal tasks in Phase 2 of the study – the development of alternative solutions and the selection of a preferred solution for transportation.

- Step 2—the preparation of physical description of the project area and a general inventory of the natural environment, social Environment and economic Environment, which were then broken down into more detailed categories. (See Appendix B, Chapter 2, Public Information Centre No. 5 material—March 23, 25 and 30, 2004)

- Step 3—requires the identification of impacts for the alternative solutions on the environment and mitigating measures. Three transportation alternative impacts were presented to the public at the March 23, 25 and 30, 2004 Open House/PIC’s.

- Step 4—is the evaluation of alternative solutions (see Table 4.3) and the identification of the recommended solution. This information was provided at the November 8, 2004 Open House/PIC.

Alternative land use and transportation solutions were developed to address the opportunities and challenges identified in the December 2002 report noted
above. During this step in the process review agencies and the public are required to be consulted which was completed.

- Step 5—Public consultation for the West Harbour Secondary Plan began back in September 2002 and has continued into 2005.

As part of the Integrated Municipal Class EA Process with the Planning Act, the City and Stantec were involved in each component of the development of the Secondary Plan and the implications on the transportation network. As each part of the Secondary Plan was reviewed and land uses were developed, their impacts were evaluated and the traffic implications on the street network identified. The transportation network was reviewed based on the Street Network and based on the Pedestrian and Cycling Network. The Transportation Master Plan identifies a roadway classification system for the West Harbour Study as follows:

- Primary Mobility Streets: This classification is similar to the Downtown Mobility and Primary Streets in the Downtown Transportation Master Plan.
- Neighbourhood Mobility Streets: This classification is similar to the Downtown Traditional and Secondary Streets in the Downtown Transportation Master Plan.
- Local Streets: This classification is similar to the Local Streets in the Downtown Transportation Master Plan.

As transportation includes all modes of travel, the Transportation Master Plan identified the pedestrian and cycling opportunities in the Secondary Plan and these are shown on the Recommended Pedestrian and Cycling Network, as shown in Figure 5.6 to this report.

1.5 PUBLIC CONSULTATION

The study team undertook key steps in the public consultation process to help ensure that the outcome of the West Harbour Secondary Plan reflects the interests and concerns of potentially affected people and parties. West Harbour public consultation involved:

A process that sought out and facilitated the involvement of those potentially involved.

Public consultation has been a key factor of this integrated planning and environmental assessment process for West Harbour. It was important to engage residents of West Harbour, as well as residents from the larger Hamilton community, from the beginning of the study process. Therefore, the study team has been involved with many public events throughout the study process. The following is an
OUTLINE OF THE KEY PUBLIC OPEN HOUSE/PUBLIC INFORMATION CENTRE EVENTS THAT HAVE OCCURRED TO DATE:

- In September 2002, a series of interviews were held with over sixty key stakeholders, including representatives from neighbourhood associations, business groups, industry, marinas and boat clubs, and other organizations, as well as City staff and Councillors. The purpose of the interviews was to gather information about the study area and to listen to individual perspectives on the opportunities and challenges.

- On October 3, 2002, a Visioning Workshop was held, to which a group of key stakeholders were invited. The Workshop provided an opportunity for stakeholders to share their perspectives and begin to identify the changes they envision on the waterfront and in the neighbourhoods. That evening an Open House was held presenting the work that had been completed in the afternoon. The common themes that emerged from the Workshop were further developed into the eight core planning principles of the West Harbour Secondary Plan, Setting Sail.

- On January 16, 2003, a Public Open House was held to present the Opportunities and Challenges Report. The report identified three areas of opportunity within the study area where there were opportunities for land use changes. There were a total of 66 recorded attendees at this Public Open House.

- On April 14, 2003, an Open House was held to present the land use options for each of the three areas of opportunity. The Open House attendees included the public, members of Council, members of the Hamilton Port Authority, the Community Liaison Committee, and Staff Technical Working Group. There were a total of 253 recorded attendees at this Public Open House.

- On August 13, 2003, Council adopted the Preferred Land Use Strategy for the three areas of opportunity and approved the findings of the Needs Assessment Study on the Perimeter Road that concluded that there was no need for the road.

- On December 3, 2003, a Public Open House was held presenting the adopted Preferred Land Use Strategy. There were a total of 121 recorded attendees at this Public Open House.

- On March 23, 2004, a Public Open House was held at LIUNA Station and there were a total of 171 recorded attendees. A second Public Open House was held on March 25, 2004 in Ancaster and Stoney Creek, with a total of 18 recorded attendees in Ancaster and 8 recorded attendees in Stoney Creek. The Public Open Houses were held to provide residents and members of the public with an opportunity to comment on the draft secondary plan land use mapping and alternative solutions for the Transportation Master Plan.
On June 26 and 27, 2004 a Setting Sail information booth displayed the proposed land uses and the proposed alternatives for the Transportation Master Plan at the First Annual Port Days on Pier 8. Comments were requested on the Secondary Plan Land Uses and Transportation Master Plan.

On November 8, 2004 a Public Open House was held to provide residents and members of the public an opportunity to review and comment on the draft Secondary Plan policies and land use mapping along with the recommended alternative for the Transportation Master Plan for West Harbour. There were a total of 149 recorded attendees at this Public Open House.

Summary of Notification

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<td>Planning &amp; Economic Development Committee</td>
<td>January 14, 2005</td>
<td>February 7, 2005 Notice of Public Meeting for Regional Official Plan Amendment, Hamilton Official Plan Amendment, Zoning By-law Amendment &amp; Master Transportation Plan</td>
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All public consultation documentation is attached as Appendix B.
WEB PAGE

As part of the public consultation process, City staff created a site on the City of Hamilton’s Web page titled “West Harbour” (http://www.hamilton.ca/Planning-and-Development/west-harbour/default.asp). The site provided members of the community, external agencies, and other stakeholders, information on the project, the study process, Public Open House dates, relevant reports, presentation materials, and newsletters. The website was updated when new information was made available. This was one key method of providing participants with information they needed to participate in a meaningful way.

During all Open House/PIC events translators were provided to accommodate the diverse ethnic fabric of the study area.

Notice of the Project’s Commencement was issued in the Hamilton Spectator on September 20, 2002

A letter dated June 21, 2004 went out to the agencies providing the Summary of Comments for the March 2004 Open Houses/PIC’s

NEWSLETTERS

Newsletters were made available throughout the study providing different information. (See Appendix B, Chapter 4):

- December 2002—Project background, Consultant Selection Update, Public Consultation Update, Invitation to Challenges and Opportunities Open House on January 16, 2003
- Spring 2003—Project background, website information and an invitation to the April 14, 2003 Open House on land use and transportation options
- November 2003—Project background, information on the Preferred Land Use Strategy, Perimeter Road, EA process and a public consultation update
- June 2004—Project background, status of project, updates on - rail yard noise, public consultation and webpage
- November 2004—Public Information Centre information was provided, a message was written from the CLC co-chairs and an update on the webpage was provided

COMMUNITY LIAISON COMMITTEE (CLC)

A process that provided participants with the information they needed to participate in a meaningful way.
An advisory group called the Community Liaison Committee (CLC) was created for the West Harbour Study. The CLC was formed on the basis of sharing information, obtaining feedback, and providing opportunities for dialogue based on a common understanding of objectives. The CLC provided a forum to deal with secondary planning concerns, as well as a venue for directing, and receiving input from stakeholders to address specific issues and concerns.

Participants were provided opportunities for municipal input and public issues and concerns were considered in developing the project design.

City staff has met with CLC continually during the West Harbour study process. These meetings were held in the evening to provide all members of the CLC an opportunity to attend and speak with City staff and, on occasion, the consulting team. In the beginning of the study process, the CLC meeting format involved a presentation on some component of the West Harbour project (i.e. land use options for the areas of opportunity, transportation options, etc.) or project updates were provided. This allowed City staff to present information to the CLC members and also provided CLC members an opportunity to give feedback to City staff. The following is a list of CLC meeting dates:

- October 3, 2002 CLC Meeting: Brainstorming Workshop.
- November 26, 2003 CLC Meeting: Workshop on water related uses.
- March 30, 2004 CLC Meeting: Review and update of draft Secondary Plan. Review of revisions that were made to the Preferred Land Use Strategy.
- August 9, 2004: Process Advisory Committee Meeting to discuss the role and function of the CLC.
- August 26, 2004: Process Advisory Committee Meeting to discuss the role and function of the CLC.
- September 23, 2004: Discussion based on the West Harbour Recreational Master Plan and the Waterfront Trail.
- October 14, 2004: Building Heights and Densities.


The process incorporated feedback and evolved in response to the input and needs of participants.

In 2004, the CLC determined a need for a new process approach as a result of stakeholder input. The result was appointing co-chairs from amongst the group of public stakeholders, and the retention of services of an independent planning consultant, which City staff agreed to in order to discuss and resolve public concerns. City staff also agreed to additional meetings, as requested by the CLC, to deal with issues of heights of new buildings, traffic and parking issues, density of new development, ecological issues and heritage issues.

The public participation process communicated how their inputs affected outcomes.

In September 2004, City staff created a database titled “Issues and Reply” that tracked issues raised by CLC members. Each issue was inputted into the database and a response was provided by the applicable City staff. Also, any changes to the draft secondary plan policies or schedules as a result of some of the issues raised were documented into the database. The “Issues and Reply” document was updated before each CLC meeting and circulated to all members of the CLC.

1.6 STUDY ORGANIZATION

PROJECT TEAM

The study was carried out by the following Project Team:

- Mary Lou Tanner, City Of Hamilton, Strategic & Environmental Planning
- Bill Janssen, City Of Hamilton, Community Planning & Design
- Harold Groen, City Of Hamilton, Transportation & Transit Planning
- Diana Tavares, City Of Hamilton, Community Planning & Design
- Lorissa Skrypniak, City Of Hamilton, Strategic & Environmental Planning
- Peter Minkiewicz, City Of Hamilton, Economic Development, Business Development
- Bill Zuk, City Of Hamilton, Hamilton Street Railway
- James Goodram, City Of Hamilton, Planning & Development, Downtown Renewal
- Leanne Ryan, City Of Hamilton, Traffic Engineering and Operations
- Jane Soldera, City Of Hamilton, Public Health & Community Services
- Rob Norman, City Of Hamilton, Open Space
WEST HARBOUR PLANNING AREA STUDY—TRANSPORTATION MASTER PLAN

INTRODUCTION

- Jeff Brookfield, Hamilton Port Authority
- Werner Plessl, Hamilton Waterfront Trust

CONSULTANT TEAM

- Urban Strategies Inc.
- Stantec Consulting Ltd.
- Paradigm
- Lura Consulting
- Ken Dakin Land Use Planning Consultant
- Gartner Lee

TECHNICAL AGENCIES

Technical agencies, as identified below were contacted during the study and requested to provide technical input and to comment on the study’s findings.

- Bay Area Restoration Council (BARC)
- Bell Canada
- Canadian Environmental Assessment Agency
- CN
- Cogeco Cable
- Conservation Halton
- Department of Fisheries and Oceans
- Environment Canada
- Federal Marine Terminals
- Hamilton Conservation Authority
- Hamilton Port Authority
- Hamilton Utilities Corporation
- Hamilton-Wentworth Catholic District School Board
- Hamilton-Wentworth District School Board
- Metropolitan Hamilton Real Estate Board
- Ministry of Community and Social Services
- Ministry of Culture
- Ministry of Health
- Ministry of Municipal Affairs and Housing
- Ministry of Natural Resources
- Ministry of the Environment – Environmental Assessment and Approvals Branch, West Central Region
- Ministry of Transportation
- MP Constituency Office
- Parks Canada
- Remedial Action Plan (RAP)
- Royal Botanical Gardens
- Southern Ontario Rail/Rail America
- Transport Canada
- Union Gas
NEIGHBOURHOOD ASSOCIATIONS AND INTEREST GROUPS

- Ainslie Woods, Westdale Communities
- Architectural Conservancy of Ontario
- Bay Area Arts & Heritage Stabilization
- Beasley Neighbourhood Association
- Bennetto Recreation Centre
- Central Hamilton Advisory Committee
- Central/North End West Neighbourhood
- Chamber of Commerce
- Chinese Community of Hamilton
- Citizens Against Hazardous Waste
- City of Burlington
- Conserver Society of Dundas
- Corktown Community Association
- Downtown BIA
- Durand Neighbourhood Association
- Friends of Haida
- Friends of Waterfront Trail
- Gibson Neighbourhood Watch
- Gourley Community Association
- Green Venture
- Hamilton and District Labour Council
- Hamilton and Region Arts Council
- Hamilton Bay Sailing Club
- Hamilton Federation of Agriculture
- Hamilton Halton Homebuilders Association
- Hamilton Industrial Environment Association
- Hamilton Power & Sail Squadron
- Hamilton Regional Indian Centre
- Hamilton Scourge Society
- Hamilton Ships Company of 1812
- Hamilton Society of Architects
- Hamilton Waterfront Trust
- Harbour West Boating School
- Harbour West Neighbours
- HMCS Star
- International BIA
- James Street Merchants
- Lansdale Neighbourhood
- Leander Boat Club
- Lively Dragon
- Macassa Bay Yacht Club
- McMaster University
- Navy League of Canada
- North Central Community Council
- North End Neighbourhood Association
- Ontario Great Lakes Renewal Fund
- Ontario Public Information and Research
- Ontario Sailing Association
- Royal Hamilton Yacht Club
- Stinson Neighbourhood Association
- Strathcona Community Council
- United Steelworkers of America

CITY OF HAMILTON DEPARTMENTS

- City Manager’s Office
- Councillor Ward 1
- Councillor Ward 2
- Culture and Recreation
- Economic Development, Business Development
- Economic Development, Tourism
- Emergency Services
- Hamilton Police Services
- Hamilton Street Railway
- Mayors Office
1.6.1 Consultation with Technical Agencies

On November 4, 2002, the City Of Hamilton introduced the Class Environmental Assessment study to relevant agencies and asked them to attend the October 3, 2002 Open House/PIC. In addition comments, concerns or proposed requirements were asked for. Following the initial letter of introduction, four points of contact were made with agencies.

As a result of solicitation of comments at each individual Open House/PIC the City Of Hamilton created the Summary of Comments table for each PIC. These tables included the public’s comments and staffs responses to those comments which were posted on the projects website. (See attached)

1.7 MASTER PLAN IMPLEMENTATION

1.7.1 Notice of Study Completion

As part of the final stage of public and agency consultation for the proposed West Harbour Area Study Transportation Master Plan, a Notice of Study Completion of the Class EA will be published after City Council considers the study recommendations.

Following authorization by City Council to release the Notice of Completion, a 30-day period for public and agency comment and/or requests for Part II Orders is initiated. This Notice will be published in the Hamilton Spectator for 2 weeks in a row and will be sent to all required Agencies and people on the project mailing list. Any person may request that the Ministry of Environment issue a Part II Order of any project listed in the Master Plan. This comment and review provision for the Master Plan will follow the procedures set out in the Municipal Class Environmental Assessment (June 2000). The procedure is summarized as follows:

- Any party with a concern can bring it to the City of Hamilton’s attention at any time during the planning process
- If a concern is not resolved to the satisfaction of the party though discussions with the City Of Hamilton, the party may request that the City Of Hamilton voluntarily proceed with additional phases of the Class Environmental
Assessment planning process (e.g. a Schedule C project to an individual Environmental Assessment)

- If City Of Hamilton declines and the party wishes to pursue the concern by seeking a Part II Order, the party may request that the Minister issue a Part II Order by writing to the Minister of the Environment (copying the request to the City Of Hamilton) before the expiry of the 30 day notice period. The Notice of Completion will state the date of expiry of the 30-day notice period. Part II Order requests made after the end of this period will not be considered by the Ministry of Environment.

Comments, at any time, may be directed to Mary Lou Tanner, Manager of Strategic & Environmental Planning, City of Hamilton.

1.7.2 Five Year Review

If the construction of the projects named in this Master Plan is not commenced within five years from the date of this Master Plan Notice of Completion, the City of Hamilton will conduct a review of this Master Plan.

Based on the requirements within the Class Environmental Assessment, it is the intent of the City to review the Master Plan not later than every five years, where there are outstanding projects. The Class Environmental Assessment requires the proponent to consider any lapse of time greater than five years from the filing of the Notice of Completion of a project to the commencement of construction for the project as a requirement for a review of the planning and design process. Similarly, should there be a substantive change to the environmental conditions that affect a project, a review will be undertaken. Should such a review be required, the City will conduct a comprehensive review of the following factors:

- Location of the project
- Significant new environmental effects
- New technology
- Change in specification for projects by regulatory agencies which affects projects
- Timing of projects based on increased or decreased demand
- Deletion or addition of projects within the system addressed in this Master Plan

Additional factors may be identified from time to time.

1.7.3 Review of the Master Plan

Following a review of any projects, the City will issue a Notice of Master Plan Review. If a Master Plan Review results in a changes to a project, a Notice of Filing of Addendum be provided and an opportunity for requests for Part II Orders provided.
The Notice of Filing of Addendum will provide information about the contents of the Review. This notice will be advertised and placed on the public record in a location noted in the Notice and for a period noted in the Notice.

1.7.4 Project Implementation/Engineering
The City of Hamilton is committed to monitoring and reviewing the environmental significance of all of the projects outlined in the Master Plan prior to and during their design and construction. To do this, the City of Hamilton has developed a comprehensive approach for project implementation including opportunities for locally affected residents and affected agencies to participate in the process. The City is committed through the Secondary Plan policies for work to be addressed through the Environmental Assessment process for such things as traffic calming on local streets and improvements to Bay Street, James Street and John Street.

1.7.5 Public and Agency Involvement during Implementation
While the Master Plan has satisfied the planning process outlined in the Class Environmental Assessment, the City Capital Planning and Implementation Division will continue to discuss the projects with interested and affected local residents and affected agencies prior to the construction of each project or related group of projects.

Ongoing dialogue will serve to update residents on the projects outlined within this document at a time when detailed site-specific comments can be made. City of Hamilton's experience with such dialogue has been positive. Should any additional issues arise from the public and agency consultation after the completion of the Master Plan, these issues should be resolved between the concerned party and the City.

If you have any questions regarding this Master Plan, or if you would like to submit written comments on aspect of the projects, please contact:

- Mary Lou Tanner, Manager Strategic & Environmental Planning

1.7.6 Copies of the Master Plan
Copies of the Master Plan will be available for public review at the following during business hours:

- City of Hamilton
  Public Works Department
  Capital Planning & Implementation Division
  77 James Street North, Suite 320
  Hamilton, ON  L8R 2K3
  Phone: 905-546-2424, ext. 5101
  (Hours: 8:30 AM to 4:30 PM business days)
2.0 Transportation Inventory

In developing the land use options, the following planning framework was identified with respect to transportation access and connections in the study area.

2.1 EXISTING CONDITIONS

The West Harbour area was developed, for the most part, on a grid network of streets and blocks, which provides for a rational and connective system of access and movement for vehicles, pedestrians and cyclists (see Figure 2.1). With the exception of roadways on the periphery, such as York Boulevard, and to a lesser degree the Wellington/Victoria and Cannon/Wilson one-way pairs, there are no major roads within the study area. There are many streets, however, that can be considered non-local in nature. These include Barton, Queen, Hess, Bay, Guise, Burlington, James, John and sections of Stuart and Strachan. Although some of these function differently than others, together they should continue to provide the primary vehicular routes to and through the area.

2.2 TRANSPORTATION OPPORTUNITIES

Recognizing the advantages of a grid street network, future development in Areas of Major Change should extend and/or refine the grid. In areas where the grid has been interrupted, notably around Central Park and along the Ferguson corridor, the City should seek to extend or connect streets.

Extension of the grid, however, will not overcome the major barriers to waterfront access, principally the bluff that follows the original shoreline, the rail yard and the CN main line. To overcome these, strong linear connections along the waterfront and additional crossings over the rail corridor should be established.

From the water, access to the waterfront would be improved with additional docks for transient boaters, and a central location (Piers 6-7) for the docking of water taxis, ferries and tour boats.

Specific opportunities the City should pursue, related to access and connections, include the following:

- Establish a clear street hierarchy that adopts the street classification system used Downtown (i.e., mobility streets, traditional streets, local streets)
- Improve transit and pedestrian connections between the waterfront and Downtown parking facilities and activity centres
Figure 2.1
West Harbour Planning Area Inventory of Access and Barriers

LEGEND OF ACCESS & BARRIERS COMPONENTS:
- EXISTING MARINE ACCESS
- FUTURE MARINE ACCESS
- LOCAL STREET
- NON-LOCAL STREET
- AREAS OF DISCONTINUOUS GRID:
- OPPORTUNITIES FOR GRID EXTENSIONS AND CONNECTIONS
- RAIL BARRIER
- TOPOGRAPHIC BARRIER
- ROAD BARRIER
- EXISTING CROSSING
- POTENTIAL FUTURE CROSSING
- POTENTIAL FUTURE CONNECTION
WEST HARBOUR PLANNING AREA STUDY—TRANSPORTATION MASTER PLAN
TRANSPORTATION INVENTORY

- Reconnect pieces of the grid with new streets or trails as part of a reconfigured Central Park
- Reconnect pieces of the grid as the Barton-Ferguson area is redeveloped
- Extend the existing grid of streets to improve access to the waterfront
- Establish, designate and promote a network of pedestrian and cycling routes
- Provide an additional crossing over the rail line at Ferguson, which is approved as part of the Mary Street Bridge Class EA process
- Provide, in concert with redevelopment, new pedestrian crossings over the rail corridor between Dundurn Park and Bay Street
- Make York Boulevard, Cannon Street and Barton Street more pedestrian-friendly through streetscape and intersection enhancements

2.3 DOWNTOWN LAND USE PLAN CONTEXT

Streets in Downtown Hamilton have been classified for urban design purposes as a guide to the planning and construction of public improvements to streets and sidewalks (Putting People First: the New Land Use Plan for Downtown Hamilton) as follows:

- **Mobility Streets** provide mobility for through traffic, freight and goods. They connect major activity centres within and to points outside of the region, with sufficient connections to neighbourhoods. Cyclists are permitted and can be accommodated with wider curb lanes. On-street parking is limited to non-peak hours. The mobility streets in the Downtown that extend into the West Harbour study area include Bay Street, James Street, York Boulevard, Cannon Street, Queen Street and Wellington Street (paired with Victoria Avenue). Other mobility streets outside the West Harbour study area include King Street, Main Street, and Hunter Street

- **Traditional Streets** are locally-oriented streets that serve the local land uses. Pedestrians are given priority with the provision of sidewalks on both sides of the street and a street that is designed for easy pedestrian crossing. The primary purpose is to provide access by residents, shoppers, employees, and serve the balanced travel needs within the neighbourhood. Cyclists are encouraged and do not require special provisions due to low vehicular speeds. On-street parking is encouraged and generally two lanes are provided for travel. Traditional streets in the Downtown that extend into the West Harbour study area include Hess Street, Caroline Street, Hughson Street, Catharine Street and Ferguson Avenue. Other traditional streets outside the West Harbour study area include Market Street, King William Street, King Street on the south side of Gore Park, and Jackson Street
TRANSPORTATION INVENTORY

- **Local Streets** are streets where access to businesses or residences, on-street parking and pedestrian movement take priority over traffic movement. Traffic calming will be utilized where it will enhance the quality of the residential street.

