ByWard Market
Local Area Parking Study (LAPS)
Summary Report
2011

Parking Operations, Maintenance, & Development
Parking Studies Unit

City of Ottawa

Parking Operations, Maintenance & Development

Parking Studies Unit

2011

Contents

1 Introduction

1.1 Context

The parking data used in the ByWard Market BIA LAPS was collected concurrently with the 2009/10 Central Area Parking Study (CAPS) update in September 2009 by the consulting firm HDR|itrans.

This Summary Report is intended to compliment the ByWard Market LAPS Technical Report by analyzing parking trends, addressing stakeholder issues, and presenting the overall findings in a condensed format. Detailed parking data is contained within the ByWard Market LAPS Technical Report.

1.2 Study Purpose

In April 2009 City Council approved the *Municipal Parking Management Strategy*[1] which established the local area parking study (LAPS) program. Two areas were identified for the preliminary LAPS, one of which was the ByWard Market BIA.

The purpose of the ByWard Market BIA LAPS is to analyze parking activities in the study area, which involves determining the total number of parking spaces, observing and recording the usage of the spaces during specific time periods, and analyzing the findings.

The results of the study are presented in two separate reports:

- The **Technical Report**, a highly detailed document that provides comprehensive inventory, occupancy, duration, and turnover data on a block face by block face and block by block level of details *(the focus is on detailed, objective data collection and presentation)*

- The **Summary Report**, which uses the data from the Technical Report to analyze parking trends, address stakeholder issues, and present the overall findings in a condensed format *(the focus is on data analysis and issue resolution)*

Like the Technical Report, the Summary Report focuses exclusively on public parking in the ByWard Market BIA LAPS area.

The ByWard Market LAPS is guided by the five primary objectives of the Municipal Parking Management Strategy:

1. Provide and maintain an appropriate supply of affordable, secure, accessible, convenient, and appealing public parking.
2. Provide and promote affordable short-term parking services, and fair and consistent enforcement services, that support local businesses, institutions, and tourism.
3. Promote, establish, and maintain programs and facilities that encourage the use of alternative modes of transportation including public transit, car/van pooling, taxis, auto sharing, cycling, and walking.

[1] For the complete text of the *Municipal Parking Management Strategy*, see http://ottawa.ca/residents/parking/parking_mgt_strategy/mngmt_strategy_en.html

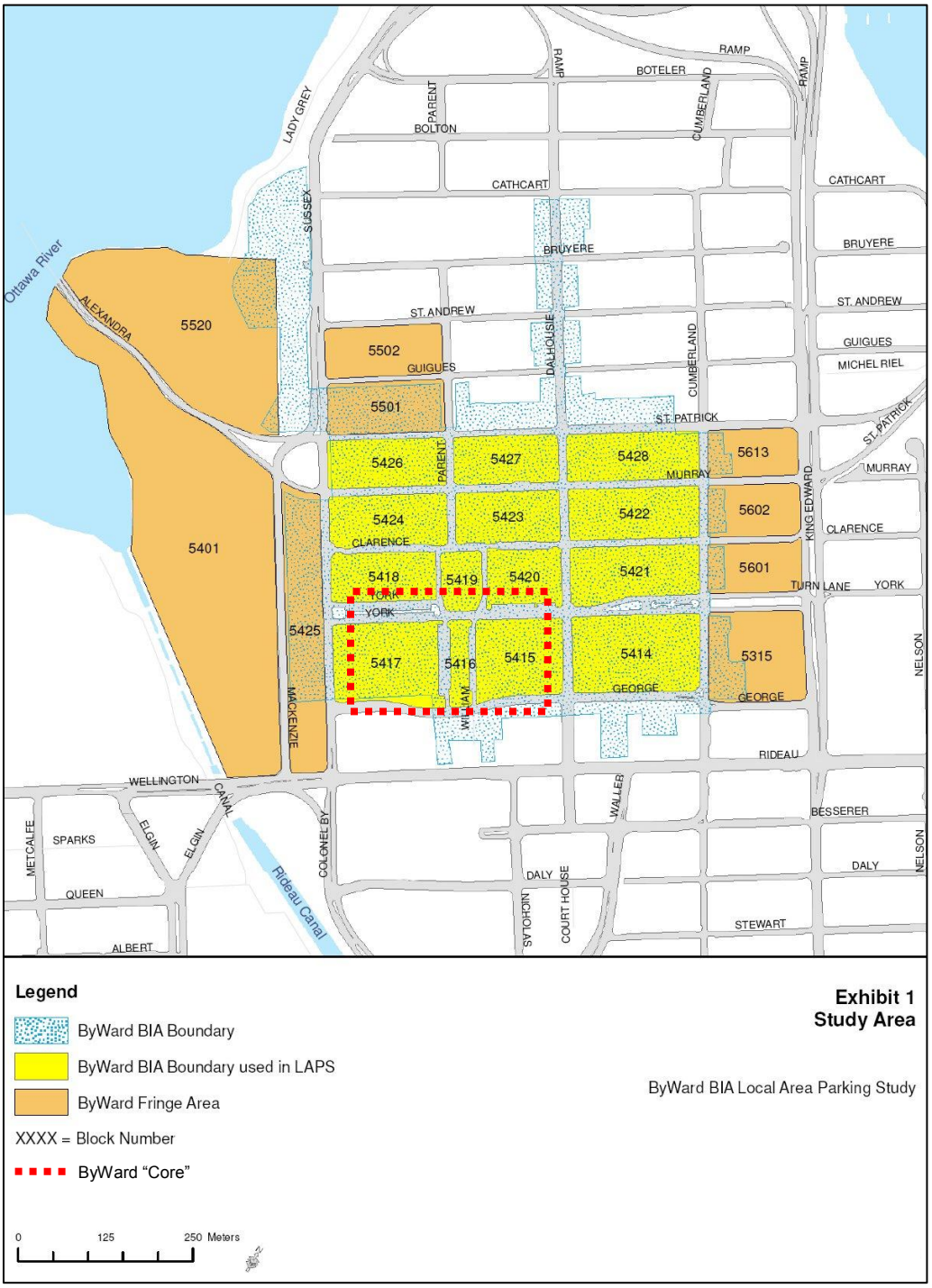
4. Support residential intensification and resolve parking problems within residential areas caused by significant traffic generators or conflicting uses of the roadway, including implementing on-street permit parking programs to relieve area residents and visitors from parking regulations directed at the non-resident.
5. Ensure the revenues generated by the Municipal Parking Program are sufficient to wholly recover all related operating and life-cycle maintenance expenditures; contribute to a reserve fund to finance future parking system development, operation, and promotion; and then assist in the funding of related initiatives to encourage the use of alternative modes of transportation.

