Waterfront and Pier 7/8 Transportation and Parking Study

IBI GROUP
City of Hamilton
June 23, 2016
Presentation Overview

• Scope of studies
• Feedback from December 9\textsuperscript{th} Presentation
• Summary of Studies
  ➢ Pier 7/8 Traffic Impact Study and Transportation Demand Management Report
  ➢ Pier 7/8 Parking Study
  ➢ West Harbour Waterfront Parking Strategy
• Next steps
Scope of Studies

Pier 7/8 Traffic and Parking Studies

• Assesses the potential impacts of the planned development on traffic in the surrounding road network
• Includes a detailed Travel Demand Management (TDM) plan
• Evaluates parking supply needs

Overall Waterfront Parking

• Assesses parking needs for broader area that respects intended built form objectives of Setting Sail and the West Harbour Waterfront Recreation Master Plan.
• Study will provide specific recommendations for the West Harbour lands between Pier 4 and 8 and a parking management strategy for the larger Waterfront Area
Key Issues Raised at December 9th Meeting

• Impacts of traffic from Pier 7/8 on North End streets, especially near schools
• Concerns about parking spillover into neighbourhood
• Requirements for boater parking to be close to marina, and to be safe and secure
• Concerns about any parking shortages on the viability of the marina
• Development assumptions compared to 2008 North End Traffic Management Study
Pier 7/8 Traffic Impacts and Travel Demand Management Opportunities
Pier 7/8 Traffic

- Development Assumptions
  - 1,300 units
  - 6,800 m² institutional
  - 7,740 m² commercial

- Trips Generated
  - AM Peak Hour
    - 175 in, 419 out
  - PM Peak Hour
    - 503 in, 313 out
  - Approximately 80 more trips than 2008 NETMP estimate

Source: Brook McIlroy, Urban Design Study – Pier 7+8, DRAFT, April 2016
Distribution of Traffic – Exiting (AM)
Distribution of Traffic – Entering (PM)
Traffic Conditions – James Street South of Burlington

• AM Peak Hour
  Southbound
  408 existing cars
  + 27 background growth
  + 210 site
  = 645 vehicles/hr
• PM Peak Hour
  Northbound
  169 existing cars
  + 48 background growth
  + 226 site
  = 443 vehicles/hr

Image Source: Google Maps
Traffic Conditions – John Street North of Burlington

- **AM Peak Hour**
  - Southbound
  - 22 existing cars
  - + 84 site
  - = 106 vehicles/hr
- **PM Peak Hour**
  - Northbound
  - 37 existing cars
  - + 85 site
  - = 122 vehicles/hr

~ 2 cars/minute
WATERFRONT AND PIER 7/8

Issues Identified (Horizon Year 2025)
Mitigation Measures

1. Traffic Management
   - Key measures include the closure of Hughson Street (now complete) and a proposed lane narrowing on John Street
   - Many measures have been implemented as pilot projects with their effects currently being measured
John Street North of Burlington

Potential options to discourage and slow traffic on John Street through lane narrowings
Mitigation Measures

2. Signal Warrant Analysis

- Signalization of
  - James Street and Burlington Street
  - Ferguson Avenue at Burlington Street
Travel Demand Management (TDM) Measures

• Stand alone TDM report identifies strategies to reduce vehicles trips generated, thereby reducing the impact on the existing road network.

• There are a number of benefits for incorporating TDM into new developments for municipalities:
  • Maximizes returns on infrastructure spending
  • Reduces parking demand
  • Helps meet local sustainability and health objectives
  • Supports urban design objectives
Cycling Infrastructure – Long Term Bicycle Parking

CarShare Vehicles in Parking Garage

A-Line LRT – James Street North

Pre – Loaded Presto Card

Source: Project Update LRT Alignment, City of Hamilton, May 2016
Pier 7/8 Parking Study
Parking for Pier 7/8

• Study considered a number of best practices:
  
  • Avoiding Excess Parking Supply – an oversupply of parking could encourage greater levels of automobile ownership and use
  
  • Parking Maximums – set an upper limit on the amount of parking developers may provide to ensure excessive parking isn’t provided
  