The streets, gateways and public spaces for the Downtown are illustrated on Figure 2.2 (Schedule L-7).

### 2.4 DOWNTOWN TRANSPORTATION MASTER PLAN CONTEXT

A summary of recommendations in the *Downtown Transportation Master Plan*, including those that may influence the West Harbour study area or impact streets that extend from the Downtown study area into the West Harbour study area are summarized below.

- **Primary Street Network** — The primary streets that will be changed from one-way to two-way operation include James Street from St. Joseph’s Drive to Murray Street, John Street from St. Joseph’s Drive to Strachan Street, York Boulevard from Bay Street to James Street, Wilson Street from James Street to Wellington Street, and King Street from Queen Street to Wellington Street.

- **Secondary Street Network** — The secondary streets that will be changed from one-way to two-way operation include Hess Street from York Boulevard to Barton Street, Caroline Street from Napier Street to York Boulevard, Park Street from York Boulevard to Barton Street, MacNab Street from Cannon Street to Guise Street, Hughson Street from Wilson Street to Barton Street, Rebecca Street from John Street to Wellington Street, King William Street from John Street to Mary Street, Hunter Street from Queen Street to Wellington Street, Charlton from James Street to John Street, and St. Joseph’s Drive from James Street to John Street.

- **Pedestrians** — Key pedestrian corridors and links to be upgraded or established with enhancements such as wide sidewalks, improved street lighting, etc. include Queen Street from King Street to York Boulevard, Bay Street from Main Street to Strachan Street, Catharine Street from Hunter Street to Cannon Street, Mary Street from King Street to Barton Street, York Boulevard from Hess Street to Bay Street, Napier Street from Caroline Street to Bay Street, George Street from Caroline Street to Bay Street, Main Street from Hess Street to Catharine Street, and Jackson Street from MacNab Street to Wellington Street.

- **Cycling** — Improvements to the City of Hamilton’s bicycle network include introducing designated bicycle lanes on Ferguson Avenue between Hunter Street and Barton Street, and Hunter Street from Queen Street to Wellington Street.

- **Public Transit** — Changes to improve transit operation and increase ridership include investigating options to improve signal timing for transit at congested...
intersections and improve bus routing as part of the conversion of streets to two-way operation. Transit Consolidation/Pedestrian Area Node is recommended at MacNab Street/King Street/James Street/Main Street area.

The *Downtown Transportation Master Plan* recommended street network including pedestrian and bicycle network, transit and parking improvements are illustrated on Figure 2.3.
Downtown Hamilton Streets Classification

(Schedule L-7 from Putting People First: the New Land Use Plan for Downtown Hamilton)
Figure 2.3
Recommended Long Term Transportation Network Plan (Downtown Transportation Master Plan)
3.0 Transportation Impacts of the Preferred Land Use Strategy

3.1 OVERVIEW OF THE PREFERRED LAND USE STRATEGY

The land use strategies for the areas of change are described in detail in the Setting Sail: Preferred Land Use Strategies report. The preferred strategies are illustrated on Figure 3.1 to Figure 3.3.

3.2 TRIP GENERATION

A typical weekday PM peak hour was selected as representing the design hour on which transportation impacts and network alternatives should be based. Although weekday AM peak hour traffic volumes can be high in the opposite direction as the PM peak hour, generally the PM peak hour carries more traffic due to a variety of trips including work-to-home, social/recreational, school, shopping and business trips.

The number of trips that the preferred land use strategy is forecast to generate at full build-out in the long term was based on the Institute of Transportation Engineer’s (ITE) Trip Generation (6th edition). The trip generation rate table is provided in the Appendix. A mode reduction factor of 20% to account for transit, bike, and walk trips was applied to all trip making forecasts. This is consistent with the City’s targets in Vision 2020.

Trips generated by commercial and office activities were further reduced to some degree (10%) because of overlaps with new residential trips and because of "pass-by" or multi-purpose trips (35% to 50%). In summary, new commercial trips generated by the proposed development were estimated to be 20 to 45% of the typical trip rates for stand-alone commercial and office developments.

An annual visitation of 400,000 people to the tourist/institutional attractions was estimated based on the assumption that up to four destinations like the Marine Discovery Centre may be developed on Pier 8, making Pier 8 a destination on par with the Royal Botanical Gardens. It is anticipated that each would attract approximately 100,000 visitors.

The above characteristics are representative of current trends, having regard to the relatively central location of the land use precincts, and there is certainly opportunity for greater reductions through alternate mode choice in the future. The resulting trip tables for each area of change based on the preferred land use strategy are provided in the Appendix. The number of trips generated by each area of change based on the preferred land use strategy is summarized in Table 3.1. It should be noted that
the traffic forecasts are for full build-out of the maximum allowable density ranges in Low, Medium 1 and Medium 2 residential areas for the land uses of the preferred land use strategy. Future traffic volumes are more likely to be less than the forecasts since maximum densities will not be realized for every developable parcel of land. However, basing trip generation on maximum densities is considered a conservative approach.

<table>
<thead>
<tr>
<th>Area of Change</th>
<th>Total Weekday PM Peak Hour Trips (vph)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barton-Tiffany</td>
<td>600</td>
</tr>
<tr>
<td>Waterfront</td>
<td>890</td>
</tr>
<tr>
<td>Ferguson-Wellington</td>
<td>400</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,890</strong></td>
</tr>
</tbody>
</table>

The preferred land use strategy collectively will generate up to 1,900 trips in the weekday afternoon peak hour. To put that number in perspective, those trips amount to about one-third of the number of peak hour trips currently entering and exiting the non-local streets of the study area, north of York/Cannon and west of Wellington.

The trips generated by the preferred land use strategy for each area of change were distributed to the roadway network to determine the impacts, i.e., forecast the change in traffic compared to the existing traffic volumes on the non-local streets in the study area. The trip distribution was based on the City’s EMMEII travel demand model origin/destination trip tables. The existing traffic volumes and trip distribution and assignment are illustrated on network plans provided in the Appendix.

The trip generation used to develop the alternative transportation networks was based on the Preferred Land Use Strategy. It was verified to be applicable to the Secondary Plan land uses (Schedule M-2), since the differences in the land use types and densities were mostly insignificant and would only result in lower trip generation, not higher, as discussed in Section 5.1, page 46.
Figure 3.1
Preferred Waterfront Land Use Strategy (from Setting Sail: Preferred Land Use Strategies, Figure 5)
Figure 3.2

Preferred Barton-Tiffany Area Land Use Strategy (from Setting Sail: Preferred Land Use Strategies, Figure 6)
Figure 3.3
Preferred Ferguson-Wellington Corridor Land Use Strategy (from Setting Sail: Preferred Land Use Strategies, Figure 8)
3.3 SPECIAL EVENTS AND WEEKEND TRAFFIC

Traffic generated by special events or festivals on the waterfront is managed through the City’s Special Event Advisory Team (S.E.A.T.) This Team is composed of City staff who work together providing guidelines for special events that meet the policy requirements of the City. From S.E.A.T., guidelines for events are recommended to City Departments then on to Council for final approval of special events. S.E.A.T. includes representation from:

- Culture and Recreation
- Building
- Electrical Safety Authority
- Finance
- Emergency Medical Services
- Hamilton Street Railway
- Health
- Parking/Noise Control
- Parks
- Police
- Traffic

Waterfront attractions will draw more visitor traffic on weekends than weekdays. However, home-based or work-based trips currently generated in the West Harbour study area are generally lower on weekends resulting in an overall lower volume of traffic on typical weekends compared to weekdays.

3.4 ROADWAY NETWORK

At full build-out (i.e., 20+ years hence), the combination of the preferred land use options for Barton-Tiffany and the Waterfront could have a significant impact on non-local streets in the study area but could be accommodated by the capacity of these roadways. These include such streets as Barton, Queen, Hess, Bay, James, John, Burlington, Wellington and Victoria.

Traffic was not assigned to Bay Street north of Strachan Street to ensure that the network could accommodate the development traffic without increasing traffic on Bay Street. Bay Street currently carries about 300 vehicles in each direction in the peak hour and this volume is considered to be a reasonable balance between its non-local function and residential nature. Certainly, care must be taken to monitor volumes on
Bay Street and to take appropriate actions to reduce or calm traffic when required. The City will initiate the appropriate traffic calming studies and introduce traffic calming techniques, as required, to reduce the probability of additional through traffic infiltrating Bay Street.

Strachan Street would also be utilized as a connector between Bayfront Park and John Street to allow for different traffic distributions north and south of Strachan. It also provides a multi-use trail connection from Bayfront Park to Ferguson Avenue and Jackie Washington Park.

At full build-out, James Street between Burlington Street and Cannon Street would be essentially operating at capacity southbound assuming the existing cross-section and on-street parking. Consequently, there may be a future need to review ways to accommodate additional travel on James Street North. These may include encouraging traffic to use other routes, such as Wellington/Victoria, fine-tuning parking and loading regulations, increasing transit share and the like. It may be necessary to structure an increased reliance on access to the waterfront from the east via Burlington Street through the use of traffic calming and diversion techniques. However, it is highly likely that traffic volumes will be less than forecast since the trip generation is based on the maximum allowable land use densities of the preferred land use strategy.

A review of the proposed local street system indicates that it would operate in an acceptable manner. Alternatives for recommended street cross-sections will be developed, having regard to expected traffic and the need to accommodate pedestrians and cyclists.

Review of the Ferguson-Wellington option indicates that the proposed and existing street network will be sufficient to serve the development with a good level of service, in part because both Wellington and Victoria are arterial access routes with spare capacity. There were no problems identified with the additions to the roadway system proposed in the land use concept, and two-lane roads are all that will be required within the development block. Widening of Wellington and Barton are not required. Any need for left-turn lanes or other improvements at intersections will be reviewed in later stages.

3.5 BICYCLE NETWORK

The bicycle network would be affected in several ways. Barton Street is a major east-west bike route in the City’s Bicycle Network. Increased traffic on Barton may require protection for two through lanes in each direction between James Street and Victoria Avenue, which would result in reduced flexibility for bike route design options. In the Barton-Tiffany area, bike routes can be adequately accommodated.
Connections across the rail lines/rail yard would be significantly enhanced with the preferred option via Caroline Street, as set out in the City’s Bicycle Network. A bicycle route connection across the CN tracks has long been planned for Ferguson Avenue. With a new bridge at Ferguson Avenue, Strachan Street must end in a cul-de-sac west of Ferguson Avenue. A multi-use trail connection should be provided linking Strachan Street to Ferguson Avenue and Jackie Washington Park.
4.0 Transportation Options

4.1 PLANNING PRINCIPLES

The planning process for Setting Sail was guided by eight core principles that emerged from extensive public consultation in the initial phase of the study, and which balance the aspirations of the City and the local community for West Harbour. The principles reflect and build upon many of the City’s Vision 2020 goals for creating a healthy and sustainable city. They are the foundation for this Secondary Plan and the West Harbour Transportation Master Plan. As such, they provide important criteria against which future initiatives and proposals for the area will be evaluated to help ensure the broad public objectives for West Harbour are realized. The full Secondary Plan should be referred to for the discussion and pre-amble for each of the principles.

1. Promote a healthy harbour
   - Employ “best practice” techniques for stormwater management to minimize reliance on the existing combined sewer system;
   - Encourage water conservation;
   - Maintain or enhance existing aquatic and shoreline habitats;
   - Remove, replace or seal potentially harmful sub-surface materials, as per statutory policies and guidelines;
   - Identify and protect key views and improve public access to the harbour; and,
   - Increase the public’s understanding and appreciation of the harbour and watershed.

2. Strengthen existing neighbourhoods
   - Ensure new development respects and enhances the character of the neighbourhoods;
   - Relocate heavy industrial uses and clean-up contaminated sites;
   - Encourage compatible development on abandoned, vacant and under-utilized land;
   - Support James Street as the area’s main commercial street;
   - Encourage new commercial uses that cater to the local neighbourhood;
   - Enhance the amenities and landscaping in existing neighbourhood parks;
   - Augment existing parkland with additional publicly-accessible open spaces;
TRANSPORTATION OPTIONS

- Ensure existing and future neighbourhoods are well served by community services, such as schools, health care, libraries and emergency services;
- Improve access to the waterfront and Downtown from the neighbourhoods;
- Preserve, restore and/or reuse buildings of historic or architectural significance;
- Preserve and maximize on street parking; and,
- Generally avoid expropriation of residential and commercial properties.

3. **Provide safe, continuous public access along the water’s edge**

- Land at the water’s edge, to a depth that can accommodate a trail, promenade, or other desired open space or public facility, must be publicly-owned;
- New development on the waterfront should not prevent or inhibit public access to the water’s edge;
- The waterfront should include public facilities for launching and docking recreational boats; and,
- The needs of recreational boating organizations for direct, safe and secure access to the harbour should be respected.

4. **Create a diverse, balanced and animated waterfront**

- Promote a diversity of land uses along the waterfront, including open space, marine recreation, residential, commercial, institutional and cultural;
- Maintain a balance of active and passive recreational uses and outdoor and indoor waterfront attractions;
- Enhance the city as a tourist destination;
- Be “waterfront-appropriate”, i.e., take advantage of the harbour setting and promote season-long and year-round enjoyment and appreciation of the waterfront; and,
- Support and encourage a diversity of marine activity.

5. **Enhance physical and visual connections**

- Mitigate or eliminate physical barriers to the waterfront;
- Promote a connected open space system along the waterfront, through the neighbourhoods and between Downtown and the waterfront;
- Extend the existing grid of streets and blocks to the waterfront wherever feasible and appropriate;
- Preserve and augment important public vistas and view corridors to and from the waterfront;
Improve pedestrian, cycling and transit connections to the waterfront from Downtown and the Escarpment;

Establish a pedestrian connection between Dundurn Park and the Waterfront Trail;

Enhance the streetscapes of key north-south and east-west streets; and,

Develop a continuous waterfront trail.

6. **Improve access**

Establish a clear street hierarchy that recognizes the function and character of existing streets;

Improve road connections to the waterfront and identify primary routes to waterfront destinations;

Promote a more balanced multi-modal transportation system, in which public transit, cycling, walking, ferries and water taxis have a significant role;

Ensure most dwelling units in the area are within 400 metres walking distance of a transit stop; and,

Minimize traffic impacts on the existing local street network.

7. **Celebrate the city’s heritage**

Conserving and strengthening the overall character of the West Harbour neighbourhoods and streetscapes;

Conserving, restoring and reusing historic buildings and structures;

Reflecting and interpreting the city’s industrial, marine and cultural heritage in the design of new buildings and open spaces;

Encouraging the development of cultural institutions to inform residents and visitors about the area’s heritage; and,

Providing public open spaces for cultural festivals and other celebratory events.

8. **Promote excellence in design**

Design and construct buildings that respect, complement and enhance the best attributes of West Harbour;

Adopt “best practice” technologies to achieve energy efficient buildings;

Ensure the public realm—the area’s parks, squares, streets, trails and public buildings—is designed, up-graded and maintained to the highest standards;

Incorporate public art into the design of significant buildings and open spaces; and,
Promote the development of inspiring, meaningful and memorable places.

4.2 ROADWAY CLASSIFICATION SYSTEM

This Transportation Master Plan identifies a roadway classification system for the West Harbour study area so that:

- The type of service or intended use each roadway provides to the public can be understood
- The characteristics of each roadway classification can be defined to match the intended use of the roadway
- The operation and safety of each roadway can be assessed relative to its existing conditions and desired design in order to make modifications that will improve safety and operational issues

The roadway classification is intended to be flexible such that improvements can be implemented over time, reflect the local context of the roadway and allow for the implementation of the Secondary Plan. Given the proximity of the Downtown to the West Harbour study area, the roadway classifications for each, although not necessary exactly the same, should be compatible. In addition, the West Harbour roadway classification needs to reflect the planning principles, the existing mobility and access conditions and the forecast conditions based on the Secondary Plan.

Note that an initial assessment of the impacts of the Secondary Plan on the transportation network has been conducted to ensure that the transportation network can absorb the impacts within the framework of the planning principles. This is documented in Section 3.0, page 26. The trip generation used to develop the alternative transportation networks was based on the Preferred Land Use Strategy. It was verified to be applicable to the Secondary Plan land uses, since the differences in the land use types and densities were mostly insignificant and would only result in lower trip generation, not higher (see Section 5.1, page 46).

The following three roadway classifications were discussed as being applicable to the West Harbour study area and compatible with the adjacent Downtown study area. They are described in detail in Table 4.1 with respect to their similarity to street definitions found elsewhere, their mobility function or focus, the number of through travel lanes, on-street parking, provision for cyclists, sidewalks and boulevards, traffic control anticipated at intersections, transit, and right-of-way and widening potential.
### Table 4.1
Description of Roadway Classifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Primary Mobility Street</th>
<th>Neighbourhood Mobility Street</th>
<th>Local Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>Similarity to street definitions found elsewhere</td>
<td>Similar to the Downtown Mobility Street and Primary Street classifications developed for the Downtown studies, and to generic Arterial Road definition</td>
<td>Similar to the Downtown Traditional and Secondary Street classifications developed for the Downtown studies, and to generic Collector Road definition</td>
<td>Similar to the Downtown Local Street classification developed for the Downtown studies, and to generic Local Road definition</td>
</tr>
<tr>
<td>Mobility focus</td>
<td>Provides for the mobility of through traffic, people and goods, connecting major activity centres and neighbourhoods within the study area, and connecting to points outside the area</td>
<td>Provides for the mobility of traffic, people and goods within the study area and to serve the local land uses</td>
<td>Provide access to businesses and residences, with on-street parking and pedestrian movement a priority over traffic movement</td>
</tr>
<tr>
<td>Number of through travel lanes</td>
<td>One to two through lanes in each direction for cars, trucks and transit vehicles - centre, two-way left-turn lane or a median planting strip on some sections of roadway may be added</td>
<td>One through lane in each direction for cars, trucks and transit vehicles</td>
<td>One through lane in each direction for cars and local truck deliveries – streets will generally remain as they currently exist unless there are compelling reasons to change them - conversion of existing one-way local streets to two-way may have implications for on-street parking, so such conversions should be initiated by local residents</td>
</tr>
<tr>
<td>Parking</td>
<td>On-street parking may be permitted, but may be limited to non-peak hours or restricted</td>
<td>On-street parking may be permitted, but may be limited to non-peak hours or restricted to one side of the street</td>
<td>On-street parking will be permitted on one or both sides of the street</td>
</tr>
<tr>
<td>Provision for cyclists</td>
<td>Cyclists may be accommodated in wider shared lanes, bike lanes or shared lanes depending on the speed, volume and mix of traffic</td>
<td>Cyclists may be accommodated in wider shared lanes, bike lanes or shared lanes depending on the speed, volume and mix of traffic</td>
<td>Cyclists will be accommodated in shared lanes</td>
</tr>
</tbody>
</table>
### TRANSPORTATION OPTIONS

#### Roadway Classification

<table>
<thead>
<tr>
<th>Feature</th>
<th>Primary Mobility Street</th>
<th>Neighbourhood Mobility Street</th>
<th>Local Street</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sidewalks and boulevards</strong></td>
<td>Sidewalks are required on both sides to accommodate pedestrians, and planting strips to separate pedestrians from the roadway should be provided through residential areas</td>
<td>Sidewalks are required on both sides to accommodate pedestrians, and planting strips to separate pedestrians from the roadway may be provided along these roadways wherever sidewalks are adjacent to through lanes</td>
<td>Sidewalks are required on both sides to accommodate pedestrians, and planting strips that separate pedestrians from the roadway may be provided to improve the aesthetics of the street (except cul-de-sac)</td>
</tr>
<tr>
<td><strong>Traffic control</strong></td>
<td>Traffic control at intersections will establish a higher order of right-of-way on the Primary Mobility Street compared to the side streets and may consist of traffic signals or stop control on the side streets</td>
<td>Traffic calming features may be implemented to encourage through traffic to use the Primary Mobility Streets or to operate at a slower speed, but the features must maintain the integrity of the grid network and not shift traffic to local streets</td>
<td>Traffic calming features may be implemented to encourage through traffic to use the Primary and Neighbourhood Mobility Streets or to operate at a slower speed, but the features must maintain the integrity of the grid network and not shift traffic to other local streets</td>
</tr>
<tr>
<td><strong>Transit</strong></td>
<td>Expected to be part of the main transit routes through the study area - transit service may be more frequent than 15-minute headways</td>
<td>May carry local transit routes in the study area - transit service should be less frequent than 15-minute headways</td>
<td>Not expected to carry local transit routes in the study area</td>
</tr>
<tr>
<td><strong>Right-of-way and widening potential</strong></td>
<td>The right-of-way of these streets is 20m wide; however, widening may be required beyond this at intersections to allow for improved geometry or auxiliary (right or left-turn) lanes</td>
<td>The right-of-way of these streets is 20m wide; however, widening may be required beyond this at intersections to allow for improved geometry or auxiliary (right or left-turn) lanes</td>
<td>The right-of-way of these streets is 20m wide, but new local roadways in the areas of change may have rights-of-way as narrow as 18m if justified from a planning and operations perspective, although widening at intersections to allow for day-lighting triangles may be required</td>
</tr>
</tbody>
</table>
4.2.1 **Primary Mobility Streets**

Similar to the Downtown Mobility and Primary streets, the Primary Mobility Streets within the West Harbour study area provide for the mobility of through traffic, people and goods, connecting major activity centres and neighbourhoods within the study area, and connecting to points outside the area.

The right-of-way of these streets is 20-m wide, however, widening may be required beyond this at intersections to allow for day-lighting triangles at all intersections, or auxiliary (right or left-turn) lanes at intersections with Primary Mobility Streets and Neighbourhood Mobility Streets. Current right-of-way designations for the following streets will remain:

- York Boulevard—36.58 m
- Cannon Street—26.21 m
- Wellington Street—26.21 m
- Victoria Avenue—24.38 m
- York Boulevard/Wilson Street—26.21 m

Potential roadway cross-sections are illustrated on Figure 4.1, excluding York Boulevard, Cannon Street, Wellington Street, Victoria Avenue and Wilson Street.