1.3 Study Area

The study area was determined by the City in consultation with the ByWard Market BIA, and Ward Councillor.

Exhibit 1 shows the study area of the ByWard Market LAPS.

Exhibit 1 – Study Area of the ByWard Market LAPS



Note: For the purposes of the study, and for historical reasons, the complete legal boundaries of the ByWard Market BIA (shaded in blue) were not used. Instead, the study area was divided into two main areas: the ByWard Market BIA (dark yellow) and the ByWard Market Fringe Area (orange). The ByWard "Core" (red dotted line) was defined by the BIA as the area with the highest parking demand (due to vendors, restaurants, bars, etc).

1.4 Definitions

"ByWard BIA Area" means the area bounded by George St., Cumberland St., St. Patrick St., and Sussex Dr. (refer to Map 1 – Study Area)

"ByWard Fringe Area" means the three blocks bounded by Rideau St., Sussex Dr., the Ottawa River, and the Rideau Canal; the two blocks bounded by St. Patrick St., Parent Ave., St. Andrew St., and Sussex Dr.; and the three blocks bounded by George St., King Edward Ave., St. Patrick St., and Cumberland St. (refer to Map 1 – Study Area)

"ByWard Core Area" means the block faces to the north and south of York St. between Sussex Dr. and Dalhousie St.; the block faces to the east and west of ByWard Market St. between George St. and York St.; the block faces to the east and west of William St. between George St. and York St.; and the block faces to the north of George St. between Sussex Dr. and Dalhousie St. (refer to Map 1 – Study Area)

"Entire study area" means the entire study area (the combined ByWard BIA Area, ByWard Fringe Area, and ByWard Core Area)

"Practical capacity" means 85% of the maximum capacity, a generally accepted parking industry measure considered to represent the maximum functional capacity[2] (once 85% capacity is reached, finding a vacant parking space becomes increasingly difficult)

"Maximum capacity" means 100% of total capacity – the absolute maximum number of parking spaces in a given area

[2] See the article, *Parking Pricing Implementation Guidelines* (March 2011) from the Victoria Transport Policy Institute for more information. http://www.vtpi.org/parkpricing.pdf

1.5 Types of Parking

Virtually all parking spaces can be classified according to the following table:

	Total Parking Supply				
Category	**Public**			**Private**	
	On-Street	**Off-Street**			
	Short-Term		**Long-Term**	**Customer/Employee**	**Residential**
Function	Parking for any number of purposes.			Parking for a specific establishment or workplace.	Parking for a specific residential building or residence.
Usage	Available for general use by the public – **anyone** may park. (Note: Public parking connotes public *usage*, not necessarily public *ownership*).			Available only to **customers** or **employees** of a specific establishment or workplace.	Available only to **residents** or **visitors** of a specific residential building or residence.
Location	Along the sides of City streets.	Parking lots or parking structures.			
Pricing	Free or priced by the hour or minute.	Usually priced by the hour or minute; sometimes free during certain times or days.	Priced by the day or month.	Varies (but often free for customers).	Varies (but often priced by the month).
Examples	• Metered/pay & display parking in the downtown core. • Unmetered on-street parking in residential areas.	• Privately owned parking lots that allow the public to park for a fee (or for free). • Municipally owned parking garages or lots that allow the public to park for a fee (or for free).		• Employee/customer only parking. • A restaurant parking lot. • A shopping mall parking lot.	• A parking garage in an apartment building or condominium. • The driveway of a house.
Name	**Public On-Street Short-Term (or simply On-Street)**	**Public Off-Street Short-Term**	**Public Off-Street Long-Term**	**Private Off-Street Customer/Employee**	**Private Off-Street Residential**

2 Parking Inventory

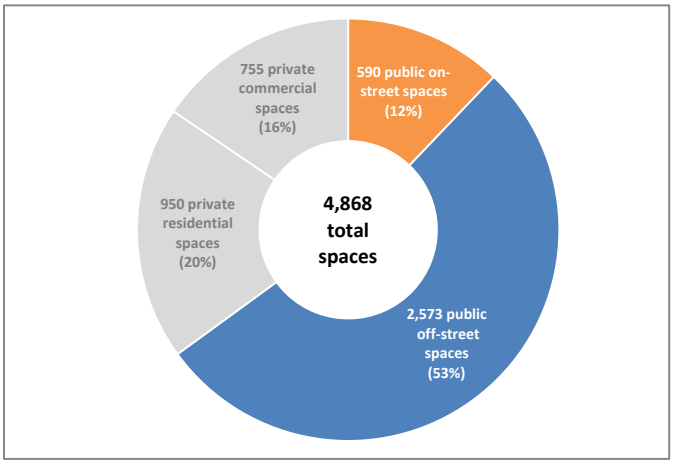
2.1 Overview

An extensive parking inventory count was performed for the ByWard Market BIA LAPS. All on-street, public off-street, and private off-street spaces were counted during September 2009. Please refer to the ByWard Market BIA LAPS Technical Report for complete inventory details.

Note: All parking inventory data contained in this report is based on the supply as observed during the data collection in September 2009.

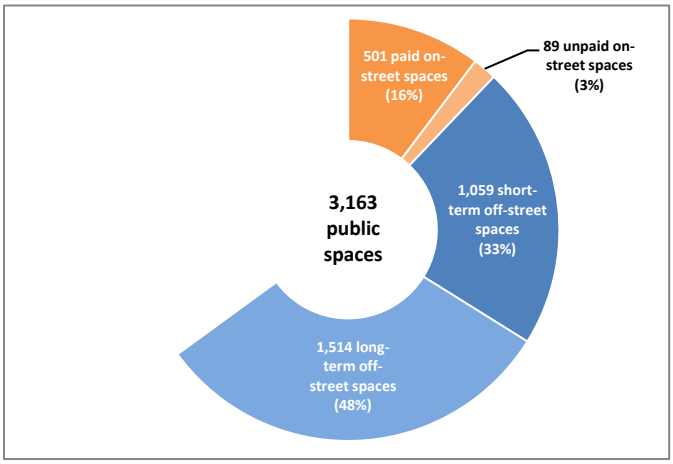
2.2 Total Parking Inventory

- There are 4,868 parking spaces in the entire study area
- 3,163 spaces are public (65% of the total supply), which includes 590 on-street spaces (12% of the total supply) and 2,573 off-street spaces (53% of the total supply)
- 1,705 spaces are private (35% of the total supply), which includes 950 residential spaces (20% of the total supply) and 755 commercial spaces (15% of the total supply)
- 1,356 spaces are municipal (28% of the total supply) which includes 590 on-street spaces and 766 off-street spaces in 2 municipal parking garages



2.3 Public Parking Inventory

- There are 3,163 public parking spaces in the entire study area
- 1,649 spaces are short-term (52% of the public supply), which includes 501 paid on-street spaces (16% of the public supply), 89 unpaid on-street spaces (3% of the public supply), and 1,059 short-term off-street spaces (33% of the public supply)
- 1,514 spaces are long-term off-street (48% of the public supply) – used by daily and monthly parkers
- 1,356 spaces are municipal (43% of the public supply) which includes 590 on-street spaces and 766 off-street spaces in 2 municipal parking garages



2.4 Map of Public Parking Inventory

Exhibit 2 – Location of on and off-street public parking

2.5 Seasonal Variation

The supply of on-street parking in the ByWard Market BIA varies depending on the season[3]. During the "Market Season" and "Market Holiday Season", some on-street spaces are occupied by vendor stalls and are unavailable for parking. This occurs only in the ByWard Core Area.