  • Shared Parking – involves the use of one parking facility by more than one land use activity, typically taking advantage of different parking demand patterns by time of day to reduce parking needs
  
  • Unbundled Parking – separates the cost of housing and parking
  
  • Accounting for Travel Demand Management Initiatives (TDM) – can influence parking demand
Parking for Pier 7/8

- Study considered a number of best practices (cont’d):
  - On-Street Parking - can accommodate short term and accessible parking needs
  - Impacts on Urban Design – site design has a significant impact on people’s decision to walk, cycle, or take transit
Approach for Assessing Parking Supply for Pier 7/8

• Recognize relationship to traffic and neighbourhood impacts
  • Too much parking = more traffic
  • Too little parking = spill over parking to neighbourhood
• Recognize importance of parking in supporting a vibrant Waterfront
• Starting point is Hamilton Zoning By-Laws - No. 6593 (Current) and No. 05-200 (Future)
• Assessed case studies to refine parking rates
  • Includes comparison of parking requirements to other jurisdictions
  • Select appropriate parking rate for each land use category
  • Account for shared parking potential
Parking Scenarios & Comparison to Other Locations

- **Residential (spaces/dwelling unit – includes visitor)**
  - City of Hamilton (Base Rate) 1
  - City of Toronto 0.85 – 1.25
    - Liberty Village 0.8 – 0.9
  - City of Markham 1 – 1.2
  - **Proposed Rate** 0.85

- **Office (spaces per 100m²)**
  - City of Hamilton (Base Rate) 3.3
  - City of Toronto 1 – 2
  - City of Markham 1.5 – 3
  - **Proposed Rate** 2.0
Parking Scenarios

• Current Design Plan for Pier 7/8 provides 1,422 spaces
• Represents “minimum” parking required
Pier 7/8 Phasing Plan

- A three phase development plan is recommended for the study area.
- Parking supply and demand should be monitored at each stage of development.
Parking Supply Configuration

• Two design options were considered as part of urban design study

1. Integrated Parking within each building/block
   • No centralized parking structure
   • Parking on lower levels and underground

2. Integrated Parking plus central parking structure
Parking Supply Options from Urban Design Study

1. Integrated Parking within Each Building/Block

2. Integrated Parking plus central parking structure
Integrated Parking within Each Building/Block

• Advantages
  • Residential parking is tied to buildings
  • First level of parking could be publically accessible
  • Supply can be adjusted on a building-by-building bases over time
  • Disperses traffic patterns

• Disadvantages
  • Accommodating wider public parking needs is more difficult and requirements agreements with building owners
Integrated Parking plus central parking structure

• Advantages
  • Can be built in phases with levels being added over time
  • Facilitates shared public parking
  • Acts as central hub for Car Share and Bike Share
  • Can accommodate parking for special events
  • Allows for more flexibility in design of buildings

• Disadvantages
  • Uncommon for residential developments
  • Large centralized structure is less appealing from an urban design perspective
Waterfront Parking Strategy
Overall Waterfront Parking Needs

Parking
Existing Supply:
453 spaces
Future Supply:
338 spaces

Expansion to a total of 637 slips

New Market Village – Loss Of West Harbour Parking

Source: West Harbour Recreation Master Plan, City of Hamilton, April 2010
Assessing Marina Parking Needs

- Interviews conducted of other marinas within the GTA
- Conditions vary by location
  - Lakeshore Yacht Club: 0.6 spaces/slip (Does not fill up)
  - Etobicoke Yacht Club: 1.08 spaces/slip (30-50% occupied)
  - Mimico Cruising Club: 1.64 spaces/slip (50% occupied)
  - Oakville Club: 0.87 spaces/slip (Does not fill up)
  - Oakville Yacht Squadron: 0.66 spaces/slip (Does not fill up)
  - Bronte Harbour Marina: 0.34 spaces/slip (Does not fill up)

- Institute of Transportation Engineers Parking Generation manual found that rates range from 0.27 - 0.59 spaces
- ASCE Planning and Design Guidelines for Small Craft Harbors found that rates ranging from 0.5 – 0.75
- Draft Hamilton Zoning By-law (05-200) requires 1 space per slip
Future Waterfront Parking Needs (Weekday Evening)