4.2.2 **Neighbourhood Mobility Streets**

Similar to the Downtown Traditional and Secondary streets, the Neighbourhood Mobility Streets within the West Harbour study area provide for the mobility of traffic, people and goods within the study area and to serve the local land uses.

The right-of-way of these streets is 20-m wide, however, widening may be required beyond this at intersections to allow for day-lighting triangles at all intersections, or auxiliary (right or left-turn) lanes at intersections with Primary Mobility Streets and Neighbourhood Mobility Streets.

Potential roadway cross-sections are illustrated on Figure 4.2.

4.2.3 **Local Streets**

Similar to the Downtown Local streets, the Local Streets within the West Harbour study area provide access to businesses and residences, on-street parking and pedestrian movement as a priority over traffic movement.

Generally, streets designated as Local Streets will remain as they currently exist.

The right-of-way of these streets is 20-m wide. New local roadways in the areas of change may have right-of-ways as narrow as 18 m if justified from a planning and operations perspective and the narrower right-of-way can be shown to accommodate
utilities, sidewalks, boulevards, etc. Widening at intersections to allow for day-lighting triangles may be required.

The potential roadway cross-section is illustrated on Figure 4.3.

Local Streets are those remaining in the study area that are not designated as Primary Mobility Streets or Neighbourhood Mobility Streets. There will also be new local streets connecting and extending the grid network as part of the development of the areas of change.

4.3 NETWORK ALTERNATIVES

Three network alternatives to support the preferred land use strategy for the study area were developed, each with a different mix of Primary Mobility Streets, Neighbourhood Mobility Streets, and Local Streets. The three network alternatives can be characterized as Neighbourhood Focus, Balanced Focus, and Mobility Focus.

The alternative roadway classifications for the non-local roads in the study area for each of the three alternative networks are summarized in Table 4.2. In every case, Wellington/Victoria and York/Cannon/Wilson are considered major arterial roads, and are not included in the table. The network alternatives noted below are illustrated on Figure 4.4 to Figure 4.6.

<table>
<thead>
<tr>
<th>Street Section</th>
<th>Network Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Neighbourhood Focus</td>
</tr>
<tr>
<td>Burlington – James easterly</td>
<td>P</td>
</tr>
<tr>
<td>Burlington – Bay to James</td>
<td>N</td>
</tr>
<tr>
<td>James – Burlington southerly</td>
<td>P</td>
</tr>
<tr>
<td>James – Burlington northerly</td>
<td>N</td>
</tr>
<tr>
<td>John – Strachan southerly</td>
<td>N</td>
</tr>
<tr>
<td>John – Strachan northerly</td>
<td>N</td>
</tr>
<tr>
<td>Barton – James easterly</td>
<td>P</td>
</tr>
<tr>
<td>Barton – James to Bay</td>
<td>N</td>
</tr>
<tr>
<td>Barton – Bay to Locke</td>
<td>N</td>
</tr>
<tr>
<td>Locke – Barton to York</td>
<td>N</td>
</tr>
<tr>
<td>Bay – Strachan southerly</td>
<td>P</td>
</tr>
<tr>
<td>Bay – Strachan to Guise</td>
<td>N</td>
</tr>
<tr>
<td>Guise – Bay to James</td>
<td>N</td>
</tr>
<tr>
<td>Guise – James to Dock S R</td>
<td>N</td>
</tr>
<tr>
<td>Dock Service Road</td>
<td>N</td>
</tr>
<tr>
<td>Ferguson – Burlington southerly</td>
<td>N</td>
</tr>
<tr>
<td>Ferguson – Burlington to DSR</td>
<td>N</td>
</tr>
</tbody>
</table>
CITY OF HAMILTON WEST HARBOUR PLANNING AREA STUDY

Potential Roadway Cross-sections

Figure 4.1a Primary Mobility Street
CITY OF HAMILTON WEST HARBOUR PLANNING AREA STUDY

Potential Roadway Cross-sections

Figure 4.1b
Primary Mobility Street
Potential Roadway Cross-sections

Figure 4.2a
Neighbourhood Mobility Street

CITY OF HAMILTON WEST HARBOUR PLANNING AREA STUDY

Sidewalk
Offset
Parking Lane
Bike Lane
Through Lane
Through Lane
Bike Lane
Parking Lane
Sidewalk
Offset

Sidewalk
Offset
Boulevard
Parking Lane
Through Lane
Through Lane
Parking Lane
Boulevard
Sidewalk
Offset

Stantec
Figure 4.2c
Neighbourhood Mobility Street

Potential Roadway Cross-sections

CITY OF HAMILTON WEST HARBOUR PLANNING AREA STUDY
Potential Roadway Cross-sections

Figure 4.3
Local Street
Preliminary Alternative Screened from Further Evaluation:
The additional traffic capacity and transit routing that this alternative provides is not required to meet the future traffic forecasts with the Preferred Land Use Strategy. This transportation network alternative will not be carried forward to detailed evaluation.
### 4.4 EVALUATION OF THE NETWORK ALTERNATIVES

The network alternatives were evaluated to determine the preferred transportation network based on the following criteria derived from the planning principles presented in Section 4.1, page 34:

- Degree of mitigation of potential traffic impacts on the local street system
- Degree of mitigation or elimination of physical barriers to the waterfront
- Degree of improvement in pedestrian, cycling and transit connections to the waterfront from the Downtown and escarpment
- Ability to extend the existing grid of streets and blocks to the waterfront
- Ability to promote a balanced multi-modal transportation system
- Degree of preservation or enhancement of key views or vistas
- Impact on levels of congestion
- Impact on on-street parking and loading
- Impact on truck routes

In summary, the Mobility Focus network was eliminated due to the system-wide increase in traffic on existing local and non-local streets. The Neighbourhood Focus network has insufficient primary streets to serve the traffic forecasts that may lead to infiltration onto local streets creating congestion and limited flexibility for transit. The Balanced Mobility Focus network has sufficient primary streets to accommodate the traffic forecasts while maintaining the character of local streets, but the public raised several concerns regarding the proposed cross-sections. The Recommended Network is similar to the Balanced Mobility Focus network, but addresses the public concerns:

- Barton Street is reclassified from a Primary Mobility Street west of Bay Street to a Neighbourhood Mobility Street. A cross-section alternative for Barton Street includes providing bike lanes on Locke Street and Barton Street from York.
Boulevard to Wellington Street with the exception of the short section between Bay Street and James Street that is narrower and residential in character. On this section of roadway, cyclists can share the travel lane with motorists

- A “Special Character” cross-section alternative for Ferguson Avenue was developed to emphasize this link in the cycling network, connecting the Niagara Escarpment to the Downtown and to the Waterfront (similar to the Ferguson Avenue Master Plan)

- Planting strips or boulevards between the sidewalk and roadway were removed from the Neighbourhood Mobility Streets and Local Street cross-sections, with the exception of Guise Street, due to the shallow front-yard setbacks to residential buildings

The evaluation of the three original network alternatives and the modified “recommended” network is presented in Table 4.3.

The modified “recommended” network and cross-sections are presented in detail in Section 5.0, page 46. It reflects public concerns that the cross-sections proposed in some locations did not fit with the existing, shallow housing setbacks and would negatively impact on front yards and on-street parking. The modified network also defines those streets that should accommodate cyclists by providing bike lanes without requiring widening of the roadway (re-striping only). By reviewing aerial mapping of the study area, the cross-sections were refined.
## Table 4.3
Evaluation of the Transportation Network Alternatives

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Original Transportation Network Alternatives</th>
<th>Modified or Recommended Network</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mobility Focus</strong></td>
<td>High – The primary mobility streets are so numerous, impacts on local streets would be minimal</td>
<td>Medium – Similar to the Balanced Focus, but with Barton Street west of James Street and Ferguson Street downgraded from a primary mobility street to a neighbourhood mobility street</td>
</tr>
<tr>
<td><strong>Neighbourhood Focus</strong></td>
<td>Low – Fewer primary mobility streets may cause spillover effects on local streets</td>
<td></td>
</tr>
<tr>
<td><strong>Balanced Focus</strong></td>
<td>High – With a sufficient number of primary mobility streets to accommodate the increase in traffic, impacts on local streets would be minimal</td>
<td></td>
</tr>
<tr>
<td><strong>Degree of mitigation of potential traffic impacts on the existing local street system</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Degree of mitigation or elimination of physical barriers to the waterfront</strong></td>
<td>Medium – All options support improved connections to the waterfront but remain constrained by rail yard and rail line crossings</td>
<td>Medium – All options support improved connections to the waterfront but remain constrained by rail yard and rail line crossings</td>
</tr>
<tr>
<td><strong>Degree of improvement in pedestrian, cycling and transit connections to the waterfront from the Downtown and escarpment</strong></td>
<td>Low – Higher priority for vehicles and transit</td>
<td>High – Better pedestrian and cycling connections, and reasonable options for transit</td>
</tr>
<tr>
<td><strong>Ability to extend the existing grid of streets and blocks to the waterfront</strong></td>
<td>High – The grid of streets is extended in the Barton-Tiffany and Waterfront areas</td>
<td>High - The grid of streets is extended in the Barton-Tiffany and Waterfront areas</td>
</tr>
<tr>
<td><strong>Ability to promote a balanced multi-modal transportation system</strong></td>
<td>Low – Higher priority for vehicles and transit</td>
<td>High – Better pedestrian and cycling connections, and reasonable options for transit, and with Barton Street west of James Street and Ferguson Street downgraded from a primary mobility street to a neighbourhood mobility street</td>
</tr>
<tr>
<td>Evaluation Criteria</td>
<td>Original Transportation Network Alternatives</td>
<td>Modified or Recommended Network</td>
</tr>
<tr>
<td>---------------------------------------------------------</td>
<td>---------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td></td>
<td>Mobility Focus</td>
<td>Neighbourhood Focus</td>
</tr>
<tr>
<td>Degree of preservation or enhancement of key views or vistas</td>
<td>High – Existing view corridors along the grid network of streets is maintained and extended</td>
<td>High – Existing view corridors along the grid network of streets is maintained and extended</td>
</tr>
<tr>
<td>Impact on levels of congestion</td>
<td>Low – More primary mobility streets provides more traffic capacity, reducing network congestion</td>
<td>High – Few primary mobility streets results in traffic congestion on local and non-local streets with insufficient capacity</td>
</tr>
<tr>
<td>Impact on on-street parking and loading</td>
<td>High – More streets may have time of day parking restrictions</td>
<td>High – On-street parking and loading on local streets would create friction or conflicts with traffic movement</td>
</tr>
<tr>
<td>Impact on truck routes</td>
<td>Low - More primary mobility streets provide more truck route options</td>
<td>High - Few primary mobility streets restrict options for truck routes</td>
</tr>
<tr>
<td>Synopsis</td>
<td>Screened out of the evaluation process in the last phase due to the system-wide increase in traffic on existing local and non-local streets</td>
<td>Insufficient primary routes may lead to infiltration onto local streets creating congestion and limited flexibility for transit</td>
</tr>
</tbody>
</table>

High impact—affects many of the streets in the planning area, say more than 70%
Medium impact—affects some of the streets in the planning area, say 30 to 70%
Low impact—affects none to a few streets in the planning area, say less than 30%
5.0 Recommended Transportation Network

5.1 WEST HARBOUR SECONDARY PLAN

*Setting Sail—Secondary Plan for the West Harbour Planning Area* was prepared by the City to define land uses and policies based on the Preferred Land Use Strategy. The general land uses are illustrated on Figure 5.1 (Schedule M-2 of the Secondary Plan). The original document should be referred to for a complete description of the land uses and associated policies.

The trip generation used to develop the alternative transportation networks was based on the Preferred Land Use Strategy. It was verified to be applicable to the Secondary Plan land uses, since the differences in the land use types and densities were mostly insignificant and would only result in lower trip generation, not higher. There are two areas where new land uses were removed due to the unlikelihood they would be redeveloped during the life of the Secondary Plan:

- Pier 9 was designated as a mix of residential, commercial and institutional uses in the Preferred Land Use Strategy but has reverted to institutional uses (i.e., the HMCS Star is expected to continue to occupy the site) in the Secondary Plan. On a per hectare basis, the institutional land use will generate less traffic than the residential land use so the trip generation used to develop the transportation network alternatives is conservative with respect to the Secondary Plan.

- Residential designations have been removed from the Stuart Street Rail Yard, where the Preferred Land Use Strategy envisioned up to 900 mostly apartment units. This change will result in less traffic (approximately 320 vph less from the total of 1,890 vph or 17%) so the trip generation used to develop the transportation network alternatives is conservative with respect to the Secondary Plan.

As noted in Section 3.2, page 26, the trip generation was based on the development at the top end of the density ranges in Low, Medium 1 and Medium 2 residential areas. It is unlikely that the developable lands will all realize this intensity of development.
Figure 5.1
General Land Use Plan (from Setting Sail—Secondary Plan for the West Harbour Planning Area, Schedule M-2)
5.2 THE RECOMMENDED TRANSPORTATION NETWORK AND STREET CROSS-SECTION ALTERNATIVES

The Recommended Transportation Network for the West Harbour Planning Area is illustrated on Figure 5.2. It consists of:

- **Primary Mobility Streets**—Similar to the Downtown Mobility and Primary streets, the Primary Mobility Streets within the West Harbour study area provide for the mobility of through traffic, people and goods, connecting major activity centres and neighbourhoods within the study area, and connecting to points outside the area. The right-of-way of these streets is generally 20-m wide, however, widening may be required beyond this at intersections to allow for daylighting triangles at all intersections, or auxiliary (right or left-turn) lanes at intersections with Primary Mobility Streets and Neighbourhood Mobility Streets.

Streets in this classification include:

- York Boulevard
- Cannon Street from York Boulevard to Wellington Street/Victoria Avenue
- Barton Street from James Street to Wellington Street/Victoria Avenue
- Burlington Street from James Street to Wellington Street/Victoria Avenue
- Guise Street/Dock Service Road/Ferguson Avenue from James Street to Burlington Street
- Bay Street from Cannon Street to Strachan Street
- James Street from Cannon Street to Guise Street
- John Street from Cannon Street to Strachan Street
- Wellington Street (and Victoria Avenue, its one-way pair located outside the study area)

Current right-of-way designations for the following streets will remain:

- York Boulevard—36.58 m
- Cannon Street—26.21 m
- Wellington Street—26.21 m
- Victoria Avenue—24.38 m
- York Boulevard/Wilson Street—26.21 m

Potential cross-sections for Primary Mobility Streets consist of the following:
Roads north of Barton Street and west of Bay Street will all operate as heavy streets.
Barton Street - James Street to Wellington Street (alternative 1)

2.4 m 2.4 m 1.6 m 3.3 m 3.3 m 1.6 m 2.4 m 2.4 m
Sidewalk Parking Lane Bike Lane Through Lane Through Lane Bike Lane Parking Lane Sidewalk

0.5 m bc&g*

Bay Street - Barton Street to Strachan Street

Variable 1.2 m 2.4 m 3.3 m 3.3 m 1.2 m Variable
Offset Sidewalk Parking Lane Through Lane Through Lane Parking Lane Offset

0.5 m bc&g*

Notes: bc&g = Barrier Curb and Gutter
Light standards are typical only
Barton Street - James Street to Wellington Street (alternative 2)
Wellington Street - Cannon Street to Burlington Street
Bay Street - Cannon Street to Barton Street

Burlington Street - James Street to Wellington Street
James Street - Cannon Street to Guise Street
John Street - Cannon Street to Barton Street

*Notes: bc&g = Barrier Curb and Gutter
Light standards are typical only
CITY OF HAMILTON WEST HARBOUR PLANNING AREA STUDY

Potential Roadway Cross-sections
20 m Right-of-way

Figure 5.3c
Primary Mobility Street

Ferguson Avenue - North of Burlington Street
Dock Service Road - John Street to Ferguson Avenue

Note: Plus recognition of special needs for manoeuvring at loading facilities for Lakeport Beverage

Guise Street - James Street to John Street

*Notes: bc&g = Barrier Curb and Gutter
Light standards are typical only
WEST HARBOUR PLANNING AREA STUDY—TRANSPORTATION MASTER PLAN
RECOMMENDED TRANSPORTATION NETWORK

- One to two through lanes in each direction for cars, trucks and transit vehicles
- On-street parking may be permitted, but may be limited to non-peak hours or restricted
- Cyclists can generally be accommodated in shared lanes or on-street bike lanes
- Sidewalks are required on both sides to accommodate pedestrians, and planting strips to separate pedestrians from the roadway may be provided where they do not diminish residential front yards
- Traffic control at intersections will establish a higher order of right-of-way on the Primary Mobility Street compared to the side streets and may consist of traffic signals or stop control on the side streets
- These streets are expected to be part of the main transit routes through the study area. Transit service may be more frequent than 15-minute headways

Potential cross-sections are illustrated on Figure 5.3 and excludes current on-way streets.

- Neighbourhood Mobility Streets—Similar to the Downtown Traditional and Secondary streets, the Neighbourhood Mobility Streets within the West Harbour study area provide for the mobility of traffic, people and goods within the study area and to serve the local land uses. The right-of-way of these streets is 20-m wide, however, widening may be required beyond this at intersections to allow for day-lighting triangles at all intersections, or auxiliary (right or left-turn) lanes at intersections with Primary Mobility Streets and Neighbourhood Mobility Streets.

Streets in this classification include:
- Barton Street from Locke Street to James Street
- Strachan Street from Bay Street to John Street
- Stuart Street west of Bay Street
- Burlington Street west of James Street
- Guise Street west of James Street
- Locke Street from York Boulevard to Barton Street
- Queen Street
- Hess Street
- Bay Street from Strachan Street to MacNab Street/Guise Street
- John Street from Strachan Street to Burlington Street
- Ferguson Avenue from Cannon Street to Burlington Street
Potential cross-sections for Neighbourhood Mobility Streets consist of the following:

- One through lane in each direction for cars, trucks and transit vehicles
- On-street parking may be permitted, but may be limited to non-peak hours or restricted to one side of the street
- Cyclists can generally be accommodated in shared lanes or on-street bike lanes
- Sidewalks are required on both sides to accommodate pedestrians, and planting strips to separate pedestrians from the roadway will be provided on Guise Street where they do not diminish residential front yards
- Traffic calming features may be implemented to encourage through traffic to use the Primary Mobility Streets or to operate at a slower speed, but the features must maintain the integrity of the grid network and not shift traffic to local streets
- They may carry local transit routes in the study area. Transit service will be less frequent than 15-minute headways

Potential cross-sections are illustrated on Figure 5.4. Two alternatives are provided for Ferguson Avenue. One reflects the existing conditions and the other implements bike lanes to emphasize this cycling corridor while providing one through lane for motorists operating in two directions with courtesy yielding to on-coming traffic and cyclists. This option is currently not supported by City staff due to the offset lanes at the intersections created by the on-street parking switching from one side to the other.

- **Local Streets**—Similar to the Downtown Local streets, the Local Streets within the West Harbour study area provide access to businesses and residences, on-street parking and pedestrian movement as a priority over traffic movement. Generally, streets designated as Local Streets will remain as they currently exist. The right-of-way of these streets is 20-m wide. New local roadways in the areas of change may have right-of-ways as narrow as 18 m if justified from a planning and operations perspective and the narrower cross-section can be shown to accommodate utilities, sidewalks, boulevards, etc. Widening at intersections to allow for day-lighting triangles may be required.

Local Streets are those remaining in the study area that are not designated as Primary Mobility Streets or Neighbourhood Mobility Streets. There will also be new local streets connecting and extending the grid network as part of the development of the areas of change.

A potential cross-section for Local Streets is illustrated in Figure 5.5.
Overall, the street network is capable of accommodating the forecast traffic based on the Secondary Plan Schedule M-2 general land uses without pavement widening except at intersections of Primary Mobility and Neighbourhood Mobility Streets where auxiliary turn lanes may be required or at intersections to provide day-lighting triangles.

The City will initiate the appropriate traffic calming studies and introduce traffic calming techniques, as required, to address traffic speeds or volumes on Neighbourhood Mobility Streets and Local Streets. Traffic calming techniques that may be considered include such devices as speed humps, raised or textured crosswalks, chicanes, curb extensions, curb radius reductions, median islands, and traffic circles. Features must maintain the integrity of the grid network and not shift traffic to local streets. These traffic calming studies will be undertaken as Schedule B projects under Municipal Class Environmental Assessment. One will be completed for the North End Neighbourhood prior to the development of Pier 8.

Directional signage for visitors originating from outside the planning area visiting attractions in the planning area is recommended to encourage the utilization of James Street, Wellington Street and Victoria Avenue as the primary access routes.

5.3 THE RECOMMENDED PEDESTRIAN AND CYCLING NETWORK

The recommended pedestrian and cycling network is illustrated in Figure 5.6. Sidewalks are recommended on both sides of the street through the Planning Area. In addition, the potential for multi-use trail and pedestrian connections were identified as follows:

- Extension of the Waterfront trail easterly to Pier 9
- Connection of the easterly end of the York Boulevard trail to the Hamilton Harbour Waterfront Trail near Dundurn Castle including a connection across the Rail Yard
- Potential pedestrian connections from Stuart Street to the Hamilton Harbour Waterfront trail across the Rail Yard
- Multi-use trail along the south side of Strachan Street from Harbour Front Drive to Ferguson Avenue
- Pedestrian connection along Ferguson Avenue from Strachan Street to Dock Service Road
- In future planning Eastwood Park consider a multi-use trail connecting Ferguson Avenue to the Waterfront

The recommended cycling network consists of the following:
Barton Street - Locke Street to Bay Street (alternative 1)
Locke Street - York Boulevard to Barton Street (alternative 1)
Stuart Street - Queen Street to Bay Street
Queen Street - Barton Street to Stuart Street (one-way travel lanes with contraflow bike lane)
Ferguson Street - Barton Street to Simcoe Street

Barton Street - Locke Street to Bay Street (alternative 2)
Locke Street - York Boulevard to Barton Street (alternative 2)

*Notes: bc&g = Barrier Curb and Gutter
Light standards are typical only
Guise Street - Bay Street to James Street

Bay Street - Strachan Street to Guise Street
John Street - Barton Street to Strachan Street
Burlington Street - Bay Street to James Street
Barton Street - Bay Street to James Street
One-way streets

Note: Consider lookouts, boulevards, and/or wider sidewalks for west side vistas on Bay Street and adjacent to schools on John Street

*Notes: bc&g = Barrier Curb and Gutter
Light standards are typical only
Ferguson Avenue - Simcoe Street to Burlington Street (alternative 1)

Ferguson Avenue - Simcoe Street to Burlington Street (alternative 2)

*Notes: bc&g = Barrier Curb and Gutter
Light standards are typical only
Ferguson Avenue - Simcoe Street to Burlington Street (alternative 1)
Aerial view of Parking alternating sides
CITY OF HAMILTON WEST HARBOUR PLANNING AREA STUDY

Potential Roadway Cross-sections 20 m Right-of-way

Figure 5.4e Neighbourhood Mobility Street

Strachan Street - Bay Street to John Street

Note: South side of street integrated with open space, including sidewalk or trail

*Notes: bc&g = Barrier Curb and Gutter
Light standards are typical only
Potential Roadway Cross-sections
20 m Right-of-way

Figure 5.5
Local Street

Notes: bc&g = Barrier, Curb and Gutter
Light standards are typical only
Signed bike route or bike lanes on Locke Street/Barton Street from York Boulevard to Bay Street, and on Barton Street from James Street easterly. The section of Barton Street from Bay Street to James Street is too narrow to accommodate bike lanes so a designated bike route on shared lanes is recommended.

