Waterfront and Pier 7/8 Transportation and Parking Study

IBI GROUP
City of Hamilton
December 9, 2015
Overview

Waterfront and Pier 7/8 Parking Study

• Objective is to provide enough parking to satisfy broader area needs while achieving 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

Pier 7/8 Transportation Impact and TDM Study

• Objective is to address the potential impacts of the planned development on traffic in the surrounding road network

• Study will include a detailed Travel Demand Management (TDM) plan
Guiding Principles

- North End Traffic Management Plan, June 2008
- West Harbour (Setting Sail) Secondary Plan was adopted by City Council on March 23, 2005 and approved by the OMB June 2012
- Focus on sustainable transportation
Existing Transportation Conditions

• 2011 TTS Data
  • 59% are auto driver
  • 16-19% are auto passenger
  • 10 – 12% transit share

• 89-91% of trips are made within Hamilton Region
  • 90% of those trips are made within the City of Hamilton
Existing Transportation Conditions – Weekend Survey Results

- Trip purpose – 46% for general recreation, 18% for sport, and 2% for the marina
- 75% drove to the waterfront, 9% used transit, 7% walked, and 6% cycled
- If parking was limited, 72% of respondents stated that they will still come to the waterfront
Existing Traffic Conditions – James Street

- Existing peak hour AM (PM) volume
  - Northbound 91 (71) vehicles
  - Southbound 412 (325) vehicles
- Theoretical capacity
  - 800 vehicles/hour/lane

Image Source: Google Maps

James St. (North view, south of Burlington Street)
Existing Level of Service

All intersections in the area operate well with no critical movements.
Access Strategies

Promote James and Dock Service Road

Minimize traffic infiltration

Provide fine grid network on Pier 7/8

Anticipate event traffic

Transportation Impacts of Future Development

- 2011 Transportation Tomorrow Survey (TTS) Data for exiting residential traffic only
- Trip generated for the a.m. peak hour:

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Unit</th>
<th>2011 TTS Data</th>
<th>Unit</th>
<th>Design Plan 2</th>
<th>ITE Trip Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>Trips per Household</td>
<td>0.47</td>
<td>Trips</td>
<td>574</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Auto Mode Split</td>
<td>60%</td>
<td>Auto Trips</td>
<td>345</td>
<td>416</td>
</tr>
<tr>
<td>Commercial</td>
<td>Square Feet per Employee</td>
<td>300</td>
<td>Trips</td>
<td>152</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Auto Mode Split</td>
<td>60%</td>
<td>Auto Trips</td>
<td>91</td>
<td>124</td>
</tr>
</tbody>
</table>

- 2011 TTS data tells us that 489 of people live and work in the same zone (study area)
- ITE Trip Generation is for auto trips only
Transportation Impacts of Future Development

- ITE Trip Generation Manual Entering (Exiting) Trips
  - AM Peak Hour – 136 (380) Trips
  - PM Peak Hour – 430 (247) Trips

- Mode Share

<table>
<thead>
<tr>
<th>Mode Share Trips</th>
<th>Existing Mode Share</th>
<th>Future Mode Share</th>
<th>Future Trips AM (PM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Driver</td>
<td>60%</td>
<td>54%</td>
<td>516 (677)</td>
</tr>
<tr>
<td>Auto Passenger</td>
<td>18%</td>
<td>18%</td>
<td>172 (226)</td>
</tr>
<tr>
<td>Transit</td>
<td>11%</td>
<td>13%</td>
<td>124 (163)</td>
</tr>
<tr>
<td>Active</td>
<td>10%</td>
<td>13%</td>
<td>124 (163)</td>
</tr>
</tbody>
</table>
Southbound through movement at Ferguson and Burlington operates as LOS D (F)
Transportation Impacts of Future Development

- Theoretical capacities:
  - Burlington and James: 800 veh/hr/lane
  - Ferguson, Guise, John, Mary, and Catherine: 650 veh/hr/lane
Transportation Impacts of Future Development

- Theoretical capacities:
  - Burlington and James: 800 veh/hr/lane
  - Ferguson, Guise, John, Mary, and Catherine: 650 veh/hr/lane
Parking – Best Practices

• Flexible parking standards
• Shared parking
• Maximize TDM
• New Mobility
  • Car Sharing
  • Bike Sharing (SOBI Hamilton)
Methodology

- City of Hamilton Zoning By-Law No. 6593
- West Harbour Waterfront Recreation Master Plan
- Best practices
  - ITE Parking Generation Manual
  - Other jurisdictions
- Shared parking
Existing Utilization

Legend:
- Parking Study Areas
- Bayfront Park Lot
- Leander Drive Lot
- Leander Boat Club
- Royal Hamilton Yacht Club
- Harbour West
- Parks Canada Discovery Centre Lot
- Eastwood Park / Arena Lot
- On-Street Parking
- Pier 7/8 Redevelopment Area

Waterfront and Pier 7/8 Parking Study Study Area

September 2015
Existing Utilization

- Bayfront Park
- Leander Dr
- Leander Boat Club
- Royal Hamilton
- Harbour West
- Discovery Centre
- Eastwood Arena
- Street Parking

**No. of Parked Vehicles**

- Capacity
- Weekday Evening
- Special Event Weekday Evening
- Saturday
Pier 7/8 Parking Forecast

- Maximum parking demand: 1,127
West Harbour Waterfront Parking Forecast

- Parking spots required: 674 (including shared parking for all uses except boating)

![Parking Demand Graph]

<table>
<thead>
<tr>
<th>Area Parking</th>
<th>Future Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bayfront Park</td>
<td>290</td>
</tr>
<tr>
<td>Macassa Bay</td>
<td>n/a</td>
</tr>
<tr>
<td>Main Basin</td>
<td>338</td>
</tr>
</tbody>
</table>
Parking Strategies

- Paid Parking
- Off-Site Parking
- Event Parking
- Unbundled Parking
Thank you