- Existing demand ranges from 37 – 105 spaces (higher on peak event days)
- Available supply (453 spaces existing, 338 future)
- Planned development adds approximately 300 boat slips and 14,000 square meters of commercial space
- Projected future parking needs
  - Hamilton Rate (Base Scenario) 1,229 spaces
  - Hamilton Rate + Shared Parking 1,042 spaces
  - Reduced Rate 897 spaces
  - Reduced Rate + Shared Parking 759 spaces

Potential parking shortfall is at least 421 spaces
Alternatives for Waterfront Parking

1. Expand Waterfront Parking Supply (i.e. in the vicinity of Pier 4/5/6)
2. Build additional parking into Pier 7/8
3. Remote Parking utilizing off-site locations
4. Influence travel behavior to reduce parking needs
Alternative 1 – Expand Waterfront Parking Supply

- Options to expand surface parking are limited
- Expanding supply will require a new parking structure
- West Harbour Recreation Master Plan identified need for parking structure and potential location

Source: West Harbour Recreation Master Plan, City of Hamilton, April 2010
Other Potential Parking Structure Locations

5 minute walk radius (400 m)
Alternative 2 – Build Additional Parking into Pier 7/8

• Pier 7/8 is a 5 minute walk from the marinas on Pier 4/5/6
• Additional parking could be created by adding more floors to the proposed garage on Block G
• Larger garage may not be feasible given space and height restrictions
Alternative 3 – Remote Parking

- Bayfront Park
  - The Bayfront Parking Lot is an existing surface lot with a capacity of 290 parking spaces
  - Typical weekday evening occupancy is only 23%, leaving 223 spaces available
  - Would require a shuttle service given distance from waterfront
- Eastwood Park
  - 7 minute walk to the Main Basin.
  - Existing surface lot has available capacity during weekday evenings
Alternative 4 – Influence travel behavior

• Apply aggressive TDM strategies to significantly reduce demand
• Facilitated by future transit options
  • A-Line Corridor
  • B-Line Rapid Transit
  • Metrolinx Regional Express Rail (RER)
Evaluation the Options

<table>
<thead>
<tr>
<th>Alternatives</th>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td>Expand Waterfront Parking Supply</td>
<td>• Located close to marina and central waterfront area</td>
<td>• High capital cost</td>
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<tr>
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<td>• Efficient in terms of land requirements</td>
<td>• Increases traffic on adjacent streets</td>
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<td></td>
<td>• Visual impacts</td>
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<tr>
<td>Build additional parking into Pier 7/8</td>
<td>• Can be scaled to demand over time</td>
<td>• High capital cost</td>
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<td></td>
<td>• Over 5 minute walk to Main Basin</td>
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<td></td>
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<td>• Attracts more cars to Pier 7/8</td>
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<td></td>
<td>• Urban design impacts</td>
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<tr>
<td>Remote Parking</td>
<td>• Low capital cost</td>
<td>• Shuttle service would require operating funds</td>
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<td>• Maximizes use of existing facilities</td>
<td>• Inconvenience</td>
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<tr>
<td>Influence travel behaviour</td>
<td>• Relatively low cost</td>
<td>• Low capital cost</td>
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<td>• Health benefits attributed to increased cycling and walking</td>
<td>• May not be sufficient to address supply shortfall, and hence potential for parking spill-over to neighbourhood</td>
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<td>• Less land requirement as less parking required</td>
<td>• TDM not applicable for marine users</td>
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<td>• Maximizes use of existing and planned transit</td>
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Recommended Strategy for Waterfront Parking

- Plan for new parking structure in waterfront area (Pier 4/5/6)
- Utilize existing surface parking on Pier 7/8 for overflow parking from West Harbour prior to full build-out of development
- Implement Travel Demand Management measures to encourage greater use of walking, cycling and transit modes, as well as ridesharing
- Provide supportive environment new mobility options including car-sharing, bike sharing and shared-ride options
Next Steps

• Receive feedback from community on traffic and parking analysis
• Assess financial implications and the feasibility of alternative strategies
• Prepare detailed implementation plan for Waterfront Parking
• Finalize all study reports
Thank you

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