While some vendors may occupy on-street spaces during the "Market Off-Season", the number is generally small.

- **Market Season**
  - Occurs from early April to early November (weather dependent)
  - Approximately 200-230 on-street parking spaces in the ByWard Core Area are available for parking, depending on how many vendors are set up on any given day
  - Approximately 565-595 on-street parking spaces in the entire study area are available for parking, depending on how many vendors are set up on any given day

[3] Market seasons are defined by the *ByWard Market Program By-Law, By-Law Number 2008-449* (pg 4). http://www.byward-market.com/images/file/ByWard%20Market%20By-law%20English.pdf

- **Market Off-Season**
  - Occurs from early November (weather dependent) to November 23 (set date); December 25 (set date) to early April (weather dependent)
  - Approximately 275 on-street parking spaces in the ByWard Core Area are available for parking
  - Approximately 640 on-street parking spaces in the entire study area are available for parking

- **Market Holiday Season**
  - Occurs from November 24 (set date) to December 24 (set date)
  - Approximately 235 on-street parking spaces in the ByWard Core Area are available for parking
  - Approximately 605 on-street parking spaces in the entire study area are available for parking

Thus, the total on-street parking supply in the ByWard Market BIA fluctuates by up to 75 parking spaces (anywhere from 0 to 75 parking spaces may be occupied by vendors on any given day, depending on the season) due to vendor activity in the ByWard Core Area, depending on the specific day and the season.

The supply of public off-street parking remains constant throughout the year, as does the supply of public parking in the ByWard Fringe Area (both on and off-street).

Note: During the September 2009 data collection, 225 on-street parking spaces were available for parking in the ByWard Core Area.

2.6 Accessible Parking

While this study has focussed on the overall parking supply and demand, it is recognized that as part of detailed implementation and examination of municipal parking facilities, planning for accessible parking supply and demand must be included. For example, in exploring options to provide real-time parking occupancy information, parking guidance signage will provide information on the availability of accessible parking spaces.

2.7 Motorcycle/Scooter Parking

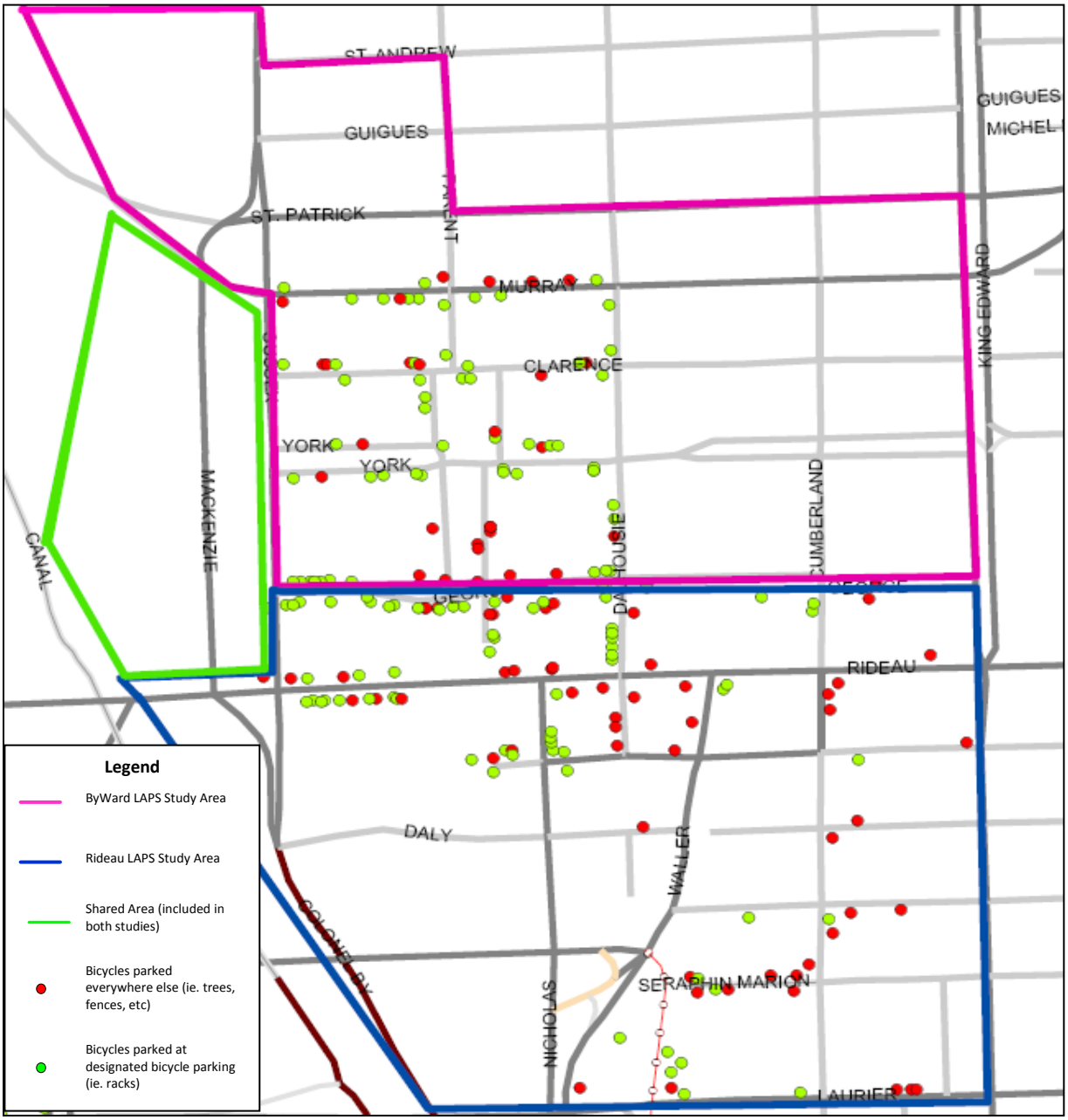
Motorcycles may park in any on-street parking space (with the rate being half the standard vehicle rate.) There are also 12 dedicated motorcycle/scooter parking spaces in the municipal parking garage at 70 Clarence St.