Signed bike route or bike lanes on Queen Street (potentially including a contraflow bike on this one-way street), Stuart Street and Bay Street from Barton to Harbour Front Drive.

Bike lanes or a designated bike route on shared lanes on Ferguson Avenue from Burlington Street northerly.

5.4 IMPLEMENTATION

No major capital roadway projects as a result of this Transportation Master Plan are proposed at this time. The City’s responsibilities for capital roadway projects to address maintenance and pavement condition continue but are outside the scope of this study.

An incremental strategy is required to implement the Transportation Master Plan. Subsequent transportation studies are required that examine in detail the impacts of development as per the City’s guidelines for Traffic Impact Studies, and determine how the Transportation Master Plan will be implemented in a staged approach and the costs associated with recommended improvements.

The West Harbour Transportation Master Plan also satisfies Phase 1 and 2 of the Municipal Class Environmental Assessment process and can be used to support the implementation of Schedule B projects (requires undertaking Phase 3 of the Class EA) and Schedule C projects (requires undertaking Phase 3 to 5 of the Class EA). The Schedule for transportation projects stemming from the Setting Sail—Secondary Plan for the West Harbour Planning Area and the West Harbour Transportation Master Plan are listed in Table 5.1.

Table 5.1

<table>
<thead>
<tr>
<th>Transportation-related Project</th>
<th>Municipal Class EA Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>New local roads under the Planning Act</td>
<td>Schedule A (approved)</td>
</tr>
<tr>
<td>Bay, James and John Streets Streetscaping Plans</td>
<td>Schedule B future studies</td>
</tr>
<tr>
<td>North End Neighbourhood Traffic Calming Study</td>
<td>Schedule B future study prior to development of Pier 8</td>
</tr>
<tr>
<td>Other traffic calming studies (as needed)</td>
<td>Schedule B future studies</td>
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Appendix A

Hamilton Perimeter Road Needs Assessment
Trip Generation Rate Table
Trip Tables For Each Area of Change Based on the Preferred Land Use Strategy
Existing Traffic Volumes
Trip Distribution and Assignment for Each Area of Change based on the Preferred Land Use Strategy
Total Traffic Volumes based on the Preferred Land Use Strategy
Total Traffic Volumes Compared to the Existing Traffic Volumes based on the Preferred Land Use Strategy
HAMILTON PERIMETER ROAD
NEEDS ASSESSMENT

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July 29, 2003
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1.0 Introduction

1.1 PURPOSE OF NEEDS ASSESSMENT

Long-range planning is critical to ensure that transportation improvements are made when and where required. A needs assessment is a pre-cursor to an Environmental Assessment for new or upgraded facilities, and explores the need and justification for transportation improvements and the feasibility of various alternatives, in keeping with the process set out in the Municipal Class Environmental Assessment. The Hamilton Perimeter Road is a concept that has been on and off the books for decades, and a decision is required on whether or not all or part of the Hamilton Perimeter Road should ever be built. A needs assessment of the Hamilton Perimeter Road will provide decision-makers with sufficient information to make an informed decision.

1.2 INTEGRATION WITH WEST HARBOUR PLANNING AREA STUDY

The West Harbour Planning Area Study combines master planning for land use and urban design, transportation and infrastructure. Transportation alternatives that may be required to support the integrated master plan must be considered in concert with an evaluation of the need and justification for the Hamilton Perimeter Road, and vice versa. However, the assessment of need for the Hamilton Perimeter Road must have regard to a much larger study area because of the scale of the undertaking, and its role relative to mobility in the lower City, the Provincial Freeway Network, and other major City facilities such as Burlington Street/Industrial Drive, the Red Hill Creek Expressway, the Lincoln M. Alexander Parkway, and other major arterial roadways.

1.3 GOALS AND OBJECTIVES

The goals and objectives for the Hamilton Perimeter Road Needs Assessment are to determine the problem or problems, explore alternative solutions, and determine if the Hamilton Perimeter Road is the preferred solution.

1.4 PUBLIC CONSULTATION

The public and stakeholders have been informed of the needs assessment and preliminary findings through public open houses and through presentations to
targeted groups. Some of the events have occurred as part of the integrated master planning for the West Harbour Planning Area Study, as follows:

- August 2002 study start-up was followed by extensive interviews with stakeholders
- Visioning Workshop, 3 October 2003 at the Workers Arts and Heritage Centre
- Technical Advisory Committee meeting, 9 December 2002 at the Workers Arts and Heritage Centre
- Community Liaison Committee meeting, 9 December 2002 at the Workers Arts and Heritage Centre
- Public Open House, 16 January 2003 at the Workers Arts and Heritage Centre
- Public Open House, 14 April 2003 at Liuna Station

Several have been with the Chamber of Commerce specifically on the Hamilton Perimeter Road.

- Chamber of Commerce Board meeting, 24 April 2003
- Chamber of Commerce Transportation Committee meeting, 22 May 2003

Additional information regarding the West Harbour Planning Area Study and the above events can be found at www.hamilton.ca/settingsail/.

In general, many members of the public and stakeholder groups oppose building the Hamilton Perimeter Road because of the environmental impacts and costs, but there are a number that support building the road to promote economic development and redevelopment, and to reduce the number of trucks on downtown streets.

1.5 STRUCTURE OF THE REPORT

The report is structured to: set out the history of the Hamilton Perimeter Road concept and applicable policies and studies; review population, employment, and travel demand trends and forecasts; evaluate the transportation network in and around Hamilton; review existing and future social, economic, and environmental conditions; and explore transportation alternatives. Conclusions are drawn and recommendations are proposed at the end of the report.
HAMILTON PERIMETER ROAD NEEDS ASSESSMENT

2.0 Background

2.1 POLICY CONTEXT

The Official Plans of both the former Regional Municipality of Hamilton-Wentworth and the former City of Hamilton contained policies to indicate that, to overcome existing and future deficiencies in the arterial road network, future road improvements would include a new road link between Burlington Street and Highway 403.

The New City of Hamilton now has seven Official Plans – the former Regional plan and six area municipal plans - that are in effect. The goal is to update and consolidate the policies and land-use designations in the existing Official Plans into one new document that will apply across the municipality. It will guide municipal land-use decision-making and shape the social, economic and physical environment in which Hamiltonians live, work and play.

In conjunction with the existing Official Plans, two key, long-range plans will guide these decisions:

- The VISION 2020 Renewal
- The 30-year Growth Related Integrated Development Strategy (GRIDS)

These planning processes are being co-ordinated under the title "Building A Strong Foundation" to ensure that sustainable thinking continues to ensure the vision for the future.

2.2 PREVIOUS STUDIES

The name adopted for this proposed major arterial road in North Hamilton in earlier planning studies was the Industrial Perimeter Road, and it is discussed in various planning documents since the 1960’s. Redevelopment plans for the North End Neighbourhoods in 1963 included the Industrial Perimeter Road, and properties were acquired in the Strachan Street corridor through the Neighbourhood Improvement Program.

Other planning studies that promoted an Industrial Perimeter Road concept included the Hamilton Area Transportation Study (1963), the Hamilton Transportation Strategy
Study (1973), the Hamilton-Wentworth Regional Official Plan (1982), and the City of Hamilton Official Plan (1982).

In 1978, the Industrial Perimeter Road Feasibility Study recommended a basic route for the Perimeter Road from Burlington Street to Highway 403, and following endorsement of the basic route by Regional Council in 1978, property acquisition proceeded anew. From the mid-1980’s to the present day, property acquisition has essentially been on a hardship case basis only.

The Hamilton Perimeter Road was studied quite intensively during the period 1987-1990. Options developed at that time included a shoreline option incorporating some property from CN and some property on fill. Another option was located on the north slope between York Boulevard and the CN Mainline, requiring retaining wall structures both uphill and downhill of the roadway. The option adopted by Council in 1990, in principle, is described more fully in Section 2.3, page 2.3. Although the Ministry of Transportation was circulated as a commenting agency, no formal position was ever received from the MTO with respect to support or concerns with a new interchange between the High Level Bridge and the King Street Interchange on Highway 403.

The West Harbourfront Development Study (November 1995), prepared by the City of Hamilton Department of Public Works and Traffic, proposed that the Hamilton Perimeter Road run westerly from Wellington/Victoria as per the 1990 concept as far as Bay Street, at which point it would turn south. It would then follow a new alignment to the west of existing Bay Street, connecting to Cannon Street at/just west of Bay Street. York Boulevard would be widened, and a full interchange would be provided at York Boulevard and Highway 403.

The Regional Transportation Review (1996) concluded that the Perimeter Road connecting to Highway 403 was not justified within the planning horizon (2020), but that a first phase from Wellington/Victoria to Bay or Queen, at an estimated cost of $50 million, should be considered further to divert truck and through traffic around the downtown.

The Downtown Transportation Master Plan (2001) concluded that construction of a first phase of the Perimeter Road to Bay Street would change travel patterns in the downtown, with reductions in traffic on some streets and increases on others. Overall, total trips in the downtown study area were projected to decrease by only one percent. The Plan recommended that a first phase of the Perimeter Road not be considered further, as it would simply redistribute traffic from east-west streets (York and Cannon) to north-south streets (Bay and Queen), with very little overall benefit.
2.3 HAMILTON PERIMETER ROAD CONCEPT

The option adopted by Council in 1990, in principle, included an initial four-lane (ultimate six-lane) Burlington Street with centre median or turning lanes between Sherman Avenue and Victoria Avenue, an interchange with a combined Victoria/Wellington, a four-lane controlled access roadway at track level along the north side of the North-Northwest Spur, grade separations with roadways that already cross the CN tracks, an interchange with Bay Street, a crossing to the south side of the Stuart Street Yard, through the former Route Canada property (now owned by the City of Hamilton), under York Boulevard in a cut-and-cover tunnel, to a new interchange with Highway 403 south of the Desjardins Canal. A map illustrating the concept is shown Figure 2.1.

![Figure 2.1](image)

Figure 2.1
Hamilton Perimeter Road Concept (1990)
HAMILTON PERIMETER ROAD NEEDS ASSESSMENT

3.0 Travel Demand Analysis

3.1 POPULATION AND EMPLOYMENT TRENDS

The population of the former Region of Hamilton-Wentworth (now the City of Hamilton) grew from 308,000 in 1956 to 481,000 in 1996. However, the population in the lower city of the former City of Hamilton dropped from 200,000 in 1956 to 190,000 in 1996 (source: Regional Facts, Issue #1, Fall 1997).

Between 1971 and 1996, job growth in Hamilton did not keep pace with population growth, and Hamilton went from having a net commuter surplus in 1971 of 7,400 work trips to having a net commuter deficit in 1996 of 11,350 work trips (source: All in a Day’s Work, H-W Region, June 1999). This is a result of new population growth finding employment to a greater degree within other Municipalities than within Hamilton.

Employment in the Bayfront Industrial Area has dropped significantly over the past quarter century. Major employers such as Otis Elevator, Proctor and Gamble, Domglas, International Harvester, and Firestone no longer have a significant presence in Hamilton, and Stelco, Dofasco, and others have downsized the workforce substantially. The traffic modeling undertaken for the Hamilton Perimeter Road Study in 1992 estimated a 37% decrease in employment in the Bayfront area between 1985 and 2001. Other indicators of this trend are the following: the manufacturing labour force in the Hamilton Census Metropolitan Area (CMA) declined 9.5% between 1981 and 1986 (Census); employment in manufacturing between 1982 and 1990 decreased by 6,500 from 57,900 to 51,400 in the former Region (RHW Employment Trends Report 1992); layoffs of more than 50 jobs at a time between 1981 and 1989 resulted in 16,200 layoffs through reduced operations and 4,500 layoffs through closures (Social Planning and Research Council, 1990).

Employment growth forecasts developed for the Downtown Transportation Study (2001) were half of those estimated in the Regional Transportation Review (1995). Employment in lower Hamilton dropped from 133,000 in 1991 to 110,000 in 1996 (Census figures), and estimates for 2001 anticipate an increase in employment in lower Hamilton to 121,000. Population and employment trends in the City as a whole, and in the lower City in particular are shown in Table 3.1.
Table 3.1
Population/Employment Numbers in 000's

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population1 – Hamilton (formerly Region of Hamilton-Wentworth)</td>
<td>308</td>
<td>348</td>
<td>383</td>
<td>401</td>
<td>409</td>
<td>411</td>
<td>423</td>
<td>452</td>
<td>468</td>
<td>490</td>
</tr>
<tr>
<td>Population1 – Lower City of former City of Hamilton</td>
<td>200</td>
<td>199</td>
<td>204</td>
<td>208</td>
<td>202</td>
<td>195</td>
<td>190</td>
<td>187</td>
<td>185</td>
<td>188</td>
</tr>
<tr>
<td>Employment – Lower City of former City of Hamilton</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>132</td>
<td>132</td>
<td>110</td>
</tr>
</tbody>
</table>

1 Census of Canada
2 Planning and Development Department

Notwithstanding employment levels, manufacturing activity, including inbound and outbound goods movement, has not dropped in the same manner as has employment for the manufacturing companies that remain in the Bayfront area. Lower employment through manufacturing process improvements does not translate into reduced goods movement. However, the loss of a number of major manufacturers/employers in the Bayfront Industrial Area has resulted in a reduction in goods movement activity.

3.2 POPULATION AND EMPLOYMENT FORECASTS

For the purposes of this study, the primary source of population and employment data for Hamilton is reflected in the City’s EMME/2 transportation modeling database. Information on population and employment estimates by “super analysis zone” (SAZ) is included in the technical report prepared by Paradigm contained in Appendix A. The population and employment projections correlate fairly well with the “Current Growth Scenario” prepared for the City of Hamilton by the Centre for Spacial Economics (CSE), as contained in Report PD02232, dated November 1, 2002. The year 2021 comparisons for population are 592,000 (CSE) and 585,600 (EMME/2), a difference of 1%, and the comparisons for employment are 286,900 (CSE) and 268,800 (EMME/2), a difference of 6%.

The population and employment growth in Hamilton over the next 20 years is projected to be concentrated in developing areas of the City, but growth in established lower city areas will be negligible (population) to moderate (employment) by comparison. Employment in the Bayfront area has declined substantially over the past 20 to 30 years, and future growth will simply return employment levels in the lower City to something approaching past levels.
Hemson Consulting prepared a component of the City of Hamilton Industrial Business Park Review in 2003 and concluded that brownfield sites will accommodate only select components of future employment growth. Hemson noted that:

"While brownfields are anticipated to accommodate some new employment growth, the majority is anticipated to be accommodated in the City's business parks. Despite the appearance of a large number of brownfields, few are actually available for development and these sites are anticipated to appeal only to select components of future employment growth and specialized market niches, such as heavy manufacturing, outdoor storage, and recycling.

Only a limited number of brownfield sites are expected to be attractive to most modern employment land users, who are seeking prestige locations and higher standards of surrounding design.

In addition, developers will be faced with more constrained site conditions, a higher risk and, therefore, will be anticipating a higher financial return associated with potential development.

Although the ERASE program has already delivered some brownfield re-development, it is still a pilot project. Not all projects will involve redevelopment to industrial use. It is too early to be counted on to accommodate significant employment growth."

This analysis supports the conclusion that growth will be largely concentrated in the developing areas of the city, and that employment in the Bayfront Area will grow more modestly through niche development and redevelopment.

The City of Hamilton's Economic Development Strategy Report (May 2002) noted that land fragmentation and the relatively small size of many brownfield sites is a serious problem in the Bayfront Industrial Area, and also noted that new legislation and an aggressive City role in land assembly would be key factors in attracting new industry to those sites.

The foregoing is not to suggest that there isn’t a significant role for brownfield redevelopment in Hamilton, but it does suggest that the scale of redevelopment will be modest in comparison to other types of development in greenfield locations and/or adjacent to 400-series highways.

3.3 RECREATIONAL TRENDS: EVOLUTION OF THE WATERFRONT

Concepts for the Hamilton Perimeter Road were developed at a time when the water lots (Piers 1-2) and Piers 5-8 were under the jurisdiction of the Hamilton Harbour
Commission, and were considered available for continued or future shipping and navigation uses. With transfer of ownership of those piers to the City of Hamilton, and renewed interest in partnerships between the City and the new Hamilton Port Authority, the industrial focus has shifted easterly. Creation of the Hamilton Waterfront Trail linking Princess Point to Bayfront Park has provided an immense opportunity for Hamilton residents and visitors to connect with the waterfront, and they have been doing it in droves. With the official opening of the Hamilton Beach Trail in May of 2003, more and more residents and visitors are being connected to the water’s edge. The preferred land use strategy that is emerging for the West Harbour proposes an enhancement of recreational amenities on the waterfront, balanced with residential and tourist-oriented commercial and cultural uses.

### 3.4 TRAVEL DEMAND TRENDS

Traffic forecasts were prepared for the Hamilton Perimeter Road Study in 1992. Estimates of westbound afternoon peak hour traffic approaching Highway 403 on York Boulevard, King Street, and Aberdeen Avenue were prepared for the future year 2001 and several "mature states". The future year 2001 estimate for York Boulevard is very close to actual count information, but the future year 2001 estimate for King Street is approximately 14% higher than actual count information. Modeling at that time predicted reductions in traffic volumes on the three main routes between 2001 and the mature states in the future. The "mature states" were both for an ultimate Regional population of 541,000 and employment of 223,000 and 206,000 respectively, and in both mature states the growth was assumed to occur in the developing areas rather than in the mature areas.

Twenty years of traffic count data have been reviewed for arterial roads in the study area, as shown in Table 3.2. Traffic trends reflect employment trends in the Bayfront Area, with one exception being James Street north of Barton.

#### Table 3.2

Traffic Volumes on Arterial Roads in the Study Area

<table>
<thead>
<tr>
<th>Location</th>
<th>24-hour Traffic Volume Trend, 1980 to 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burlington west of Wellington</td>
<td>16% decrease</td>
</tr>
<tr>
<td>Barton west of Wellington</td>
<td>9% decrease</td>
</tr>
<tr>
<td>Cannon west of Wellington</td>
<td>5% decrease</td>
</tr>
<tr>
<td>Cannon west of Bay</td>
<td>4% increase</td>
</tr>
<tr>
<td>Bay north of Barton</td>
<td>5% decrease</td>
</tr>
<tr>
<td>James north of Barton</td>
<td>48% increase</td>
</tr>
<tr>
<td>John north of Barton</td>
<td>3% decrease</td>
</tr>
</tbody>
</table>
A Technical Report for the Hamilton Perimeter Road Needs Assessment has been prepared by Paradigm Transportation Solutions Ltd., and is attached as Appendix A. The existing traffic characteristics within the study area were summarized for present conditions in the morning peak hour, using four north-south and two east-west traffic screenlines. The Traffic Screenlines are shown in Figure 3.1.

The report compared existing capacities to existing traffic volumes at each of the screenlines shown in Figure 3.1, and determined that there is spare capacity at each of the screenlines, but that some were more constrained than others. As is shown in Table 3.3, below, the existing spare capacity is most constrained between the downtown and Highway 403.

### Table 3.3

Existing Spare Capacity on North-South Screenlines

<table>
<thead>
<tr>
<th>North-South Screenlines—Existing Spare Capacity</th>
<th>Between Locke and Queen</th>
<th>Between Bay and James</th>
<th>Between John and Wellington</th>
<th>East of Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM peak Hour Westbound</td>
<td>3,060</td>
<td>4,410</td>
<td>3,350</td>
<td>3,550</td>
</tr>
<tr>
<td>AM Peak Hour Eastbound</td>
<td>1,480</td>
<td>2,880</td>
<td>4,880</td>
<td>4,700</td>
</tr>
<tr>
<td>Two-way Total</td>
<td>4,540</td>
<td>7,290</td>
<td>8,130</td>
<td>8,250</td>
</tr>
<tr>
<td>PM peak Hour Westbound</td>
<td>1,310</td>
<td>3,020</td>
<td>2,840</td>
<td>2,660</td>
</tr>
<tr>
<td>PM Peak Hour Eastbound</td>
<td>2,500</td>
<td>2,740</td>
<td>3,740</td>
<td>3,140</td>
</tr>
<tr>
<td>Two-way Total</td>
<td>3,810</td>
<td>5,760</td>
<td>6,580</td>
<td>5,800</td>
</tr>
</tbody>
</table>
Table 3.4
Existing Spare Capacity on East-West Screenlines

<table>
<thead>
<tr>
<th>East-West Screenlines—Existing Spare Capacity</th>
<th>Between Barton and Burlington</th>
<th>Between Wilson and King</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM peak Hour Southbound</td>
<td>2,880</td>
<td>3,560</td>
</tr>
<tr>
<td>AM Peak Hour Northbound</td>
<td>4,090</td>
<td>3,190</td>
</tr>
<tr>
<td>Two-way Total</td>
<td>6,970</td>
<td>6,750</td>
</tr>
<tr>
<td>PM peak Hour Southbound</td>
<td>2,210</td>
<td>1,470</td>
</tr>
<tr>
<td>PM Peak Hour Northbound</td>
<td>4,020</td>
<td>4,020</td>
</tr>
<tr>
<td>Two-way Total</td>
<td>6,230</td>
<td>5,490</td>
</tr>
</tbody>
</table>

Based on the screenline information, levels of service across each screenline can be summarized.