2.8 Bicycle Parking

On Friday, June 25, 2010 City staff performed a bicycle parking study in the ByWard Market and Downtown Rideau BIA LAPS area. All bicycle racks in the area were identified, and all parked bicycles were counted. Additionally, all bicycles parked along railings, trees, parking meters, road signs, etc. were counted in order to determine the full extent of bicycle parking in the area.

The total bicycle parking inventory in the ByWard Market area was found to be 202 spaces (including all designated racks and all “ring and post” units). During the study, staff counted 124 bicycles in the ByWard Market BIA area. This translates into an average occupancy rate of 0.61. See Exhibit 3.

Exhibit 3 – Bicycle Parking in the ByWard Market & Downtown Rideau areas



3 Findings

3.1 Overview

Based on the parking data collected, four metrics were calculated and analyzed for all public parking spaces as part of the LAPS:

- Average occupancy rate
- Peak occupancy rate
- Average duration
- Average turnover

Parking Occupancy is the ratio of the number of vehicles parked divided by the number of spaces provided. The chance that a customer to the area will be able to find convenient, available parking on a particular street or parking lot is a function of occupancy. An occupancy rate of between 75% and 85% is considered to be an industry "best practice", representing the level at which there is a reasonable opportunity for a customer to find parking. Above this rate, additional traffic can be generated as drivers search for available parking. Thus, an occupancy ratio of 85% is considered to be the "practical capacity" of a facility or block face. Customers would need to park at less convenient locations, or potentially shop elsewhere. This is a key point from the Municipal Parking Management Strategy – studies should be undertaken wherever paid occupancy rates are less than 75% or greater than 85%.

Duration refers to the average length of time that a vehicle remains parked on a street or in a parking lot. The observed duration should be similar to the posted or intended time period (e.g., one hour on-street parking). Typically, parking time limits in the core business areas and along main streets is one hour in duration. Depending on the nature of abutting businesses, two hour time limits may be in place. The intent of providing parking limits in commercial areas is to provide turnover of prime parking spaces, and to optimize the number of customers of a business area who can make use of a particular prime parking space.

Turnover is directly related to ***Duration***, and represents the number of unique vehicles that make use a parking space over a study period. It represents the number of potential customers served by the space. For example, over an eight-hour period, four customers could make use of one space in a "two hour limit" zone, whereas if that same space were designated as a "one hour limit", up to eight customers could be served in the same time period.

3.2 Weekday (Thursday) – Public Occupancy, Duration, & Turnover

ByWard Market LAPS – Thursday, September 24, 2009. 8am – 6pm				
Area	**Metric**	**On-Street**	**Public Off-Street**	**Total Public**
ByWard Market BIA	Supply	475	1,655	**2,130**
	Average Occupancy Rate	62%	59%	**60%**
	Peak Occupancy Rate	96%	81%	**84%**
	Average Duration	1.3	3.4	**3.0**
	Average Turnover	4.2	1.4	**2.1**
Entire Study Area	Supply	590	2,573	**3,163**
	Average Occupancy Rate	56%	62%	**61%**
	Peak Occupancy Rate	91%	82%	**84%**
	Average Duration	1.4	3.4	**3.0**
	Average Turnover	3.8	1.5	**1.9**

Key Findings – Entire Study Area

On-street

- Average occupancy rates (56%) were moderate
- Peak occupancy rates (91%) exceeded practical capacity
- Average duration (1.4 hours) suggests vehicles generally complied with duration regulations
- Average turnover (3.8 vehicles per space) means approximately 2,250 vehicles parked on-street during the observation period

Off-street

- Average occupancy rates (62%) were moderate to high
- Peak occupancy rates (82%) approached practical capacity
- Average duration (3.4 hours) indicates public off-street parking was used for longer duration parking
- Average turnover (1.5 vehicles per space) means approximately 3,900 vehicles parked in off-street facilities in the entire study area during the observation period

Overall

- Average occupancy rates (61%) were moderate to high
- Peak occupancy rates (84%) approached practical capacity

3.3 Friday Evening – Public Occupancy, Duration, & Turnover

ByWard Market LAPS – Friday, September 25, 2009. 6:30pm – 9:30pm				
Area	**Metric**	**On-Street**	**Public Off-Street**	**Total Public**
ByWard Market BIA	Supply	475	1,655	**2,130**
	Average Occupancy Rate	106%	54%	**65%**
	Peak Occupancy Rate	113%	61%	**73%**
	Average Duration	1.7	1.6	**1.6**
	Turnover	1.8	0.7	**0.9**
Entire Study Area	Supply	590	2,573	**3,163**
	Average Occupancy Rate	101%	48%	**58%**
	Peak Occupancy Rate	111%	53%	**64%**
	Average Duration	1.7	1.7	**1.7**
	Turnover	1.8	0.6	**0.8**

Key Findings – Entire Study Area

On-street

- Average occupancy rates (101%) exceeded maximum capacity
- Peak occupancy rates (111%) exceeded maximum capacity
- Average duration (1.7 hours) suggests vehicles generally complied with duration regulations
- Average turnover (1.8 vehicles per space) means approximately 1,050 vehicles parked on-street during the observation period

Off-street

- Average occupancy rates (48%) were moderate
- Peak occupancy rates (53%) were moderate
- Average duration (1.7 hours) indicates public off-street parking was used for shorter duration parking
- Average turnover (0.6 vehicles per space) means approximately 1,550 vehicles parked in off-street facilities in the entire study area during the observation period

Overall

- Average occupancy rates (58%) were moderate
- Peak occupancy rates (64%) were moderate to high

3.4 Saturday – Public Occupancy, Duration, & Turnover

ByWard Market LAPS – Saturday, September 26, 2009. 8am – 6pm				
Area	**Metric**	**On-Street**	**Public Off-Street**	**Total Public**
ByWard Market BIA	Supply	475	1,655	**2,130**
	Average Occupancy Rate	79%	48%	**55%**
	Peak Occupancy Rate	111%	72%	**81%**
	Average Duration	1.4	2.6	**2.3**
	Turnover	5.1	1.3	**2.1**
Entire Study Area	Supply	590	2,573	**3,163**
	Average Occupancy Rate	74%	43%	**49%**
	Peak Occupancy Rate	108%	66%	**74%**
	Average Duration	1.5	2.5	**2.3**
	Turnover	4.6	1.3	**1.9**