Table 3.5
Current Level of Service Summary (North-South Screenlines)

<table>
<thead>
<tr>
<th>North-South Screenlines—Current Levels of Service</th>
<th>Between Locke and Queen</th>
<th>Between Bay and James</th>
<th>Between John and Wellington</th>
<th>East of Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM peak Hour Westbound</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>AM Peak Hour Eastbound</td>
<td>C - D</td>
<td>C</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>PM peak Hour Westbound</td>
<td>C - D</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>PM Peak Hour Eastbound</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
</tbody>
</table>

Table 3.6
Current Level of Service (East-West Screenlines)

<table>
<thead>
<tr>
<th>East-West Screenlines—Current Levels of Service</th>
<th>Between Barton and Burlington</th>
<th>Between Wilson and King</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM peak Hour Southbound</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>AM Peak Hour Northbound</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>PM peak Hour Southbound</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>PM Peak Hour Northbound</td>
<td>A</td>
<td>C</td>
</tr>
</tbody>
</table>

In essence, levels of service on Hamilton roadways in the study area are very good, and even the most constrained screenline is operating at level of service C-D.
3.5 TRAVEL DEMAND FORECASTS

In the modeling undertaken for the study, attached as Appendix A, three future road networks were evaluated: a base network that is essentially the same as the existing network; the base network plus a completed Red Hill Creek Expressway, and the base network plus the Red Hill Creek Expressway, Hamilton Perimeter Road, and conversion of Wilson and King to two-way operation, as recommended in the Downtown Transportation Plan. A continuation of current trends for transit usage was assumed in the forecast, meaning that a modal split of approximately ten percent would remain unchanged. Of the three networks summarized in Table 3.7, below, only the third has additional east-west capacity through the study area compared to the present.

Table 3.7
Comparison of Traffic Growth with Existing Spare Capacity
(AM Peak Hour Conditions)

<table>
<thead>
<tr>
<th>Study Screen Line</th>
<th>Direction</th>
<th>Existing Spare Capacity (vph)</th>
<th>Forecast Growth to Year 2021 (vph in AM peak hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Base Network</td>
<td>RHCE Network</td>
</tr>
<tr>
<td>Between Locke &amp; Queen</td>
<td>Westbound</td>
<td>3,060</td>
<td>444</td>
</tr>
<tr>
<td></td>
<td>Eastbound</td>
<td>1,480</td>
<td>1,146</td>
</tr>
<tr>
<td>Between Bay &amp; James</td>
<td>Westbound</td>
<td>4,145</td>
<td>449</td>
</tr>
<tr>
<td></td>
<td>Eastbound</td>
<td>2,280</td>
<td>859</td>
</tr>
<tr>
<td>Between John &amp; Wellington</td>
<td>Westbound</td>
<td>3,250</td>
<td>784</td>
</tr>
<tr>
<td></td>
<td>Eastbound</td>
<td>4,880</td>
<td>484</td>
</tr>
<tr>
<td>East of Victoria</td>
<td>Westbound</td>
<td>3,550</td>
<td>738</td>
</tr>
<tr>
<td></td>
<td>Eastbound</td>
<td>4,700</td>
<td>509</td>
</tr>
<tr>
<td>Between Barton &amp; Burlington</td>
<td>Southbound</td>
<td>2,880</td>
<td>189</td>
</tr>
<tr>
<td></td>
<td>Northbound</td>
<td>4,090</td>
<td>-58</td>
</tr>
<tr>
<td>Between Wilson &amp; King</td>
<td>Southbound</td>
<td>2,210</td>
<td>449</td>
</tr>
<tr>
<td></td>
<td>Northbound</td>
<td>4,020</td>
<td>151</td>
</tr>
</tbody>
</table>

Results of the modeling indicate that there will be spare capacity across all screenlines. The most constrained screenline is between Locke and Queen Streets, but it is projected that there would be spare capacity even with the base network, i.e. with no capacity improvements in the system. With the Red Hill Creek Expressway in place by 2020, the growth across the Locke Street screenline would be more modest.

3.6 TRUCKING INTERVIEWS

Interviews were held in person or by telephone with representatives of Stelco, Lakeport Beverage, Canamera Foods, Federal Marine Terminals, Sylvite/Norris, Newport Logistics, and Southern Ontario Railway/RailAmerica. The interviews were not intended to gather a statistically meaningful sample of truck movements, origins, and destinations, but rather was intended to gain some understanding of types of trip movements, typical volumes, and attitudinal information from participants.
Some of the companies interviewed are oriented to the west, primarily for food and agriculture related business (canola, soybean, meal, fertilizers). These companies feel that although a Perimeter Road would provide better connections to Hwy 403 west, the concept is not realistic and/or there needs to be a simpler way. Their issue is safe and reasonably quick access to Hwy 403.

Other companies are much more oriented to the east via Burlington Street/Industrial Drive, for markets toward Toronto or Buffalo. Although the concept of the Perimeter Road is attractive, in terms of completing an arterial road system including the Linc and the RHCE, for the most part a Perimeter Road is not critical to their operation. The consensus is that completion of the RHCE is required, and that it will provide improved connections to former Hwy 56, Hwy 6, and Hwy 403.

Of the companies interviewed, Stelco generated the most truck trips, and of the 400 +/- trips outbound daily, approximately 25% are oriented to Nanticoke and points west (with most going to Nanticoke). For trips using former Hwy 56 or Hwy 6 south, the RHCE would provide a shorter route than a Perimeter Road. For trips to the Aberdeen Yard or Hwy 403 west, the Perimeter Road would be shorter. Stelco supports the concept of an improved connection between Stelco and Hwy 403 because Stelco is effectively landlocked to the west.

3.7 WEST HARBOUR PLANNING AREA STUDY FORECASTS

The West Harbour Planning Area Study has identified three areas of potential change and growth in the study area, those being the Waterfront area, the Barton/Tiffany area, and the Ferguson/Wellington area. Estimates of additional traffic have been prepared for a number of land use scenarios in the three areas, and for the purposes of this needs assessment, traffic from three representative scenarios (essentially equivalent to the preferred land use scenarios as of June 2003) has been generated and assigned to the road system.

Because of the proportion of residential land use implicit in the three scenarios, traffic flows tend to be greater into the areas than leaving the areas in the afternoon peak hour. This characteristic is positive in that the greater flows tend to coincide with the off-peak direction.

The travel demand analysis contained in Appendix A determined that the screenline with the least available capacity is the north-south screenline at Locke Street. At present, it is estimated that the spare capacity at the screenline is approximately 1,300 vehicles per hour westbound in the afternoon peak hour. Future traffic growth at the screenline in 2020 is estimated to be approximately 800 vehicles per hour, with the existing road network plus the Red Hill Creek Expressway, leaving a spare capacity of 500 vehicles per hour.
With full buildout of the three growth areas – Waterfront, Barton/Tiffany, and Ferguson/Wellington – it is estimated that 300-400 vehicles per hour would be generated westbound across the Locke screenline in the afternoon peak hour. Therefore, there would still be some spare capacity at the most constrained screenline with full buildout. Capacities in other directions and through other screenlines are not a concern.
HAMILTON PERIMETER ROAD NEEDS ASSESSMENT

4.0 Existing and Future Conditions

4.1 TRANSPORTATION NETWORK EVALUATION

4.1.1 Road and Highway System Overview

In the period 1980 – 1983, major improvements were constructed for Burlington Street and Industrial Drive in Northeast Hamilton, significantly increasing the capacity of Burlington/Industrial between the major employment centres in the Bayfront Industrial Area and the QEW. Completion of these works coincided with industry closures and accelerated reductions in the workforce in major employment centres such as Stelco and Dofasco, and the capacity of the Burlington Street/Industrial Drive connection substantially exceeds the volumes now using the roadways. With the anticipated completion of the Red Hill Creek Expressway in 2007/2008, Hamilton will have a ring road system of freeways consisting of the QEW, Red Hill Creek Expressway, Lincoln M. Alexander Parkway, and Highway 403. The Bayfront Industrial Area would be directly connected to that ring road system at the QEW via Burlington Street/Industrial Drive.

East-west arterial roadways between Victoria Avenue and Highway 403 include:

- Main Street/King Street one-way pair
- York Boulevard and Cannon/Wilson one-way pair
- Barton Street east of Queen Street (terminates at Locke Street)
- Burlington Street east of James Street (terminates at Bay Street)

North-south arterial roadways include:

- Wellington Street/Victoria Avenue one-way pair
- John Street south of Barton Street
- James Street
- Bay Street south of Barton Street
- Queen Street south of Barton Street
The traffic level of service on these arterial roads in the peak hours is generally good, and can be categorized as Level of Service C with occasional periods at Level of Service D. Level of Service C is characterized by stable flows at volumes that restrict freedom to choose speed and change lanes, with volumes up to 75% of capacity of the roadway. Level of Service D is characterized by tolerable operating speeds, subject to unstable flow and low freedom to manoeuvre, with volumes up to 90% of capacity of the roadway.

4.1.2 Screenline Analysis

Four north-south screenlines were evaluated for existing and future conditions:

- Between Locke Street and Queen Street (Locke Screenline)
- Between Bay Street and James Street (Bay Screenline)
- Between John Street and Wellington Street (John Screenline)
- East of Victoria Avenue (Victoria Screenline)

At present, each screenline has existing spare capacity, with the Locke Screenline being the most constrained at 1,400 to 1,500 vehicles per hour spare capacity in the peak hour and peak direction. The other three screenlines have 2,000 to 5,100 vehicles per hour spare capacity in the peak hour and peak direction. The fact that capacities are less constrained through the central area and north end in comparison to west of the downtown is a factor in not considering initial phases of the Hamilton Perimeter Road, since it would increase screenline capacity in areas already in greater surplus.

4.1.3 Travel Distance Conditions

Burlington Street/Industrial Drive is an important arterial road "spine" for industrial access from the Burlington Street/QEW Interchange, providing a high capacity connection from the Bayfront Industrial Area to the "ring road" (QEW, Highway 403, LINC, RHCE). Major connections to this "ring road" include: the QEW to/from Toronto; the QEW to/from Niagara; former Highway 56 south to/from Haldimand County and Highway 3; Highway 6 south to/from Nanticoke/Lake Erie; Highway 403 to/from Brantford/Highway 401; and Highway 6 north to/from Guelph/Highway 401. These connections are illustrated in Figure 4.1.
In order to assess the relative merits of traffic (especially trucks) choosing to exit the Bayfront Industrial Area to the east using Burlington Street/Industrial Drive in comparison to exiting to the west via the most logical truck route (e.g. Cannon, York), a comparison of travel distances was undertaken for each of the main exit routes from the Bayfront Industrial Area.
For trips destined to QEW Niagara, the decision would be obvious, i.e., to use Burlington Street (Figure 4.2)

For trips destined to former Highway 56, the distances would be equal from approximately the interchange of King Street/Highway 403, meaning that any trips from the Bayfront would logically use Burlington Street and the Red Hill Creek Expressway to access former Highway 56 (Figure 4.3)
For trips destined to Highway 6 south, the distances would be equal from approximately the intersection of Burlington/Sherman, meaning that any trips from east of Sherman Avenue would logically use Burlington Street and the Red Hill Creek Expressway to access Highway 6 south to Nanticoke (Figure 4.4)

Figure 4.4
Trips to Highway 6 South

For trips going through the Freeman interchange to either Highway 407 or QEW Toronto, the distances would be equal from approximately mid-way between Sherman and Wentworth on Burlington Street, meaning that any trips from east of Wentworth/Sherman would logically use Burlington Street and the QEW to travel east toward Toronto (Figure 4.5)

Figure 4.5
Trips to Hwy. 407 or QEW
For any of the above four scenarios, the Hamilton Perimeter Road would not provide a travel distance benefit for the Bayfront Industrial Area.

- For trips destined to Highway 403 west toward Brantford, the distances would be equal from approximately the interchange of QEW/Red Hill Creek Expressway (Figure 4.6)

- For trips destined to Highway 6 north toward Guelph, the distances would be approximately equal from a point on the QEW opposite Eastport (Figure 4.7)
For the above two scenarios, the Hamilton Perimeter Road, if it were available, or the existing truck route system would provide shorter travel distances and times for the Bayfront Industrial Area.

### 4.1.4 Truck Routes and Volumes

Truck routes in the Lower City between Highway 403 and Victoria Avenue include:

- The Main/King one-way pair, except for the section of King through the central area (Wellington to Bay)
- York Boulevard and the Cannon/Wilson one-way pair
- Barton Street from Queen Street easterly
- Bay Street from Stuart Street southerly
- Queen Street from Stuart Street southerly
- John Street from Barton Street southerly
- Burlington Street from Ferguson easterly, Ferguson north of Burlington, and the Dock Service Road
- A number of short road sections required for operational reasons

These truck routes are illustrated in Figure 4.8.

![Figure 4.8](source: www.hamilton.ca)
Truck routes in the study area are on roadways that are not access-controlled, and with mixed land uses, including industrial, commercial, and mixed residential. Recent turning movement traffic counts were assembled for every significant intersection in the area bounded by Highway 403, Main Street, and Victoria Avenue. The truck-only subset of those counts was assembled and reviewed. The 7-hour truck volumes were used in the analysis of the truck survey set out below, and in addition, significant flow patterns through the study area were derived from the raw count information to provide a check for information from the survey.

Over a three-day period in May 2003, a sample of 348 truck trips was collected by following trucks from an entry point to either a destination or an exit route. Entry points were York Boulevard at Dundurn Street, Main Street at Dundurn Street, Burlington Street at Victoria Avenue, Barton Street at Victoria Avenue, Cannon Street at Victoria Avenue, King Street at Victoria Avenue, and Victoria Street at Main Street. Destinations/exit routes included internal to the study area, Burlington Street eastbound, Barton Street eastbound, Wilson Street eastbound, Main Street East eastbound, Claremont Access southbound, Highway 403 westbound, Highway 6 northbound, Highway 403 eastbound, and other external destinations.

In order to assess truck movement through the study area, a subset of the sample was chosen that excluded trips at the periphery of the study area, e.g. York to Dundurn to Chatham Street or points west, and Victoria northbound to Main eastbound. The remaining sample of 301 records was then assigned to an origin-destination table, and that table was factored up to match comparable 7-hour truck counts from City count records. The predicted 7-hour truck trip table is shown below as Table 4.1.

Table 4.1
Predicted 7-hour Truck Origins and Destinations in Study Area

<table>
<thead>
<tr>
<th>Truck Trip Origins</th>
<th>Internal</th>
<th>Burlington EB</th>
<th>Barton EB</th>
<th>Wilson EB</th>
<th>Main EB</th>
<th>Claremont SB</th>
<th>Hwy 403 EB</th>
<th>Hwy 403 WB</th>
<th>Hwy 6 NB</th>
<th>External</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>York at Dundurn</td>
<td>160</td>
<td>70</td>
<td>20</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>280</td>
</tr>
<tr>
<td>Main at Dundurn</td>
<td>90</td>
<td>120</td>
<td>0</td>
<td>0</td>
<td>120</td>
<td>30</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>360</td>
</tr>
<tr>
<td>Burlington at Victoria</td>
<td>120</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>50</td>
<td>50</td>
<td>60</td>
<td>80</td>
<td>0</td>
<td>360</td>
</tr>
<tr>
<td>Barton at Victoria</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>30</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>150</td>
</tr>
<tr>
<td>Cannon at Victoria</td>
<td>70</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>20</td>
<td>20</td>
<td>50</td>
<td>50</td>
<td>30</td>
<td>240</td>
</tr>
<tr>
<td>King at Victoria</td>
<td>40</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>140</td>
</tr>
<tr>
<td>Victoria at Main</td>
<td>80</td>
<td>90</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>210</td>
</tr>
<tr>
<td>Total</td>
<td>660</td>
<td>280</td>
<td>40</td>
<td>10</td>
<td>120</td>
<td>240</td>
<td>100</td>
<td>120</td>
<td>150</td>
<td>50</td>
<td>1,740</td>
</tr>
</tbody>
</table>

29 July 2003
This trip table was compared against actual 7-hour truck volumes entering, exiting, and within the study area from City count information, and it was determined that there is quite a good correlation to observed truck volumes in the study area. Of the 1,740 trucks entering the study area in a 7-hour period, approximately 660 or 38 percent had a destination within the study area.

The trip table was also used as the base case for estimating the volumes of trucks that may choose to use a Hamilton Perimeter Road if it were in place. A very generous estimate of the proportion of truck trips that might divert to a Hamilton Perimeter Road was estimated for each origin-destination pair. The results are summarized below in Table 4.2.

Table 4.2
7-hour Truck Trips that may be Diverted to a Hamilton Perimeter Road

<table>
<thead>
<tr>
<th>Diverted Truck Trip Origins</th>
<th>Diverted Truck Trip Destinations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Internal</td>
</tr>
<tr>
<td>York at Dundurn</td>
<td>80</td>
</tr>
<tr>
<td>Main at Dundurn</td>
<td>30</td>
</tr>
<tr>
<td>Burlington at Victoria</td>
<td>60</td>
</tr>
<tr>
<td>Barton at Victoria</td>
<td>10</td>
</tr>
<tr>
<td>Cannon at Victoria</td>
<td>10</td>
</tr>
<tr>
<td>King at Victoria</td>
<td>10</td>
</tr>
<tr>
<td>Victoria at Main</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
</tr>
</tbody>
</table>

The 7-hour truck volumes at each major entry point to the study area, the volumes estimated to use the Hamilton Perimeter Road, and the truck volumes with destinations within the study area are illustrated on Figure 4.9.
The implication is that up to half of the truck trips in the study area could be attracted to a Hamilton Perimeter Road if it were in place, based on very generous diversion assumptions. In a 7-hour period, two-way truck volumes attracted to the facility could be 850 trips. The volume over a 24-hour period would probably be approximately double that number, or about 1,700 truck trips. This volume would not be insignificant, but to put it in perspective, the capacity of an access-controlled four-lane Hamilton Perimeter Road would be approximately 6,000 vehicles per hour.

**4.1.5 Burlington Street/Industrial Drive**

Burlington Street between Wellington Street North and Sherman Avenue North was reconstructed in the late 1990's to provide a high-quality concrete roadway with two through lanes in each direction, plus medians/left-turn lanes as required. From Sherman Avenue easterly to the QEW, Burlington Street and Industrial Drive provide various combinations of major one-way pairs and elevated "express" sections with at-grade "local" sections, providing a high capacity and relatively high speed major
arterial spine for industrial access. Posted speeds are 60 to 70 km/hr, but actual speeds are higher, and the traffic level of service is very good, at Level of Service C in the peak hours.

4.1.6 Connection to Highway 403

There are several MTO planning studies underway that directly or indirectly affect Highway 403 between Highway 6 and King/Main Streets:

- Review of the Freeman interchange and the highway approaches to that interchange, including Highway 403 from east of Highway 6: status—underway but moving slowly because of highway system issues
- Review of Highway 403 from Highway 6 (including the interchange) to the Lincoln M. Alexander Parkway: status—dormant for some years, but may be re-activated soon
- Preparation of terms of reference for an EA for the Mid-Peninsula Highway Corridor Study: status—in progress, EA Terms of Reference submitted to MOE, two corridor options would materially affect Highway 403

The MTO would be very concerned with proposals for a new interchange on Highway 403 south of the Desjardins Canal for the following reasons:

- There are many uncertainties because of the various planning studies described above, especially with respect to potential Highway 403 widening and potential Highway 6 interchange reconfiguration to address the existing eastbound left side exit and entrance
- The geometry through the section of Highway 403 in question has a number of geometric limitations, including horizontal curves and stopping sight distance considerations
- The York Boulevard ramps to/from Toronto are immediately adjacent to the proposed interchange location
- An interchange this close to both Highway 6 and King/Main interchanges would have significant challenges related to weaving distances and ramp and taper lengths, compounded by the horizontal curvature

The MTO would require additional studies related to traffic impacts, traffic operations, and preliminary design level of detail before the MTO would be in a position to advise whether or not it would support a Hamilton Perimeter Road connection to Highway 403. If asked the direct question about whether or not a new Hamilton Perimeter
Road interchange is possible in the proposed location, the MTO must answer, "it depends", because of the significant concerns and study needs discussed above.

On a balance of probabilities, the potential for obtaining MTO approval for an interchange of the Hamilton Perimeter Road with Highway 403 is not at all assured.

### 4.1.7 Red Hill Creek Expressway/LINC

The Lincoln M. Alexander Parkway (LINC) was opened to traffic in October of 1997 between Highway 403 and Dartnall Road. An interim connection to Mud Street in Stoney Creek was completed the following year. Improvements to the interchange of the LINC and Highway 403 to provide freeway-to-freeway ramps were completed in 2002. The Red Hill Creek Expressway connection between the LINC and the QEW is a committed project of the Council of the City of Hamilton, and a financing plan is in place. Construction is anticipated to begin in 2003, with completion scheduled for 2007/2008. On a balance of probabilities, construction of the Red Hill Creek Expressway is quite certain to proceed.

### 4.1.8 Mid-Peninsula Corridor

An Environmental Assessment Terms of Reference was published in January 2003 for public and agency review. A proposed schedule for undertaking the route location EA was included in the document, and it set out that an EA could be completed in the first quarter of 2007, with the caveat that the schedule would be dependant on the start date and on the time period required to complete each activity, depending on the issues that may arise during the route location process.

The Environmental Assessment Terms of Reference for the Mid-Peninsula Transportation Corridor submitted to the Minister of the Environment in May 2003 has been withdrawn and will be resubmitted at a later date. This may or may not affect the schedule for EA completion.

A Mid-Peninsula Highway would have an impact on the QEW in terms of off-loading and providing an alternate route for long-haul trips, and depending on the route location ultimately chosen, may impact very substantially on Highway 403 between the Freeman Interchange and an interchange of Highway 403 and the Mid Peninsula Highway.
HAMILTON PERIMETER ROAD NEEDS ASSESSMENT
EXISTING AND FUTURE CONDITIONS

4.2 SOCIAL ENVIRONMENT

4.2.1 Intervening Opportunities

Lands acquired for the Hamilton Perimeter Road have not been used for the highest and best use, and the uncertain future of both those lands and the Hamilton Perimeter Road itself have compromised the advancement of realistic plans for the North End, the waterfront, and connections between the central area and the waterfront. Continued support for a Hamilton Perimeter Road will maintain uncertainty until approvals and financing are in place, which are both highly unlikely in the foreseeable future. Abandoning support for the Hamilton Perimeter Road now would allow for the development of realistic responses to identified concerns (e.g. goods movement), and would allow incorporation of the acquired property into achievable development plans for the West Harbour Planning Area.

Many cities across North America are grappling with the challenge of overcoming major road barriers along their waterfront. Toronto has dismantled the east end of the Gardiner Expressway, and has been exploring alternatives to the elevated Gardiner Expressway within the central area, including an at-grade arterial road or tunnel option. Boston, with huge financial assistance from the federal government, is burying a section of the I-90 adjacent to the harbour. Hamilton has an opportunity to heed the lessons learned by other cities and to explore other solutions.

From a city-wide perspective, abandoning the Perimeter Road concept may also mean a renewed focus on economic development initiatives with more currency, such as smart growth, intelligent buildings and electronic conferencing. Cities and businesses are embracing these trends and others that reduce unnecessary travel to gain competitive advantage (source: www.movingtheeconomy.ca).