Key Findings – Entire Study Area

On-street

- Average occupancy rates (74%) approached practical capacity
- Peak occupancy rates (108%) exceeded maximum capacity
- Average duration (1.5 hours) suggests vehicles generally complied with duration regulations
- Average turnover (4.6 vehicles per space) means approximately 2,700 vehicles parked on-street during the observation period

Off-street

- Average occupancy rates (43%) were moderate
- Peak occupancy rates (66%) were moderate to high
- Average duration (2.5 hours) indicates public off-street parking was used for shorter duration parking
- Average turnover (1.3 vehicles per space) means approximately 3,350 vehicles parked in off-street facilities in the entire study area during the observation period

Overall

- Average occupancy rates (49%) were moderate
- Peak occupancy rates (74%) approached practical capacity

3.5 Sunday – Public Occupancy, Duration, & Turnover

ByWard Market LAPS – Sunday, September 27, 2009. 10:30am – 6pm				
Area	**Metric**	**On-Street**	**Public Off-Street**	**Total Public**
ByWard Market BIA	Supply	475	1,655	**2,130**
	Average Occupancy Rate	99%	28%	**44%**
	Peak Occupancy Rate	112%	41%	**57%**
	Average Duration	1.9	2.0	**2.0**
	Turnover	3.8	0.8	**1.5**
Entire Study Area	Supply	590	2,573	**3,163**
	Average Occupancy Rate	96%	26%	**39%**
	Peak Occupancy Rate	114%	40%	**54%**
	Average Duration	1.9	2.0	**2.0**
	Turnover	3.7	1.1	**1.6**

Key Findings – Entire Study Area

On-street

- Average occupancy rates (96%) exceeded practical capacity
- Peak occupancy rates (114%) exceeded maximum capacity
- Average duration (1.9 hours) suggests vehicles generally complied with duration regulations but some vehicles exceeded them
- Average turnover (3.7 vehicles per space) means approximately 2,200 vehicles parked on-street during the observation period

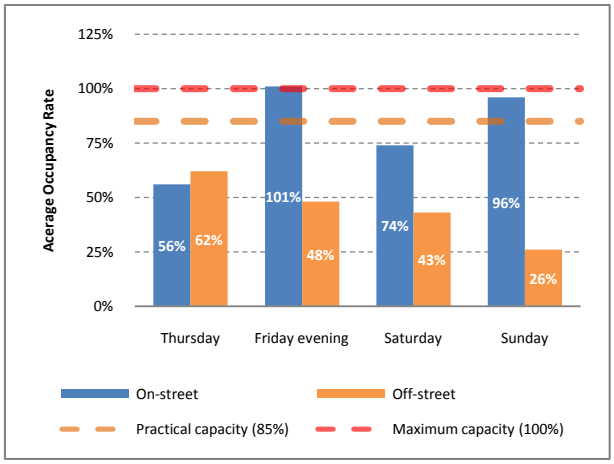
Off-street

- Average occupancy rates (26%) were low
- Peak occupancy rates (40%) were low to moderate
- Average duration (2.0 hours) indicates public off-street parking was used for shorter duration parking
- Average turnover (1.1 vehicles per space) means approximately 2,800 vehicles parked in off-street facilities in the entire study area during the observation period

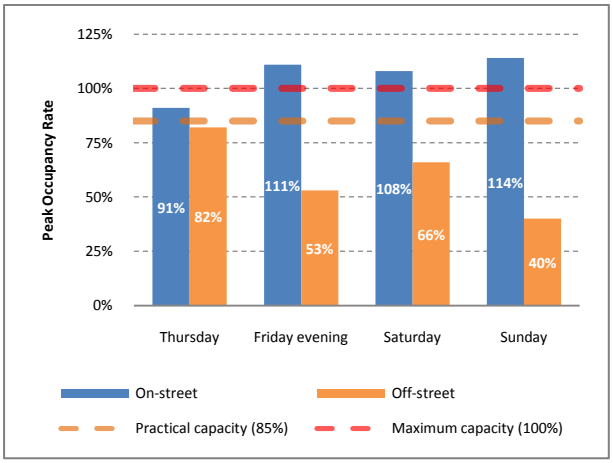
Overall

- Average occupancy rates (39%) were low to moderate
- Peak occupancy rates (54%) were moderate

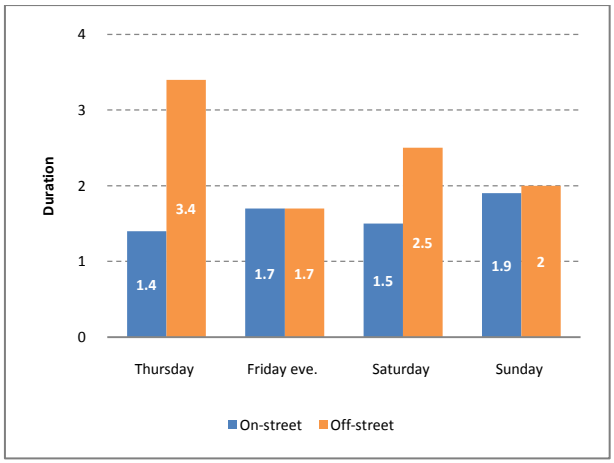
3.6 At a Glance – ByWard Market LAPS Public Parking Occupancy, Duration, and Turnover



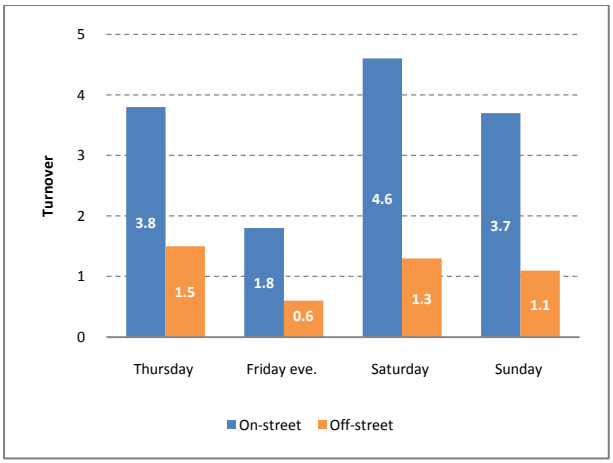
Average Occupancy Rate (Entire Study Area)



Peak Occupancy Rate (Entire Study Area)



Average Duration (Entire Study Area)



Average Turnover (Entire Study Area)

Key Findings – Entire Study Area

- Average on-street occupancy rates exceeded average off-street occupancy rates on all days except Thursday
- Peak on-street occupancy rates exceeded peak off-street occupancy rates on all days
- While peak on-street occupancy rates exceeded practical capacity on Thursdays and exceeded maximum capacity on Friday evening, Saturday, and Sunday, peak off-street occupancy rates never reached practical capacity
- While on-street durations were significantly lower than off-street durations on Thursday, on-street and off-street durations were relatively similar on all other days
- On-street turnover was significantly higher than off-street turnover on observed days.

4 Major Issues

4.1 Impact of Development on Public Parking

Parking data as collected for these studies included all parking in the area, both publicly available and private (spaces available only for residents of a property or employee).

One of the objectives of the Municipal Parking Management Strategy is:

> "*to provide and promote affordable short-term parking services, and fair and consistent enforcement services, that support local businesses, institutions, and tourism.*"

Thus, the focus of the detailed analysis has been on publicly available parking and particularly on shorter-term publicly available parking (both privately owned and Municipally-owned).

When new development occurs in the Central Area, the parking requirements are typically less than what has historically been provided. It is anticipated that the relative supply of dedicated parking for new developments will decrease over time, and as a result, demand for general public parking will potentially increase. In addition, new developments often take the place of existing surface parking lots.

4.1.1 Potential Public Parking Losses

Comparisons of land use for critical blocks have been made by documenting land use data and air photo information from 1999, 2005 and 2009. The most significant change identified in this review has been the development of several major condominiums in the area, which, in several cases, has resulted in the loss of publicly-available off street surface parking. Planned and potential developments are being reviewed for possible impact on the parking supply. Each block was examined to determine the potential loss of public parking supply.

In the ByWard Market, this analysis indicates that future developments could result in a potential loss of about 200 public off-street parking spaces – in the blocks bounded by George St., Cumberland St., Clarence St., and William St. See Exhibit 4.

There may be opportunities to promote the use of the existing municipal garage facility at 141 Clarence (Clarence/Dalhousie/Murray) to help address this potential loss. However, in order to ensure the ongoing supply of some public parking in support of local businesses, and in alignment with the Strategy Objectives, it is recommended that efforts be made to secure a supply of publicly-available off-street parking by:

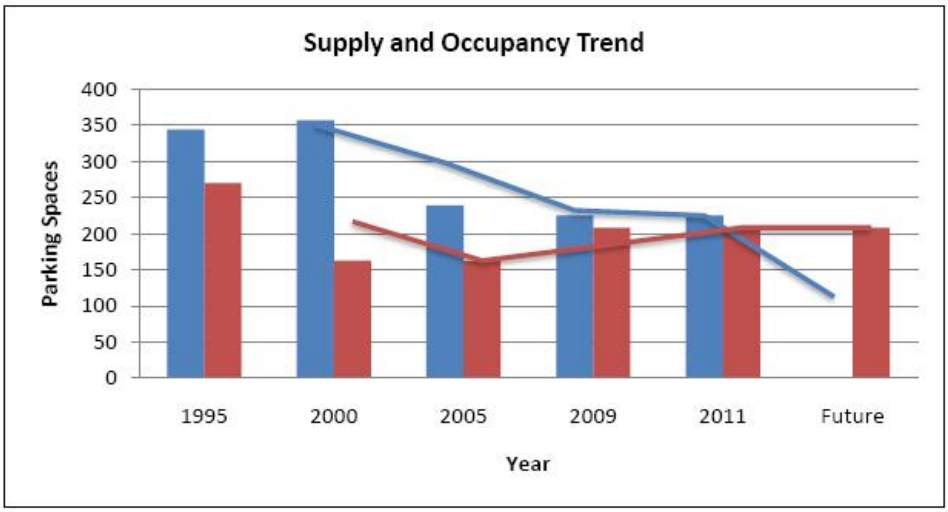
- Partnering with a private sector development to include municipally-controlled public parking; and/or,
- Ensuring the provision of publicly-available (but privately owned) short term parking as part of development approvals.

Another option to mitigate potential losses to the public parking supply in the ByWard Market would be the possible expansion of the municipal parking garage facility at 70 Clarence St. Each additional floor would provide between 50 and 75 spaces. Any expansion of the facility would need to adhere to City planning objectives and zoning by-law requirements (the site is currently zoned for 11 metre maximum height).

Exhibit 4 – Impact of Development on Public Off-Street Parking Supply

Scenario 1: **Assuming all public off-street surface is replaced by new development; and occupancy same as 2009 in 2011 and future**

	Supply	Occupancy	Occupancy Rate
1995	344	270	0.78
2000	357	163	0.46
2005	239	162	0.68
2009	225	208	0.92
2011	225	208	0.92
Future	0	208	-