4.2.2 Neighbourhood Impacts

The concept of a proposed Hamilton Perimeter Road has been affecting planning for the Downtown and North End residents for decades. Impacts of the Hamilton Perimeter Road would have to be explored fully in an Individual Environmental Assessment, but social impacts will include adding an additional east-west barrier to travel and to community cohesion, and the change in travel patterns and volumes on existing roadways. The unintended consequences of building a Hamilton Perimeter Road may be significant, and may include attracting additional traffic to the area through changes in catchment areas, and attracting QEW to Highway 6 north through traffic from the QEW and Highway 403.
4.3 ECONOMIC ENVIRONMENT

4.3.1 Goods Movement

Goods movement is the only significant issue remaining if the Hamilton Perimeter Road concept is abandoned. The overall City of Hamilton Transportation Master Plan, to be developed as a component of the new Official Plan, should address this issue. Many other avenues for goods movement need to be explored without the historical panacea that the whole issue would be solved when the Hamilton Perimeter Road is built.

One potential change affecting the Port would be if the Port of Toronto Terminal Operations Complex were to be decommissioned, with operations moved elsewhere (logically Hamilton). The Toronto Terminal is approximately 20 ha (50 ac) in area, and contains marine berths, a storage building, container handling and distribution centre, and rail service. In Hamilton, the first choice for locating such a facility would be Eastport, adjacent to the QEW. Another option could be Pier 15 if plans for the Randle Reef remediation take place. The Pier 15 option would rely primarily on the high capacity Burlington Street/Industrial Drive connection to the QEW if the Hamilton Perimeter Road is not built, although truck routes would still remain westerly to Highway 403.

Streamlined intermodal connections, third party logistics, route and load optimization, freight campuses and GPS tracking are just some of the advances that are changing the way goods are transported. These may provide solutions for moving goods in ways that are integrated, clean, smart, service oriented, safe, and user-focused. (source: www.movingtheeconomy.ca).

4.3.2 Brownfields Redevelopment

Industrial growth will be largely concentrated in the developing areas of the city, and employment in the Bayfront Area will grow more modestly through niche development and redevelopment. The City of Hamilton ERASE program has had and will have some success in redevelopment of brownfield sites in the Bayfront Industrial Area. The City of Hamilton’s Economic Development Strategy Report (May 2002) noted that land fragmentation and the relatively small size of many brownfield sites is a serious problem in the Bayfront Industrial Area, and also noted that new legislation and an aggressive City role in land assembly would be key factors in attracting new industry to those sites.
4.3.3 Cost and Affordability

The previously estimated cost of the full Hamilton Perimeter Road is in the order of $350 million, assuming successful completion of an Individual Environmental Assessment and approval to connect to Highway 403. The business case for building the road is simply not there, given that the capacity of the roadway is not required within the planning horizon, and that an increased modal split, transportation demand management, construction of the Red Hill Creek Expressway, and potential off-loading of the QEW by the Mid-Peninsula Highway would serve to reduce demand for the Hamilton Perimeter Road as well.

The costs of the Environmental Assessment process, planning, design and construction administration are not included in the $350 million construction cost estimate. Those activities and approvals would add 20 to 25 percent to the total cost of the project.

4.4 NATURAL ENVIRONMENT

4.4.1 Potential Challenges

Notwithstanding that the Hamilton Perimeter Road would be subject to an Environmental Assessment, there are a number of potential challenges including:

- Additional fill in Cootes Paradise and relocation of the Hamilton Waterfront Trail
- Dealing with contaminated sites
- Construction impacts of a cut-and-cover tunnel west of Dundurn Castle and under York Boulevard
- Proximity impacts on waterfront recreational uses on Hamilton Harbour
- Crossing the area just south of the Desjardins Canal and just north of Hamilton Cemetery. Many refugees of the 1847 Irish Famine who died of disease in Hamilton are buried there.

Some of these challenges may be more easily overcome than others, but may be very daunting nonetheless.
5.0   Alternatives

5.1   TRAVEL DEMAND MANAGEMENT

Travel Demand Management (TDM) techniques attempt to modify travel decisions so that more sustainable transportation, economic, social, and environmental objectives are met. Examples include flexible/staggered hours, encouragement of higher vehicle occupancies through carpooling/ridesharing and transit, increased home-based work, increased opportunity for fewer and shorter trips through residence/employment location synergies, and the promotion of active transport (walking, cycling, etc.). TDM rejects a traditional prediction/build approach to infrastructure in favour of behaviour modification.

Vision 2020 supports TDM principles, and travel demand for automobile travel can be modified through TDM. TDM for goods movement may include trip timing modification and regulatory changes. Many TDM techniques are viable in Hamilton, and specifically within the study area.

5.2   RAIL

The Bayfront Industrial Area is well served by rail. Both CN and CP have east-west mainline trackage in the lower City, with CN's being north of Barton Street. The North North West Spur (NNW Spur) provides direct connections to the Bayfront Industrial Area, and transloading facilities are located at the Parkdale and Aberdeen Yards. The Stuart Street Yard serves short-haul needs and interactions between mainline train and local client deliveries and shipments. There have been a number of discussions over the years about a relocation of the Stuart Street Yard to an alternative location(s) in Aldershot, in the Bayfront Industrial Area, or elsewhere.

Increased use of rail, and increased use of transloading facilities (truck to rail and vice versa) are possible. The short-haul operator of the Stuart Street Yard, RailAmerica, is increasing the number of rail cars handled per year, and is actively involved in providing unit-train service between Stelco's Hamilton and Nanticoke locations.

Increased rail service for goods movement is a viable option for some goods movement streams, but is not suitable for all goods movements, depending on shipping quantities, types, destinations and timing needs.
Rail service for passenger movements is primarily provided through GO Transit to the Hunter Street Terminal, although there is scope for improved rail service on the CN system through VIA Rail.

5.3 MARINE/FERRY

The Port of Hamilton is one of the largest commercial ports in Canada, handling approximately 12 million tonnes of cargo annually. Approximately 90 percent of this volume is inbound bulk goods, much of which is destined to the steel industry (iron ore, coal). Pier 15 (at the foot of Sherman Avenue) and Piers 25-27 (Eastport) are the prime areas for additional port activity. Pier 15 is served primarily by Burlington Street/Industrial Drive, and Eastport is served by Eastport Drive and the QEW.

Roll on/roll off (ro-ro) passenger car and truck ferry services have been proposed from time to time, but have tended to focus on longer/international trips, such as between Toronto and Rochester. They have not proven to be financially viable. If there were a future for this type of activity in Hamilton Harbour, the effect would be minimal on car and truck traffic in the Bayfront Industrial Area.

5.4 TRANSIT

There is already good transit service coverage in the study area. Modal split overall in the HSR service area in the morning peak hour is 8-10 percent, and is 15-20 percent in the downtown area. Modeling undertaken for this study has assumed a continuation of modal split trends. The "vision scenario" developed for the Regional Transportation Review (1995) assumed a doubling of modal split within the transit service area, in keeping with the principles of Vision 2020, but trends since that time have in fact been static or dropping slightly.

Because the study area is well served by transit routes, there is a better opportunity for increased modal split than in developing areas where revenue/cost ratios tend to be very low, at least initially. If the type of development and redevelopment proposed in the study area is supportive of transit, then a higher than average modal split can be aggressively pursued if there is a will to do so.

5.5 ROADWAY ALTERNATIVES

5.5.1 Do nothing

This alternative would retain the existing arterial roadway network and truck route system in the lower City between Highway 403 and the QEW. Upgrades would be limited to operational improvements within the existing road allowance, and on-street
regulations for parking and loading activity would continue to be monitored and adjusted as the need arises. Truck activity in the lower City would remain on the existing designated truck routes.

5.5.2 Selected Link and Intersection Improvements

Selected link and intersection improvements would be a logical extension of the “do nothing” alternative. Examples of improvements that could be considered or explored as the need arises include:

- Modifications or widenings of Dundurn Street between York Boulevard and King Street
- Intersection radius and pavement markings improvements, and parking regulation changes to Queen Street between York Boulevard and King Street

Some of these options would be subject to the Class Environmental Assessment for Municipal Projects, and others would not, but all would be achievable within the planning horizon if the need arises.

The role of Wilson Street as a one-way roadway versus converted to a two-way roadway as set out in the Downtown Transportation Study would need to be studied in more detail prior to any conversion, but a reasonable level of service would likely be achievable as a two-way roadway. The conversion would have to have regard to the role of Wilson Street as the truck route connector between York Boulevard and Victoria Avenue. All other road elements proposed by the Downtown Transportation Study would be supported.

5.5.3 Policy and Regulations

Arterial road designations, routes subject to No Parking during declared snow emergencies, and the truck route system in the study area described in Section 4.1.4, page 4.7 have all been established by Municipal by-law. Options available through implementation of policy and regulation may include:

- Modifications to the arterial road network
- Implementation of speed calming and traffic diversion through traffic calming techniques
- Adoption of policies and modifications to the truck route system to encourage use of Burlington Street/Industrial Drive and discourage use of arterial roads through the downtown
- Designation of routes to be use for the transportation of hazardous goods
All policy and regulatory instruments are available for use in the study area.

5.5.4 First Phase of the Hamilton Perimeter Road

A first phase of the Hamilton Perimeter Road has been promoted from time to time, linking Burlington Street to either Bay Street or the Queen Street/Hess Street one-way pair. A first phase cannot be justified on the basis of capacity needs, and would result in capacity improvements across screenlines that have greater spare capacity at present than the Locke Screenline between Highway 403 and the westerly limit of a first phase of the Hamilton Perimeter Road. In essence, any phasing that would extend capacity westerly from Burlington Street without a completed connection to Highway 403 would not be beneficial, as it would draw through traffic into the area that would otherwise use alternate routes to the south and east. There are already reasonably good connections between Burlington Street and Highway 403 via Wellington/Victoria, Cannon/King/Main, and York Boulevard. Other challenges include affordability and completion of an environmental assessment. On balance, the costs and risks far outweigh the benefits.

5.5.5 The Full Hamilton Perimeter Road

The full Hamilton Perimeter Road linking Burlington Street to a new interchange on Highway 403 cannot be justified on the basis of capacity needs, and there are other challenges that would have to be addressed, including affordability, an Individual Environmental Assessment, and approvals to connect to Highway 403. On balance, the costs and risks far outweigh the benefits.
HAMILTON PERIMETER ROAD NEEDS ASSESSMENT

6.0 Summary and Conclusions

Based on current and projected travel demand, there is no demonstrated need for a Hamilton Perimeter Road. In addition to potentially huge costs and environmental liabilities, there is a significant risk of not being able to connect to Highway 403. An evaluation of the transportation network concludes that the Bayfront Industrial Area is well served by Burlington Street/Industrial Drive and a ring road system of the QEW, Highway 403, the Lincoln M. Alexander Parkway, and the Red Hill Creek Expressway (under construction).

Connections to QEW Niagara, QEW Toronto, Highway 407, Highway 6 south and former Highway 56 south would all be well served without a Hamilton Perimeter Road. Although connections to Highway 403 west and Highway 6 north could be improved if Burlington Street/Industrial Drive were connected to Highway 403, trucking demand for those movements represents approximately one-third of truck trips that enter or exit the area bounded by Dundurn, Main, and Victoria Streets.

Notwithstanding that need for the road cannot be demonstrated, the evidence suggests that a Hamilton Perimeter Road could attract up to 850 truck trips in a 7-hour period (or approximately 1,700 truck trips per day) from existing routes in the study area, based on very generous assumptions about the proportions of trucks that would be diverted from existing routes to a new Hamilton Perimeter Road. This volume would not be insignificant, but to put it in perspective, the capacity of an access-controlled four-lane Hamilton Perimeter Road would be approximately 6,000 vehicles per hour. Given that there is not a good case to build a Hamilton Perimeter Road for future traffic volumes, and that truck volumes served by the facility would be very modest in comparison to the capacity of the roadway, the issue comes down to goods movement in and through the study area. In other words, if trucks are perceived as the problem, the Hamilton Perimeter Road is not the only solution. The matter of goods movement generally, and specifically in and through the study area, should be investigated as a component of the overall transportation master plan to be prepared for the new Official Plan for the City of Hamilton.

It is time for a watershed decision. That decision should be to abandon the Hamilton Perimeter Road concept, eliminate the uncertainty, move forward with plans for creating a vibrant waterfront and downtown connections, and deal realistically in other ways with goods movement.
APPENDIX A

Hamilton Perimeter Needs Assessment Technical Report - Paradigm
TECHNICAL REPORT

Prepared for:

HAMILTON WEST HARBOUR PLANNING AREA STUDY

Prepared by:

PARADIGM TRANSPORTATION SOLUTIONS LTD

June, 2003
1.0 INTRODUCTION

This report is one of a number of technical studies related to “Setting Sail – The Hamilton West Harbour Planning Area Study”. In the development of the plan for the West Harbour Planning Area, a key consideration is the need for a Hamilton Perimeter Road to be incorporated into the plan. This report provides a technical documentation of the investigation of the existing and future peak hour traffic demand in the vicinity of the West Harbour Planning Area. The need for a Hamilton Perimeter Road is based on both local traffic and the future City-wide traffic related to the overall grow and development strategy for Hamilton. This report considers the City-wide component of future traffic volumes. Estimates of the local traffic related to future land use development within the West Harbour Planning Area have been investigated as a separate analysis.

This report includes a description of existing traffic patterns in the study area, the basis for forecasts of future traffic in a City-wide basis and the analysis of the future traffic within the context of the need for a major new roadway such as the Hamilton Perimeter Road (HPR) to accommodate that traffic. A description of the HPR and the background to the proposal are described in a separate report as part of the overall Hamilton West Harbour Planning Area Study.

2.0 EXISTING TRAFFIC CONDITIONS

The Hamilton West Harbour area is roughly bounded by Wellington Street to the east, Cannon Street and York Blvd to the south and Hamilton Harbour to the north. The existing traffic conditions within this area have been established using traffic count data provided by the City of Hamilton. This data included intersection turning movement counts generally collected during the period from 1999 to 2002 as well as the City’s 1999 traffic volume book.

The existing traffic volumes are displayed as average link volumes at selected screen lines on the non-local street network within and adjacent to the study area. The area street network and the selected screen lines are indicated in Figure 1 below. The screen lines are as follows:

- A north-south screen line between Queen St and Locke St that includes Barton St, York Blvd, King St and Main St.
- A north-south screen line between Bay St and James St that includes Burlington St, Barton St, Cannon St, York Blvd, King St and Main St.
- A north-south screen line between John St and Wellington St that includes Burlington St, Barton St, Cannon St, Wilson St, King St and Main St.
- A north-south screen line east of Victoria St that includes Burlington St, Barton St, Cannon St, Wilson St, King St and Main St.
- An east-west screen line north of Barton St that includes Bay St, James St, John St, Wellington St and Victoria St.
- An east-west screen line between Wilson St and King St that includes Queen St, Bay St, James St, John St, Wellington St and Victoria St.
The truck volumes in the study area are also of interest. Figure 4 below shows the existing 7 hour truck volumes for this network. The data in Figure 4 shows trucks only and does not include buses.

A summary of the traffic volumes at the screen lines identified in Figure 1 is provided in Table 1A and 1B below. The key items to note in this data summary are:

- The PM peak hour volumes are about 30% to 40% higher than the AM peak hour volumes.
- The AM peak hour volumes are highest west of the downtown while the PM volumes are highest east of the downtown. However, while the overall pattern indicates some downtown orientation, the traffic is not strongly directionally oriented. This indicates that the travel
pattern in this area is related to many different activity centres rather than just the downtown employment.

<table>
<thead>
<tr>
<th>North-South Screenline Existing Traffic Volumes</th>
<th>Between Locke &amp; Queen</th>
<th>Between Bay &amp; James</th>
<th>Between John &amp; Wellington</th>
<th>East of Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM Peak Westbound</td>
<td>3140</td>
<td>2985</td>
<td>3550</td>
<td>3650</td>
</tr>
<tr>
<td>AM Peak Eastbound</td>
<td>5520</td>
<td>4520</td>
<td>3920</td>
<td>3300</td>
</tr>
<tr>
<td>Two way total</td>
<td>8660</td>
<td>7505</td>
<td>7470</td>
<td>6950</td>
</tr>
<tr>
<td>PM Peak Westbound</td>
<td>4890</td>
<td>4380</td>
<td>3960</td>
<td>4540</td>
</tr>
<tr>
<td>PM Peak Eastbound</td>
<td>4500</td>
<td>4660</td>
<td>5060</td>
<td>4860</td>
</tr>
<tr>
<td>Two way total</td>
<td>9390</td>
<td>9040</td>
<td>9020</td>
<td>9400</td>
</tr>
<tr>
<td>7 hr Trucks Westbound</td>
<td>710</td>
<td>700</td>
<td>500</td>
<td>910</td>
</tr>
<tr>
<td>7 hr Trucks Eastbound</td>
<td>590</td>
<td>630</td>
<td>720</td>
<td>680</td>
</tr>
<tr>
<td>Two way total</td>
<td>1300</td>
<td>1330</td>
<td>1220</td>
<td>1590</td>
</tr>
</tbody>
</table>

**TABLE 1A: EXISTING NORTH SOUTH SCREEN LINE SUMMARY**

<table>
<thead>
<tr>
<th>East-West Screenline Existing Traffic Volumes</th>
<th>Between Barton &amp; Burlington</th>
<th>Between Wilson &amp; King</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM Peak Southbound</td>
<td>1120</td>
<td>2240</td>
</tr>
<tr>
<td>AM Peak Northbound</td>
<td>1110</td>
<td>3410</td>
</tr>
<tr>
<td>Two way total</td>
<td>2230</td>
<td>5650</td>
</tr>
<tr>
<td>PM Peak Southbound</td>
<td>1790</td>
<td>4330</td>
</tr>
<tr>
<td>PM Peak Northbound</td>
<td>1180</td>
<td>2580</td>
</tr>
<tr>
<td>Two way total</td>
<td>2970</td>
<td>6910</td>
</tr>
<tr>
<td>7 hr Trucks Southbound</td>
<td>520</td>
<td>520</td>
</tr>
<tr>
<td>7 hr Trucks Northbound</td>
<td>410</td>
<td>480</td>
</tr>
<tr>
<td>Two way total</td>
<td>930</td>
<td>1000</td>
</tr>
</tbody>
</table>

**TABLE 1B: EXISTING EAST WEST SCREEN LINE SUMMARY**

Estimates of the network capacity in this area have been developed based on an assumed capacity of 400 vehicles per hour to 800 vehicles per hour for each through travel lane on the non-local roadways identified in Figure 1. This is a general estimate only because the capacity of a roadway link is determined by the downstream intersection conditions, including the relative share of traffic on the different intersection approaches. A summary of the existing available roadway capacity is provided in Tables 2A and 2B below.

<table>
<thead>
<tr>
<th>North-South Screenline Existing Roadway Capacity</th>
<th>Between Locke &amp; Queen</th>
<th>Between Bay &amp; James</th>
<th>Between John &amp; Wellington</th>
<th>East of Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak Westbound</td>
<td>6200</td>
<td>7400</td>
<td>6800</td>
<td>7200</td>
</tr>
<tr>
<td>Peak Eastbound</td>
<td>7000</td>
<td>7400</td>
<td>8800</td>
<td>8000</td>
</tr>
<tr>
<td>Two way total</td>
<td>13200</td>
<td>14800</td>
<td>15600</td>
<td>15200</td>
</tr>
</tbody>
</table>

**TABLE 2A: EXISTING NORTH SOUTH SCREEN LINE CAPACITY**

<table>
<thead>
<tr>
<th>East-West Screenline Existing Roadway Capacity</th>
<th>Between Barton &amp; Burlington</th>
<th>Between Wilson &amp; King</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak Southbound</td>
<td>4000</td>
<td>5800</td>
</tr>
<tr>
<td>Peak Northbound</td>
<td>5200</td>
<td>6600</td>
</tr>
<tr>
<td>Two way total</td>
<td>9200</td>
<td>12400</td>
</tr>
</tbody>
</table>

**TABLE 2B: EXISTING EAST WEST SCREEN LINE CAPACITY**
One method to compare the traffic volume and available capacity conditions is to compare the amount of available spare capacity that is available in the network. Tables 3A and 3B below provide a summary of the estimated available spare capacity for the study area.

<table>
<thead>
<tr>
<th>North-South Screenline Existing Spare Capacity</th>
<th>Between Locke &amp; Queen</th>
<th>Between Bay &amp; James</th>
<th>Between John &amp; Wellington</th>
<th>East of Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM Peak Westbound</td>
<td>3060</td>
<td>4415</td>
<td>3250</td>
<td>3550</td>
</tr>
<tr>
<td>AM Peak Eastbound</td>
<td>1480</td>
<td>2880</td>
<td>4880</td>
<td>4700</td>
</tr>
<tr>
<td>Two way total</td>
<td>4540</td>
<td>7295</td>
<td>8130</td>
<td>8250</td>
</tr>
<tr>
<td>PM Peak Westbound</td>
<td>1310</td>
<td>3020</td>
<td>2840</td>
<td>2660</td>
</tr>
<tr>
<td>PM Peak Eastbound</td>
<td>2500</td>
<td>2740</td>
<td>3740</td>
<td>3140</td>
</tr>
<tr>
<td>Two way total</td>
<td>3810</td>
<td>5760</td>
<td>6580</td>
<td>5800</td>
</tr>
</tbody>
</table>

**TABLE 3A: EXISTING SPARE CAPACITY ON NORTH SOUTH SCREEN LINES**

<table>
<thead>
<tr>
<th>East-West Screenline Existing Spare Capacity</th>
<th>Between Barton &amp; Burlington</th>
<th>Between Wilson &amp; King</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM Peak Southbound</td>
<td>2880</td>
<td>3560</td>
</tr>
<tr>
<td>AM Peak Northbound</td>
<td>4090</td>
<td>3190</td>
</tr>
<tr>
<td>Two way total</td>
<td>6970</td>
<td>6750</td>
</tr>
<tr>
<td>PM Peak Southbound</td>
<td>2210</td>
<td>1470</td>
</tr>
<tr>
<td>PM Peak Northbound</td>
<td>4020</td>
<td>4020</td>
</tr>
<tr>
<td>Two way total</td>
<td>6230</td>
<td>5490</td>
</tr>
</tbody>
</table>

**TABLE 3B: EXISTING SPARE CAPACITY ON EAST WEST SCREEN LINES**

The summary of existing traffic conditions generally indicates that the existing peak hour traffic volumes are substantially below the available roadway capacity in both the AM and PM peak hours. In almost all locations, there are in excess of 2000 vehicles per hour of spare capacity (equivalent to 2 to 3 arterial roadway lanes) and the volume to capacity ratio is generally 60 % or less. This represents a low level of traffic congestion that is normally considered acceptable. The exceptions and apparent critical area in terms of traffic volumes compared to capacity are:

- The eastbound direction on the west side of the downtown during the AM peak hour when the available spare capacity is reduced to about 1480 vehicles per hour with a volume to capacity ratio of about 79 %.
- The westbound direction on the west side of the downtown during the PM peak hour when the available spare capacity is reduced to about 1310 vehicles per hour with a volume to capacity ratio of about 79 %.