Supply = Public off-street surface + structure

Aerial View of ByWard East Area

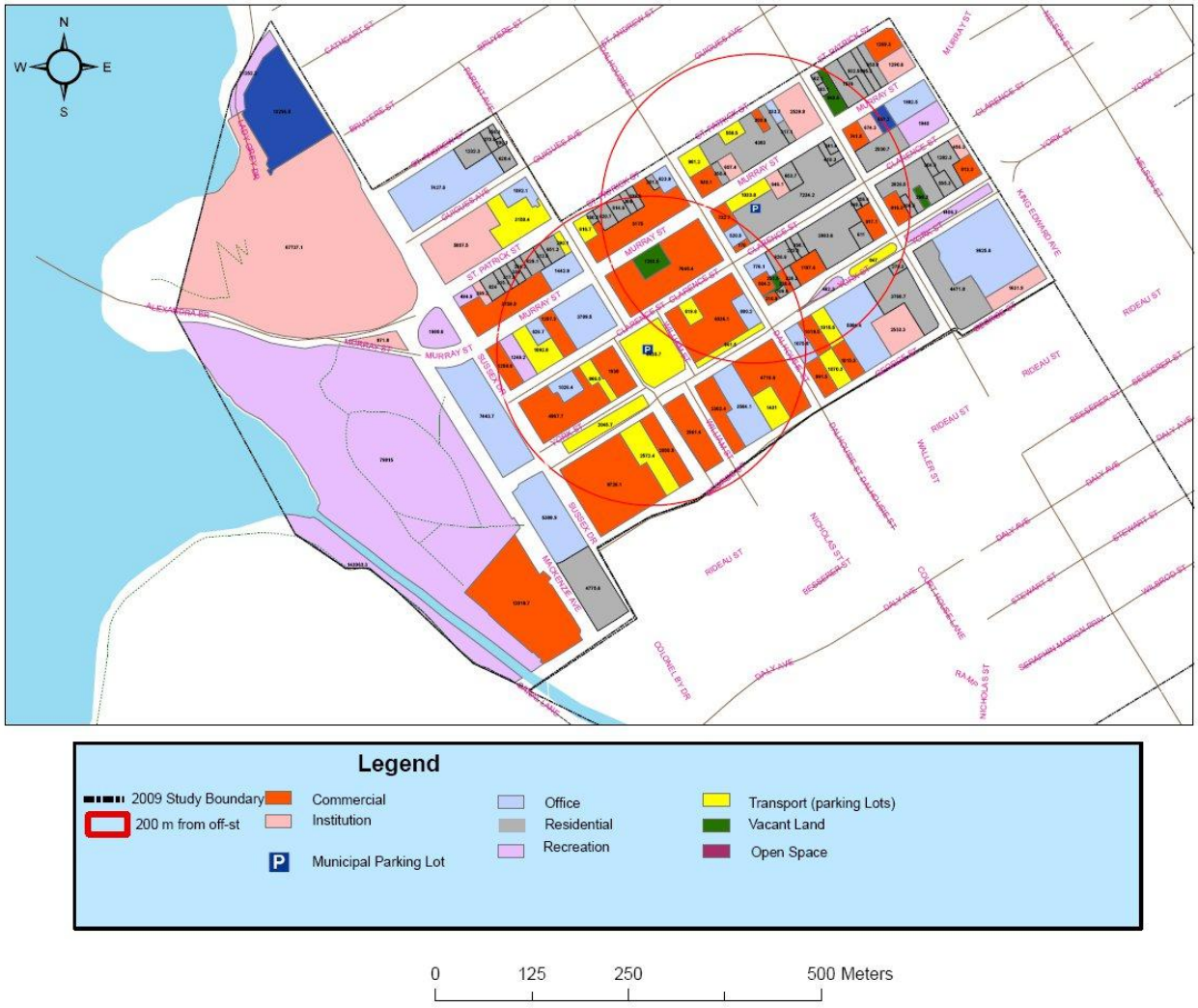
4.1.2 Land Use

According to 2005 land use data (2010 data not available at the time of report publication), there are approximately 105 property parcels in the ByWard Market area:

- 30 are zoned as commercial (22%)
- 17 are zoned office (13%)
- 51 are zoned residential (38%)
- 10 are zoned institution (7%)
- 17 are zoned parking lots (13%)
- 10 remaining are zoned vacant land, recreation, and open space (7%)

See Exhibit 5 for details.

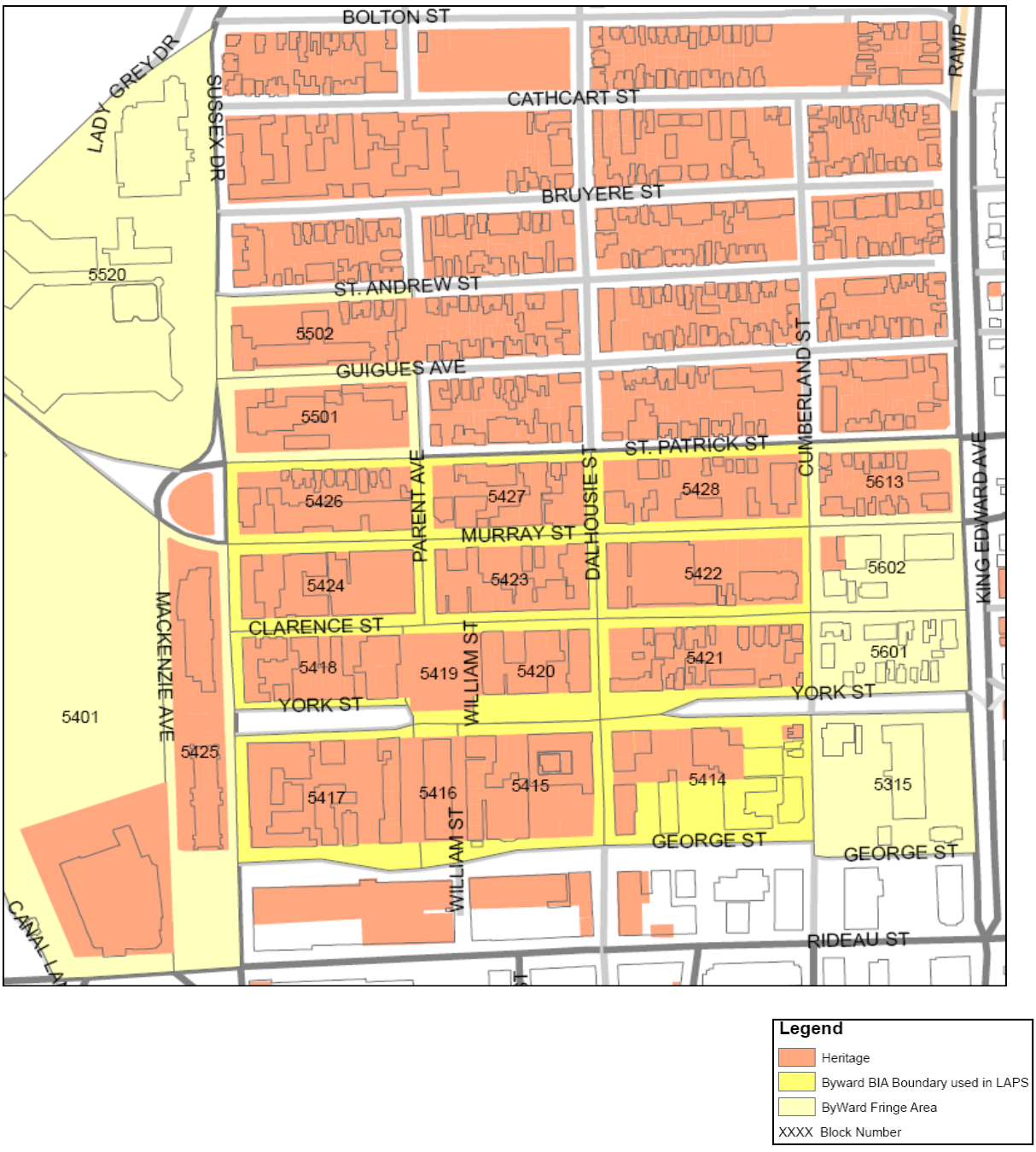
Exhibit 5 – 2005 ByWard Market Land Use



4.1.3 Heritage

Much of the ByWard Market area is covered by a Heritage District designation, thus redevelopment opportunities are limited in terms of height and density. See Diagram 6.