The finding that the roadway network west of the downtown is the most critical area in terms of available roadway capacity to accommodate peak period traffic is a reflection of the available corridor in this area consisting of only York Blvd, King St and Main St. This is further reflected in Tables 3C and 3D below that provide a general level of service summary for the screen lines. In almost all cases the level of service is in the A to C range. The exceptions are the AM peak eastbound and PM peak westbound cases where the level of service is in the high C or low D range. Level of service D is the normal peak hour condition in a larger urban area the size of Hamilton and is usually regarded as an acceptable traffic condition.
3.0 BASIS FOR TRAVEL FORECASTS

The future traffic conditions for the study area have been assessed using the City of Hamilton’s EMME/2 travel forecasting model and database. This model has been calibrated to provide travel estimates for the AM peak hour. The data base includes data files on existing and future land use, alternative roadway networks and related files used as input to the travel forecasting model. Of critical importance to the travel forecasts are the land use assumptions used for the analysis as the pattern of future land use will form the underlying basis to estimate the future pattern of travel throughout the City and beyond. The City data base provided population and employment estimates for years 2001, 2006 and 2021. Since year 2006 is very close to the existing conditions it is not relevant for this analysis. The traffic forecasts have been carried out using the land use years 2001 and 2021.

The population estimates for the Super Analysis Zones (SAZ) used for the traffic forecasts are shown in Table 4 below. The SAZ are shown in Appendix A of the report.
### POPULATION ESTIMATES

<table>
<thead>
<tr>
<th>Hamilton Super Analysis Zones</th>
<th>2001 Estimates (mo03)</th>
<th>2021 Estimates (mo21)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study area</td>
<td>13,434</td>
<td>13,450</td>
</tr>
<tr>
<td>Ham centre</td>
<td>71,224</td>
<td>70,745</td>
</tr>
<tr>
<td>Ham downtown</td>
<td>21,801</td>
<td>22,382</td>
</tr>
<tr>
<td>Ham harbour</td>
<td>4,142</td>
<td>3,923</td>
</tr>
<tr>
<td>Ham mtn NE</td>
<td>62,826</td>
<td>58,497</td>
</tr>
<tr>
<td>Ham mtn NW</td>
<td>25,910</td>
<td>28,776</td>
</tr>
<tr>
<td>Ham mtn SE</td>
<td>38,288</td>
<td>40,621</td>
</tr>
<tr>
<td>Ham mtn SW</td>
<td>21,048</td>
<td>27,247</td>
</tr>
<tr>
<td>Ham QEW</td>
<td>3,650</td>
<td>3,457</td>
</tr>
<tr>
<td>Ham red hill</td>
<td>43,376</td>
<td>43,650</td>
</tr>
<tr>
<td>Ham west</td>
<td>29,162</td>
<td>28,511</td>
</tr>
<tr>
<td>Anc airport</td>
<td>1,268</td>
<td>1,173</td>
</tr>
<tr>
<td>Anc new</td>
<td>14,962</td>
<td>28,998</td>
</tr>
<tr>
<td>Anc old</td>
<td>10,418</td>
<td>11,443</td>
</tr>
<tr>
<td>Anc rural</td>
<td>1,851</td>
<td>2,167</td>
</tr>
<tr>
<td>Dundas</td>
<td>23,404</td>
<td>25,437</td>
</tr>
<tr>
<td>Flam rural</td>
<td>22,556</td>
<td>24,009</td>
</tr>
<tr>
<td>Flam Waterdown</td>
<td>14,250</td>
<td>28,757</td>
</tr>
<tr>
<td>Glen airport</td>
<td>2,990</td>
<td>8,669</td>
</tr>
<tr>
<td>Glen Rymal</td>
<td>1,822</td>
<td>1,644</td>
</tr>
<tr>
<td>Glen rural</td>
<td>7,063</td>
<td>20,742</td>
</tr>
<tr>
<td>SC Highland</td>
<td>18,111</td>
<td>30,559</td>
</tr>
<tr>
<td>SC old</td>
<td>22,425</td>
<td>24,931</td>
</tr>
<tr>
<td>SC QEW</td>
<td>19,301</td>
<td>23,089</td>
</tr>
<tr>
<td>SC rural</td>
<td>2,589</td>
<td>2,914</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>497,871</strong></td>
<td><strong>575,793</strong></td>
</tr>
</tbody>
</table>

### TABLE 4: POPULATION FORECASTS

The population estimates in Table 4 indicate that most anticipated population growth will occur in the outlying areas of Ancaster, Flamborough, Glenbrook and Stoney Creek Heritage Green. This is consistent with the trends of the past several years and the designated residential development areas of the City. Overall the level of growth anticipated is a population increase of about 16% over the twenty year planning period. By comparison, Hamilton’s population increased by 4.8% during the 1996 to 2001 period (Statistics Canada).

The employment estimates for years 2001 and 2021 are summarized in Table 5 below. These estimates have been adjusted to reflect estimates of employment in the Hamilton centre, Hamilton downtown and Hamilton harbour SAZ consistent with the recent Downtown Transportation Study conducted by the City.
**EMPLOYMENT ESTIMATES**

<table>
<thead>
<tr>
<th>Hamilton Super Analysis Zones</th>
<th>2001 Estimates (mo07)</th>
<th>2021 Estimates (mo26)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study area</td>
<td>6,031</td>
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</tr>
<tr>
<td>Ham centre</td>
<td>22,377</td>
<td>24,202</td>
</tr>
<tr>
<td>Ham downtown</td>
<td>27,272</td>
<td>30,816</td>
</tr>
<tr>
<td>Ham harbour</td>
<td>23,364</td>
<td>26,566</td>
</tr>
<tr>
<td>Ham mtn NE</td>
<td>16,736</td>
<td>23,294</td>
</tr>
<tr>
<td>Ham mtn NW</td>
<td>7,399</td>
<td>6,682</td>
</tr>
<tr>
<td>Ham mtn SE</td>
<td>10,327</td>
<td>13,943</td>
</tr>
<tr>
<td>Ham mtn SW</td>
<td>1,323</td>
<td>3,999</td>
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<td>Ham QEW</td>
<td>13,449</td>
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<td>Ham red hill</td>
<td>8,720</td>
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<td>Anc airport</td>
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<td>1,369</td>
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<tr>
<td>Anc new</td>
<td>1,494</td>
<td>2,909</td>
</tr>
<tr>
<td>Anc old</td>
<td>2,903</td>
<td>6,556</td>
</tr>
<tr>
<td>Anc rural</td>
<td>2,786</td>
<td>1,629</td>
</tr>
<tr>
<td>Dundas</td>
<td>5,945</td>
<td>10,460</td>
</tr>
<tr>
<td>Flam rural</td>
<td>5,967</td>
<td>10,670</td>
</tr>
<tr>
<td>Flam Waterdown</td>
<td>7,230</td>
<td>5,817</td>
</tr>
<tr>
<td>Glan airport</td>
<td>772</td>
<td>5,561</td>
</tr>
<tr>
<td>Glan Rymal</td>
<td>170</td>
<td>7,910</td>
</tr>
<tr>
<td>Glan rural</td>
<td>1,028</td>
<td>4,979</td>
</tr>
<tr>
<td>SC Highland</td>
<td>1,397</td>
<td>2,515</td>
</tr>
<tr>
<td>SC old</td>
<td>9,637</td>
<td>12,824</td>
</tr>
<tr>
<td>SC QEW</td>
<td>10,756</td>
<td>12,824</td>
</tr>
<tr>
<td>SC rural</td>
<td>424</td>
<td>1,047</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>207,701</strong></td>
<td><strong>268,779</strong></td>
</tr>
</tbody>
</table>

**TABLE 5: EMPLOYMENT ESTIMATES**

The estimates of employment indicate an overall increase in employment within the city of about 29% over the 2001 to 2021 planning period. The employment increase is fairly widely distributed across the City with an increase in employment of about 8,500 jobs in the Hamilton centre, Hamilton downtown and Hamilton harbour SAZ.

**4.0 FUTURE TRAFFIC ESTIMATES**

The initial travel estimates was conducted for the year 2001 existing roadway network to establish a basis for comparison. The model estimates of the AM peak hour traffic volumes for the study screen lines are compared to the observed existing traffic volumes for the same screen lines as shown in Tables 6A and 6B below.
### TABLE 6A: COMPARISON OF 2001 MODEL ESTIMATES WITH EXISTING TRAFFIC (NORTH-SOUTH SCREEN LINES)

<table>
<thead>
<tr>
<th></th>
<th>Between Locke &amp; Queen</th>
<th>Between Bay &amp; James</th>
<th>Between John &amp; Wellington</th>
<th>East of Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing AM Peak Westbound</td>
<td>3140</td>
<td>2985</td>
<td>3550</td>
<td>3650</td>
</tr>
<tr>
<td>Existing AM Peak Eastbound</td>
<td>5520</td>
<td>4520</td>
<td>3920</td>
<td>3300</td>
</tr>
<tr>
<td>Existing two way total</td>
<td>8660</td>
<td>7505</td>
<td>7470</td>
<td>6950</td>
</tr>
<tr>
<td>2001 Model AM Peak Westbound</td>
<td>3591</td>
<td>2876</td>
<td>2967</td>
<td>3181</td>
</tr>
<tr>
<td>2001 Model AM Peak Eastbound</td>
<td>4718</td>
<td>3199</td>
<td>3015</td>
<td>3804</td>
</tr>
<tr>
<td>2001 Model two way total</td>
<td>8309</td>
<td>6075</td>
<td>5982</td>
<td>6985</td>
</tr>
<tr>
<td>Existing / Model Comparison Westbound</td>
<td>87%</td>
<td>104%</td>
<td>120%</td>
<td>115%</td>
</tr>
<tr>
<td>Existing / Model Comparison Eastbound</td>
<td>117%</td>
<td>141%</td>
<td>130%</td>
<td>87%</td>
</tr>
<tr>
<td>Existing / Model two way total comparison</td>
<td>104%</td>
<td>124%</td>
<td>125%</td>
<td>99%</td>
</tr>
</tbody>
</table>

### TABLE 6B: COMPARISON OF 2001 MODEL ESTIMATES WITH EXISTING TRAFFIC (EAST-WEST SCREEN LINES)

<table>
<thead>
<tr>
<th></th>
<th>Between Barton &amp; Burlington</th>
<th>Between Wilson &amp; King</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing AM Peak Southbound</td>
<td>1120</td>
<td>2240</td>
</tr>
<tr>
<td>Existing AM Peak Northbound</td>
<td>1110</td>
<td>3410</td>
</tr>
<tr>
<td>Existing two way total</td>
<td>2230</td>
<td>5650</td>
</tr>
<tr>
<td>2001 Model AM Peak Southbound</td>
<td>865</td>
<td>1708</td>
</tr>
<tr>
<td>2001 Model AM Peak Northbound</td>
<td>1822</td>
<td>3880</td>
</tr>
<tr>
<td>2001 Model two way total</td>
<td>2687</td>
<td>5588</td>
</tr>
<tr>
<td>Existing / Model Comparison Southbound</td>
<td>129%</td>
<td>131%</td>
</tr>
<tr>
<td>Existing / Model Comparison Northbound</td>
<td>61%</td>
<td>88%</td>
</tr>
<tr>
<td>Existing / Model two way total comparison</td>
<td>83%</td>
<td>101%</td>
</tr>
</tbody>
</table>

The data in Tables 6A and 6B indicate that the model is generally underestimating the observed traffic volumes crossing the north-south screen lines and overestimating the traffic volumes crossing the east-west screen lines. Recognizing this limitation in the model, the emphasis in analyzing future traffic conditions, as estimated by the model, is focused on determining the increase in traffic volumes from 2001 to the forecast year.

Forecasts of the year 2021 AM peak hour traffic volumes have been developed using the City of Hamilton EMME/2 model and the year 2021 land use pattern represented by the population and employment distribution outlined in Tables 4 and 5. The year 2021 traffic has been assigned to three possible roadway networks, as follows:

- **A base roadway network** that consists of the existing roadway network only, with no major improvements.
- **A roadway network** that includes the completion of the Red Hill Creek Expressway (RHCE) from the Lincoln Alexander Parkway to the Queen Elizabeth Way (QEW) as currently planned by the City.
A roadway network that includes the RHCE, the conversion of James St (Queen - Wellington) and York Blvd/ Wilson St (Bay - Wellington) to two way traffic operation and a new Hamilton Perimeter Road (HPR) facility connecting Wellington St to Highway 403 with an interchange at Bay St. The analysis assumed the HPR is a fully access controlled facility. In each case, the estimated modal share of peak hour trips using public transit is similar to the existing situation.

A comparison of the year 2021 AM peak hour traffic estimates on the base roadway network with the year 2001 estimates is provided in Tables 7A and 7B below.

<table>
<thead>
<tr>
<th>North-South Screenline Traffic Growth (Base Network)</th>
<th>Between Locke &amp; Queen</th>
<th>Between Bay &amp; James</th>
<th>Between John &amp; Wellington</th>
<th>East of Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001 Model AM Peak Westbound</td>
<td>3591</td>
<td>2876</td>
<td>2967</td>
<td>3181</td>
</tr>
<tr>
<td>2001 Model AM Peak Eastbound</td>
<td>4718</td>
<td>3199</td>
<td>3015</td>
<td>3804</td>
</tr>
<tr>
<td>2001 Model two way total</td>
<td>8309</td>
<td>6075</td>
<td>5982</td>
<td>6985</td>
</tr>
<tr>
<td>2021 Model AM Peak Westbound</td>
<td>4035</td>
<td>3325</td>
<td>3751</td>
<td>3919</td>
</tr>
<tr>
<td>2021 Model AM Peak Eastbound</td>
<td>5864</td>
<td>4058</td>
<td>3499</td>
<td>4313</td>
</tr>
<tr>
<td>2021 - 2001 Westbound Growth</td>
<td>444</td>
<td>449</td>
<td>784</td>
<td>738</td>
</tr>
<tr>
<td>2021 - 2001 Eastbound Growth</td>
<td>1,146</td>
<td>859</td>
<td>484</td>
<td>509</td>
</tr>
<tr>
<td>2021 - 2001 Two way Growth</td>
<td>1,590</td>
<td>1,308</td>
<td>1,268</td>
<td>1,247</td>
</tr>
</tbody>
</table>

**TABLE 7A: FORECASTS OF 2021 AM PEAK HOUR TRAFFIC FOR BASE NETWORK NORTH-SOUTH SCREEN LINES**

<table>
<thead>
<tr>
<th>East-West Screenline Traffic Growth (Base Network)</th>
<th>Between Barton &amp; Burlington</th>
<th>Between Wilson &amp; King</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001 Model AM Peak Southbound</td>
<td>865</td>
<td>1708</td>
</tr>
<tr>
<td>2001 Model AM Peak Northbound</td>
<td>1822</td>
<td>3880</td>
</tr>
<tr>
<td>2001 Model two way total</td>
<td>2687</td>
<td>5588</td>
</tr>
<tr>
<td>2021 Model AM Peak Southbound</td>
<td>1054</td>
<td>2157</td>
</tr>
<tr>
<td>2021 Model AM Peak Northbound</td>
<td>1764</td>
<td>4031</td>
</tr>
<tr>
<td>2021 Model two way total</td>
<td>2818</td>
<td>6188</td>
</tr>
<tr>
<td>2021 - 2001 Southbound Growth</td>
<td>189</td>
<td>449</td>
</tr>
<tr>
<td>2021 - 2001 Northbound Growth</td>
<td>-58</td>
<td>151</td>
</tr>
<tr>
<td>2021 - 2001 Two way Growth</td>
<td>131</td>
<td>600</td>
</tr>
</tbody>
</table>

**TABLE 7B: FORECASTS OF 2021 AM PEAK HOUR TRAFFIC FOR BASE NETWORK EAST-WEST SCREEN LINES**

The traffic estimates provided in Tables 7A and 7B indicate that the traffic growth across the north - south screen lines is about 1000 vph to 1300 vph (two way traffic). At the Locke St screen line, the growth in the AM peak hour traffic volume in the eastbound direction is about 1150 vph in comparison to the available spare capacity of about 1500 vph. The traffic growth across the east - west screen lines is lower with the southbound traffic increasing by about 450 vph across the CNR screen line in comparison to the estimated spare capacity of about 2500 vph.
The year 2021 traffic estimates for the second future roadway network with the RHCE included are provided in Tables 8A and 8B below.

<table>
<thead>
<tr>
<th>North-South Screenline Traffic Comparison (RHCE Network)</th>
<th>Between Locke &amp; Queen</th>
<th>Between Bay &amp; James</th>
<th>Between John &amp; Wellington</th>
<th>East of Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001 Model AM Peak Westbound</td>
<td>3591</td>
<td>2876</td>
<td>2967</td>
<td>3181</td>
</tr>
<tr>
<td>2001 Model AM Peak Eastbound</td>
<td>4718</td>
<td>3199</td>
<td>3015</td>
<td>3804</td>
</tr>
<tr>
<td>2001 Model two way total</td>
<td>8309</td>
<td>6075</td>
<td>5982</td>
<td>6985</td>
</tr>
<tr>
<td>2021 Model AM Peak Westbound</td>
<td>3912</td>
<td>3282</td>
<td>3656</td>
<td>3598</td>
</tr>
<tr>
<td>2021 Model AM Peak Eastbound</td>
<td>5537</td>
<td>3925</td>
<td>3274</td>
<td>3839</td>
</tr>
<tr>
<td>2021 Model two way total</td>
<td>9449</td>
<td>7207</td>
<td>6930</td>
<td>7437</td>
</tr>
<tr>
<td>2021 - 2001 Westbound Growth</td>
<td>321</td>
<td>406</td>
<td>689</td>
<td>417</td>
</tr>
<tr>
<td>2021 - 2001 Eastbound Growth</td>
<td>819</td>
<td>726</td>
<td>259</td>
<td>35</td>
</tr>
<tr>
<td>2021 - 2001 Two way Growth</td>
<td>1,140</td>
<td>1,132</td>
<td>948</td>
<td>452</td>
</tr>
</tbody>
</table>

**TABLE 8A: FORECASTS OF 2021 AM PEAK HOUR TRAFFIC FOR RHCE NETWORK NORTH-SOUTH SCREEN LINES**

<table>
<thead>
<tr>
<th>East-West Screenline Traffic Comparison (RHCE Network)</th>
<th>Between Barton &amp; Burlington</th>
<th>Between Wilson &amp; King</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001 Model AM Peak Southbound</td>
<td>865</td>
<td>1708</td>
</tr>
<tr>
<td>2001 Model AM Peak Northbound</td>
<td>1822</td>
<td>3880</td>
</tr>
<tr>
<td>2001 Model two way total</td>
<td>2687</td>
<td>5588</td>
</tr>
<tr>
<td>2021 Model AM Peak Southbound</td>
<td>681</td>
<td>1887</td>
</tr>
<tr>
<td>2021 Model AM Peak Northbound</td>
<td>1557</td>
<td>3754</td>
</tr>
<tr>
<td>2021 Model two way total</td>
<td>2238</td>
<td>5641</td>
</tr>
<tr>
<td>2021 - 2001 Southbound Growth</td>
<td>-184</td>
<td>179</td>
</tr>
<tr>
<td>2021 - 2001 Northbound Growth</td>
<td>-265</td>
<td>-126</td>
</tr>
<tr>
<td>2021 - 2001 Two way Growth</td>
<td>-449</td>
<td>53</td>
</tr>
</tbody>
</table>

**TABLE 8B: FORECASTS OF 2021 AM PEAK HOUR TRAFFIC FOR RHCE NETWORK EAST-WEST SCREEN LINES**

The traffic estimates on the network with the RHCE indicate that the traffic growth across the north-south screen lines is less than in the base network comparison, particularly in the area east of downtown Hamilton. This is due to the availability of the RHCE facility to accommodate traffic across the escarpment further east. The AM peak hour eastbound growth across the Locke St screen line is about 820 vph as compared to the growth of about 1150 vph on the base network. Again this may be compared to the available spare capacity of about 1500 vph for eastbound traffic at this location. The traffic growth across the north-south screen lines is very minor or even decreased from the estimated 2001 screen line volumes.

Tables 9A and 9B below provide year 2021 traffic estimates for the network with the RHCE, the HPR and the conversion of the downtown sections of King St and York Blvd / Wilson St to two-way traffic operation.
The traffic forecasts in Tables 9A and 9B indicate some significant shifts in traffic with the introduction of the HPR and the conversion of King St and York/Wilson St to two-way traffic operation. The traffic crossing the north-south screen lines has increased, particularly on the west side of the downtown area. Also, the traffic volumes crossing the east-west screen lines have increased significantly. At the critical Locke St screen line, the traffic increase is about 1250 per hour in the AM peak eastbound direction. This may be compared to the estimated existing spare capacity of about 1500 vph (although it should be noted this 2021 network alternative provides approximately 3000 vph additional capacity with the HPR facility). The apparent effect of this increase in capacity with the higher operating standards on the HPR is to attract an additional 400 to 450 vph to this corridor from other areas of the City. In the analysis it was found that the AM peak hour traffic volumes using the HPR were about 750 vph westbound and 1120 vph eastbound at the Locke St screen line. These volumes may be compared to an approximate capacity of about 3000 vph in each direction for a fully access-controlled four lane roadway.
5.0 SUMMARY AND CONCLUSIONS

The analysis of the existing traffic conditions indicates that there is generally sufficient roadway capacity throughout the study area to accommodate the peak hour traffic volumes at the present. This is consistent with casual observation of the traffic conditions in the central area of Hamilton. The area that is potentially the most critical portion of the roadway network is the west side of downtown Hamilton, referred to as the Locke St screen line. In this area, the current peak hour traffic volumes utilize about 75% to 80% of the available roadway capacity. The amount of unused or spare capacity is approximately 1300 to 1500 vehicle per hour in the peak direction in both the AM peak hour and the PM peak hour.

Based on the year 2021 forecasts of city-wide population and employment used for this analysis, there will be some traffic growth in this area. Table 10 below provides a comparison between the estimated spare capacity and the forecasts of year 2021 traffic growth for the different roadway network scenarios for the AM peak hour.

<table>
<thead>
<tr>
<th>Study Screen Line</th>
<th>Direction</th>
<th>Existing Spare Capacity (vph)</th>
<th>Forecast Growth to Year 2021 (vph in AM peak hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Base Network</td>
<td>RHCE Network</td>
</tr>
<tr>
<td>Between Locke &amp; Queen</td>
<td>Westbound</td>
<td>3,080</td>
<td>444</td>
</tr>
<tr>
<td>Eastbound</td>
<td></td>
<td>1,480</td>
<td>1,146</td>
</tr>
<tr>
<td>Between Bay &amp; James</td>
<td>Westbound</td>
<td>4,415</td>
<td>449</td>
</tr>
<tr>
<td>Eastbound</td>
<td></td>
<td>2,880</td>
<td>859</td>
</tr>
<tr>
<td>Between John &amp; Wellington</td>
<td>Westbound</td>
<td>3,250</td>
<td>784</td>
</tr>
<tr>
<td>Eastbound</td>
<td></td>
<td>4,880</td>
<td>484</td>
</tr>
<tr>
<td>East of Victoria</td>
<td>Westbound</td>
<td>3,550</td>
<td>738</td>
</tr>
<tr>
<td>Eastbound</td>
<td></td>
<td>4,700</td>
<td>509</td>
</tr>
<tr>
<td>Between Barton &amp; Burlington</td>
<td>Southbound</td>
<td>2,880</td>
<td>189</td>
</tr>
<tr>
<td>Northbound</td>
<td></td>
<td>4,090</td>
<td>-58</td>
</tr>
<tr>
<td>Between Wilson &amp; King</td>
<td>Southbound</td>
<td>2,210</td>
<td>449</td>
</tr>
<tr>
<td>Northbound</td>
<td></td>
<td>4,020</td>
<td>151</td>
</tr>
</tbody>
</table>

**TABLE 10: COMPARISON OF TRAFFIC GROWTH WITH EXISTING SPARE CAPACITY (AM PEAK HOUR CONDITIONS)**

The critical screen line location on the west side of the downtown is highlighted in Table 10 along with forecast growth under different network scenarios. This comparison indicates the estimated traffic growth over the next two decades will not exceed the existing roadway capacity. The most likely roadway network, namely the one including the Red Hill Creek Expressway (RHCE), has the least traffic growth and results in an estimated remaining spare capacity at the Locke St screen line of about 660 vph in year 2021.

This analysis reflects a particular land use strategy that has been defined in terms of the amount and distribution of population and employment in years 2001 and 2021. The amount of growth indicated over the next 20 years is consistent with the observed growth patterns for at least the past decade in Hamilton. The distribution of employment indicates growth of about 10% in the central area of the city during the analysis period. While employment has been declining in these areas during recent years, the city has been taking actions to encourage new economic activity in the city centre and it is reasonable to expect that these initiatives will result in some employment growth.

If the estimates of traffic growth were found to exceed the spare capacity of the roadway network, this would indicate a deficiency, indicating the need for improvements. Improvements could take many forms, including travel demand management measures, minor traffic operations improvements, widening of existing roads and the construction of new roadway links. Under the environmental assessment process, the full range of improvements would need to be assessed to
determine the most appropriate improvement. In this particular case, the growth in traffic over the next 20 years appears to be well within the limits of the amount of traffic that can be absorbed by the existing roadway network without major improvements. The traffic growth does not require the construction of a new roadway link to accommodate peak hour volumes.

In conclusion, the estimated future traffic growth to year 2021 in this area does not justify a new roadway facility such as the Hamilton Perimeter Rd.
The existing AM peak hour traffic volumes on this network are shown in Figure 2 below.

The existing PM peak hour traffic volumes for this network are shown in Figure 3 below.
<table>
<thead>
<tr>
<th>Time Period:</th>
<th>Residential - Medium 2 (300 units/ha)</th>
<th>Residential - Medium 1 (150 units/ha)</th>
<th>Residential - Low (60 units/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Residential Condominium/Townhouse</td>
<td>Residential Condominium/Townhouse</td>
<td>Residential Condominium/Townhouse</td>
</tr>
<tr>
<td></td>
<td>dwelling units</td>
<td>dwelling units</td>
<td>dwelling units</td>
</tr>
<tr>
<td>Residential</td>
<td>High-Rise Apartment</td>
<td>High-Rise Apartment</td>
<td>Low-rise Apartment</td>
</tr>
<tr>
<td>Residential</td>
<td>units</td>
<td>units</td>
<td>units</td>
</tr>
<tr>
<td>Residential</td>
<td>0.35 % 34%</td>
<td>0.35 % 39%</td>
<td>0.54 % 33%</td>
</tr>
<tr>
<td>Residential</td>
<td>% IN % OUT</td>
<td>% IN % OUT</td>
<td>% IN % OUT</td>
</tr>
<tr>
<td>Residential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>Retail - Ferguson-Wellington</td>
<td>Retail - Barton-Tiffany, Waterfront</td>
<td>Commercial - Office - Ferguson-Wellington</td>
</tr>
<tr>
<td>Commercial</td>
<td>m2</td>
<td>m2</td>
<td>m2</td>
</tr>
<tr>
<td>Commercial</td>
<td>820 Specialty Retail Centre</td>
<td>820 Specialty Retail Centre</td>
<td>720 Medical-Dental Office Building</td>
</tr>
<tr>
<td>Commercial</td>
<td>1000 sq. ft.</td>
<td>1000 sq. ft.</td>
<td>1000 sq. ft.</td>
</tr>
<tr>
<td>Commercial</td>
<td>1.036 43% 57%</td>
<td>1.036 43% 57%</td>
<td>3.294 27% 73%</td>
</tr>
<tr>
<td>Commercial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institutional - included in Commercial/Tourism</td>
<td>units</td>
<td>Residential Condominium/Townhouse</td>
<td>dwelling units</td>
</tr>
<tr>
<td>Institutional - included in Commercial/Tourism</td>
<td>ha</td>
<td>Tourism and ancillary commercial</td>
<td></td>
</tr>
<tr>
<td>Institutional - included in Commercial/Tourism</td>
<td>m2</td>
<td>Marina</td>
<td></td>
</tr>
<tr>
<td>Institutional - included in Commercial/Tourism</td>
<td>acres</td>
<td>0.19</td>
<td>0.6</td>
</tr>
<tr>
<td>Cultural Tourism (including Marine Discovery Centre and Outdoor Amusement if applicable)</td>
<td>trips</td>
<td>40</td>
<td>50%</td>
</tr>
<tr>
<td>Cultural Tourism (including Marine Discovery Centre and Outdoor Amusement if applicable)</td>
<td>trips</td>
<td>320</td>
<td>50%</td>
</tr>
<tr>
<td>Cultural Tourism (including Marine Discovery Centre and Outdoor Amusement if applicable)</td>
<td>trips</td>
<td>160</td>
<td>50%</td>
</tr>
<tr>
<td>Amphitheatre</td>
<td>5,000 seats; events typically in evenings and weekend afternoons; assume 25% are tourists already nearby, 35% walk or use transit; 4 persons/vehicle or 500 vehicles/event</td>
<td>0</td>
<td>0 %</td>
</tr>
<tr>
<td>Amphitheatre</td>
<td>2,000 seats; events typically in evenings and weekend afternoons; assume 25% are tourists already nearby, 35% walk or use transit; 4 persons/vehicle or 200 vehicles/event</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Stadium</td>
<td>28,000 seats; events typically held in the evening and weekend afternoons; assume no drop-off at site; on-site parking for 200 spaces for employees, press, participants and buses; 10,000 spectators arriving by charter/shuttle bus (see below); balance of spectators (18,000) park downtown and walk; parking required for 4,500 vehicles downtown (4 persons per vehicle); less a reduction for people taking transit downtown and walking to the site, or persons dropped off downtown and walking = 240 trips</td>
<td>0</td>
<td>85%</td>
</tr>
<tr>
<td>Charter/shuttle bus, 10,000 spectators, 75/bus = 270 round trips</td>
<td>buses</td>
<td>0</td>
<td>50%</td>
</tr>
<tr>
<td>Charter/shuttle bus, 10,000 spectators, 75/bus = 270 round trips</td>
<td>seats</td>
<td>0</td>
<td>50%</td>
</tr>
<tr>
<td>Charter/shuttle bus, 10,000 spectators, 75/bus = 270 round trips</td>
<td>acres</td>
<td>0.19</td>
<td>60%</td>
</tr>
<tr>
<td>Marina</td>
<td>414 Marina</td>
<td>1.3 29%</td>
<td>71%</td>
</tr>
<tr>
<td>Marina</td>
<td>416 National Monument</td>
<td>acres</td>
<td>5.73</td>
</tr>
<tr>
<td>Marina</td>
<td>417 Multipurpose Recreational Facility</td>
<td>acres</td>
<td>6.73</td>
</tr>
<tr>
<td>Marina</td>
<td>418 National Monument</td>
<td>acres</td>
<td>5.73</td>
</tr>
<tr>
<td>Marina</td>
<td>419 National Monument</td>
<td>acres</td>
<td>5.73</td>
</tr>
<tr>
<td>Marina</td>
<td>441 Live Theater</td>
<td>0.02</td>
<td>50%</td>
</tr>
<tr>
<td>Marina</td>
<td>444 Movie Theater with Matinee</td>
<td>0.14</td>
<td>53%</td>
</tr>
<tr>
<td>Marina</td>
<td>446 Arena</td>
<td>acres</td>
<td>0.12</td>
</tr>
<tr>
<td>Marina</td>
<td>448 Amusement Park</td>
<td>acres</td>
<td>0.12</td>
</tr>
<tr>
<td>Marina</td>
<td>449 Amusement Park</td>
<td>acres</td>
<td>0.12</td>
</tr>
<tr>
<td>Marina</td>
<td>450 Ice Rink</td>
<td>seats</td>
<td>0.12</td>
</tr>
<tr>
<td>Marina</td>
<td>451 Ice Rink</td>
<td>seats</td>
<td>0.12</td>
</tr>
<tr>
<td>u/ha:</td>
<td>Preferred Option - Neighbourhood Extension</td>
<td>PM Peak Hour Trips</td>
<td>Entering</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------------------------</td>
<td>--------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Residential - Medium 2</td>
<td>300 units/1,000 ft2 GFA</td>
<td>4.10</td>
<td>1,230</td>
</tr>
<tr>
<td>Residential - Medium 1</td>
<td>150 units/1,000 ft2 GFA</td>
<td>3.74</td>
<td>710</td>
</tr>
<tr>
<td>Residential - Low</td>
<td>60 units/1,000 ft2 GFA</td>
<td>1.390</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>total residential</td>
<td>9.23</td>
<td>2,025</td>
</tr>
<tr>
<td>Commercial - Retail</td>
<td>2,000 m2</td>
<td>0.680</td>
<td>22</td>
</tr>
<tr>
<td>Added Parks/Open Space</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td></td>
<td>750</td>
</tr>
<tr>
<td><strong>Total Trips Including Mode Reduction</strong></td>
<td>20%</td>
<td>600</td>
<td>360</td>
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</table>

Stantec Consulting Ltd. 22/12/2004
## West Harbour
### PROPOSED DENSITIES

**Ferguson-Wellington**

<table>
<thead>
<tr>
<th>Preferred Option:</th>
<th>A</th>
<th>Preferred Option</th>
<th>PM Peak Hour Trips</th>
<th>Entering</th>
<th>Exiting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential - Medium 2</td>
<td>300</td>
<td>2.17</td>
<td>650</td>
<td>228</td>
<td>139</td>
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<tr>
<td>Residential - Medium 1</td>
<td>150</td>
<td>1.95</td>
<td>440</td>
<td>154</td>
<td>94</td>
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<tr>
<td>Residential - Low</td>
<td>60</td>
<td>0.35</td>
<td>20</td>
<td>11</td>
<td>7</td>
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<tr>
<td><strong>total residential</strong></td>
<td><strong>4.47</strong></td>
<td><strong>1,110</strong></td>
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</tr>
<tr>
<td>Commercial - Retail</td>
<td>9,500 m2</td>
<td>5.49</td>
<td>102</td>
<td>106</td>
<td>46</td>
</tr>
<tr>
<td>Added Parks/Open Space</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>500</strong></td>
<td><strong>290</strong></td>
</tr>
<tr>
<td><strong>Total Trips Including Mode Reduction</strong></td>
<td><strong>20%</strong></td>
<td></td>
<td></td>
<td><strong>400</strong></td>
<td><strong>230</strong></td>
</tr>
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</table>

Stantec Consulting Ltd. 5/5/2005
## Waterfront Trip Table

<table>
<thead>
<tr>
<th>Preferred Option</th>
<th>A Maximum densities</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Preferred Option</td>
<td>u/ha:</td>
<td>land area (ha)</td>
<td>units/GFA</td>
<td>PM Peak Hour Trips</td>
<td>Entering</td>
<td>Exiting</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential - Medium 2</td>
<td></td>
<td>300</td>
<td>5.04</td>
<td>1.475</td>
<td>516</td>
<td>315</td>
<td>176</td>
<td></td>
</tr>
<tr>
<td>Residential - Medium 1</td>
<td></td>
<td>150</td>
<td>5.95</td>
<td>0.95</td>
<td>333</td>
<td>203</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>Residential - Low</td>
<td></td>
<td>60</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Total residential</td>
<td></td>
<td>10.99</td>
<td>2,425</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial - Retail</td>
<td></td>
<td>6,000 m2</td>
<td>0.76</td>
<td>65</td>
<td>67</td>
<td>29</td>
<td>38</td>
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</tr>
<tr>
<td>Marine Recreation</td>
<td></td>
<td>2.50</td>
<td>6.18</td>
<td>1</td>
<td>1</td>
<td>0</td>
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</tr>
<tr>
<td>Cultural Tourism/Outdoor Amusement</td>
<td></td>
<td>400,000 visitors/year</td>
<td>1.92</td>
<td>160</td>
<td>80</td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amphitheatre</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stadium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Trips Including Mode Reduction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Stantec Consulting Ltd. 22/12/2004
CHAPTER 1—STAKEHOLDER INTERVIEWS

List of Stakeholders to be interviewed: August 29th, 2002
Stakeholder Interview Summaries (2003) for

- Hamilton Waterfront Trust
- Bay Area Restoration Council
- Brewer's Marine Supplies
- Friends of the Waterfront Trail
- Friends of HMCS Haida
- Hamilton Chamber of Commerce
- Hamilton Bay Sailing Club
- Hamilton Harbour Remedial Action Plan
- Harbour West Neighbours
- Leander Boat Club
- Lively Dragon
- MacDonald Marine Services
- Macassa Bay Yacht Club
- Navy League of Canada
- North End Neighbourhood Association
- Marine Discovery Centre (Parks Canada)
- Hamilton Port Authority
- Hamilton Power and Sail Squadron
- Royal Hamilton Yacht Club
- City of Hamilton Special Events

CHAPTER 2—PUBLIC INFORMATION CENTRES

October 3rd, 2002
- Notice of Study Commencement and Public Consultation
- Display Panels from Open House
- Presentation conducted at Open House

January 16th, 2003: Opportunities and Challenges Report
- Notice (from Setting Sail Newsletter)
- Completed Public Comment Sheets
- Summary of Comments
- Correspondence re: Open House
April 14th, 2003
- Notice
- Letter to CLC Members and Staff Technical Group
- Display Panels from Open House (Two Sets)
- Completed Public Comment Sheets
- Summary of Comments
- Correspondence re: Open House

December 3rd, 2003
- Notice
- Notice of Extended Deadline for Public Comments
- Display Panels from Open House
- Completed Public Comment Sheets
- Summary of Comments
- Correspondence re: Open House

March 23rd & 25th, 2004
- Notice
- Display Panels from Open House
- Completed Public Comment Sheets
- Summary of Comments
- Correspondence re: Open House

November 8th, 2004
- Notice
- Request for Notice to be placed in “North End Breezes”
- Display Panels from Open House
- Completed Public Comment Sheets
- Summary of Comments
- Correspondence re: Open House

June 26th & 27th, 2004: Port Days Booth on West Harbour Planning Area Study
- Completed Public Comment Sheet

CHAPTER 3—COMMUNITY LIAISON COMMITTEE (CLC) MEETINGS

October 3rd, 2002
- Invitation
- Visioning Workshop Summary Report
November 26th, 2003
- Invitation
- Agenda
- Blank Workbook
- Meeting Record
- Letter to Participants
- March 30th, 2004
- Invitation to New Organizations
- Letter to Existing Organizations
- Letter to Participants
- Agenda
- Meeting Record
- Blank Workbook
- Acceptances and Regrets from Participants
- Letter to Participants following up on Waterfront Trail Report

June 21st, 2004
- Invitation
- Agenda
- Meeting Record
- Follow-up Letter (with attachments)
- Completed Comment Sheets
- Follow-up letter re: Waterfront Recreational Trail Council Decision
- Correspondence pertaining to meeting

August 9th & 26th, 2004: Process Advisory Group
- Invitation to 1st meeting
- Follow-up Letter to Participants
- Correspondence with H. Turkstra
- Invitation to August 2nd meeting
- Working Paper from H. Turkstra
- Discussion Summary from August 26th
- Harbour West Neighbours Response

September 23rd, 2004
- Invitation
- Reminder
- Agenda
- Issues to be Reviewed and Discussed
- Draft West Harbour Secondary Plan Excerpts
- Map of Draft Fisheries Policy Areas L-6
- Meeting Record
- Follow-up letter and e-mail
- Letter from CLC Internal Co-chairs
September 30th, 2004
- Invitation
- Agenda
- Meeting Record
- Follow-up e-mail re: Leander Waterfront Trail

October 14th, 2004
- Invitation
- Ken Dakin’s Comments on Densities and Heights
- E-mail to Participants re: Consolidated Issues and Reply Document
- E-mail to Participants re: Building Heights and Densities
- Agenda
- Meeting Record

October 21st, 2004
- Invitation
- E-mail re: Issues and Reply Document
- Location confirmation e-mail
- Agenda
- Meeting Record
- E-mail from Ken Dakin re: Issues
- Other Correspondence

November 18th, 2004
- Agenda
- Meeting Record
- Letter from Hamilton-Wentworth District School Board

December 2nd, 2004
- Invitation
- Agenda
- Meeting Record

December 8th, 2004: Supplementary Meeting on Traffic
- Meeting Record
- Follow-up Letter

December 16th, 2004: Supplementary Meeting on Ecological Issues
- Meeting Record
- Follow-up Letter on Fisheries Report
- Follow-up E-mail

January 4th, 2005
- Meeting Record
- Submission from Harbour West Neighbours
CHAPTER 4—NEWSLETTERS

December 2002
Spring 2003
November 2003
June 2004

CHAPTER 5—CORRESPONDENCE FROM AGENCIES & GROUPS

- Bay Area Restoration Council (BARC)
- Bunge Canada (formerly CanAmera Foods)
- Canadian National Railway
- Friends of HMCS Haida
- Golden Horseshoe Enterprises Inc. / Canadian Music Hall of Fame
- Hamilton Bay Sailing Club
- Hamilton Chamber of Commerce
- Hamilton Conservation Authority
- Hamilton Harbourlights Flotel
- Hamilton Naturalists’ Club
- Hamilton Police Service
- Hamilton Port Authority
- Hamilton Power and Sail Squadron
- Hamilton Recreational Boating Alliance
- Harbour West Neighbours (HWN)
- Leander Boat Club
- Lively Dragon Club
- Macassa Bay Yacht Club
- Navy League of Canada, Hamilton Branch
- North End Neighbourhood Association (NENA)
- Remedial Action Plan for Hamilton Harbour (RAP)
- Rheem Canada Ltd.
- Royal Hamilton Yacht Club
- Waterfront Regeneration Trust

Provincial Government Agencies

- Ontario Ministry of Culture
- Ontario Ministry of the Environment
- Ontario Ministry of Heritage
- Ontario Ministry of Natural Resources
- Ontario Ministry of Public Safety and Security
- Ontario Ministry of Transportation
Federal Government Agencies
- Canadian Environmental Assessment Agency
- Department of Fisheries and Oceans Canada
- Environment Canada
- Transport Canada

CHAPTER 6—GENERAL PUBLIC CORRESPONDENCE

CHAPTER 7—OUTGOING GENERAL CORRESPONDENCE

CHAPTER 8—PROJECT UPDATES TO COUNCIL

August 14th, 2002
September 25th, 2002
January 6th, 2003
March 1st, 2003
June 9th, 2003 – Memo
March 24th, 2004

CHAPTER 9—CITY COUNCIL MEETINGS

September 24th, 2003

Concerning the Adoption of the Preferred Land Use Strategy
- Letter from Stephen Park, Harbour West Neighbours Requesting to Appear Before Council
- Letter from William R. Mitchell, Macassa Bay Yacht Club, Requested to Speak Before Council
- Letter from George S. Gage, Leander Boat Club, Requesting to Speak Before Council
- Presentation from Harbour West Neighbours
- Presentation from Leander Boat Club
- Hearings Sub-Committee Minutes 03-031

October 29th, 2003

Concerning the Downtown Mobility Streets Master Plan & MacNab Street Bridge
- Letter from Stephen Park, Harbour West Neighbours Requesting to Appear Before Council
- Presentation from Harbour West Neighbours
- Hearings Sub-Committee Minutes 03-035

April 2005
nv/01650/active/65000454/planning/reports/finalrpt_454_west_harbour_tmp_final_apr05.doc
April 19th, 2004
- Letter from Stephen Park, Harbour West Neighbours Requesting to Speak Before Council
- Minutes 04-010

February 7th, 2005

Statutory Public Meeting of the Planning and Economic Development Committee re: Setting Sail
- Notice of Public Meeting
- Staff Presentation
- List of Speakers
- Submission from Bay Area Restoration Council
- Submission from A. Milliken Heisey for Canadian National Railway
- Submission from James Webb for 1201159 Ontario Limited
- Submission from Russ Cheeseman, B&M Metal Recycling
- Submission from Stephen Park, Harbour West Neighbours
- Submission from Michael Poworoznyk, Resident
- Presentation from Herman Turkstra, Harbour West Neighbours
- Petition submitted by H. Turkstra
- Letter from Robbinex Intermediaries, submitted by H. Turkstra
- Submission from Hamilton Chamber of Commerce
- Submission from Peter Burns, Hamilton Bay Sailing Club
- Report 05-004

CHAPTER 10—REPORTS AND PRESENTATIONS

- December 2002: Setting Sail: Opportunities and Challenges Report
- July 2003: Environmental Review: Hamilton West Harbour Planning Area
- July 2003: West Harbour Fisheries Assessment
- July 18th, 2003: Preferred Land Use Strategy Staff Report
- July 29th, 2003: Hamilton Perimeter Road Needs Assessment
- August 5th, 2003: Preferred Land Use Presentation to Committee of the Whole
- October 21st, 2003: Environmental Noise and Vibration Assessment – Stuart Street Rail Yard – Potential Area of Influence
- March 30th, 2004: Setting Sail: CLC Meeting Presentation
- June 1st, 2004: Hamilton Port Authority Review of Development Options for Pier 8, Hamilton, Ontario
- December, 2004: West Harbour – Setting Sail Fisheries Study, Phase II