Exhibit 6 – ByWard Market Map of Heritage District

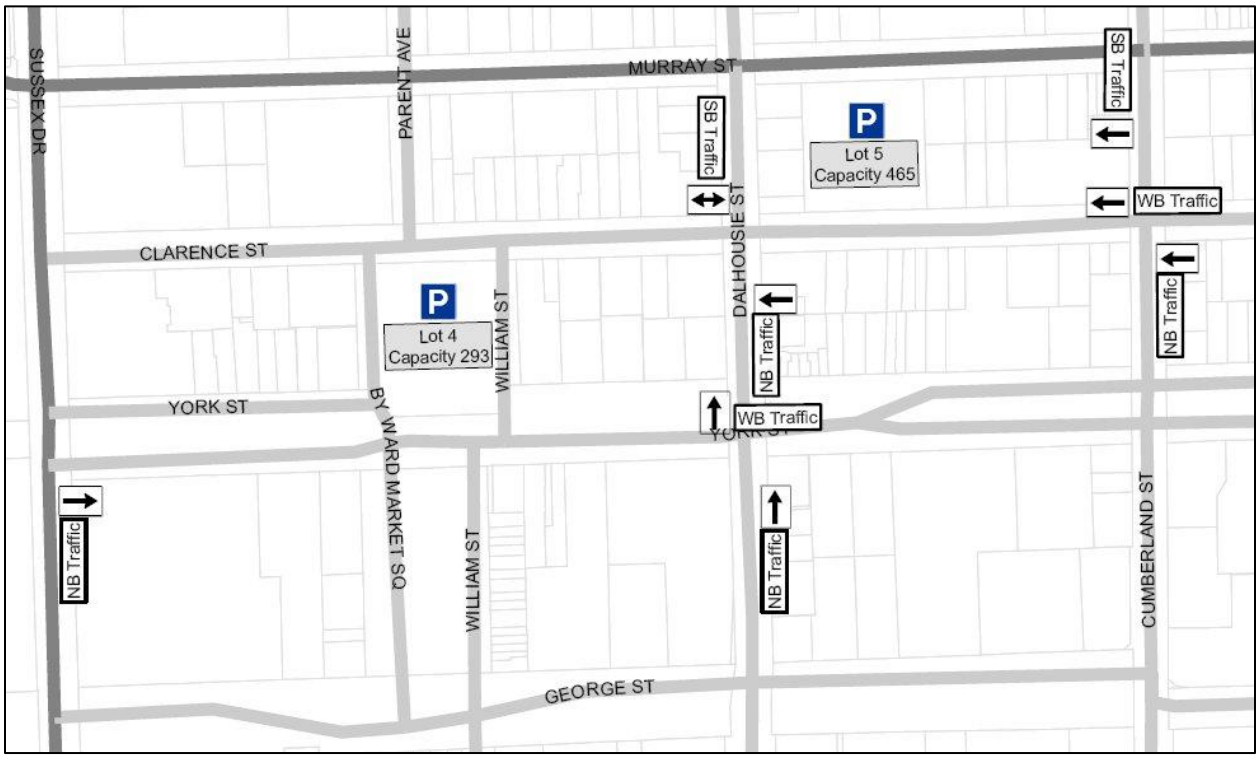


4.2 Wayfinding

A key finding is the need for improvements to wayfinding to and from parking facilities in the ByWard Market and Downtown Rideau areas. Off-street parking occupancy is moderate to low at times, and part of this may be a need to improve the awareness of available off-street public parking facilities.

There are two municipal parking facilities in the ByWard Market. One facility fills to capacity regularly, while the other, one block away, does not. Improvements to the wayfinding and information to drivers are needed. See Exhibit 7 for a map of current wayfinding signage.

Exhibit 7 – Map of Current Wayfinding Signage



Appropriate signage with location and number of available parking spaces could attract some drivers to park in the City lot at Clarence/Murray/Dalhousie instead of the ByWard Garage, balancing the use. Wayfinding could help reduce time searching for parking, leading to less congestion and traffic in the area.

Current initiatives are examining options to improve signage and guidance to and between the two City facilities. Parking guidance systems displaying the current availability of parking spaces in the Municipal parking structures are planned. Similar systems have been implemented in different cities in North America, Europe, and Asia. See Exhibit 8 for example signage.

Exhibit 8 – Example Wayfinding Signage (from Montreal, Quebec)

4.3 Paid Parking on Sundays & Holidays

The detailed analysis of parking occupancies and durations in the Local Area Parking Study Technical report reveals that on-street parking is highly used, with limited turnover or opportunities for customers to find convenient parking. This high occupancy and low turnover suggests that paid parking on Sundays and holidays should be examined. In the core area of the ByWard Market, parking turnover on Saturdays is about six times – meaning that each prime parking space potentially serves six customers over the business day. However, on Sundays, the turnover is about three times. Refer to Exhibit 10.

Exhibit 10 – Sample ByWard Core Data

Day	Avg Occupancy Rate	Peak Occupancy Rate	Avg Duration (hours)	Turnover (vehicles)
Thursday (8am-6pm)	71%	104%	1.4	5
Friday Eve. (6:30pm-9:30pm)	112%	120%	1.7	2
Saturday (8am-6pm)	85%	102%	1.3	***6***
Sunday (10:30am-6pm)	102%	107%	2.9	***3***

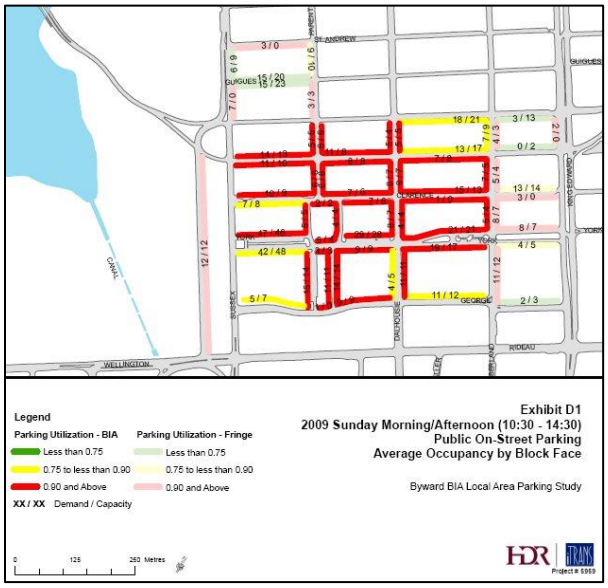
Prime on-street parking in the ByWard Market area is 87% occupied by 10:30 am, and occupancy remains above 90% for the day (see Exhibit 9). This is due to the fact that there is no charge for on-street parking and spaces are filled early and for the entire day. Although on-street parking on Sundays is technically "free", convenient, short-term on-street parking for customers of the ByWard Market is difficult to find. This means that short-term customers are unable to find convenient parking, and need to park at less convenient off-street paid parking facilities.

Free parking on Sundays encourages drivers to spend time searching for a space on-street even if it is not readily available. Paid parking would help to redistribute parking demand and discourage long-term on-street occupancy, directing it to off-street parking facilities. Reducing the demand for on-street parking would encourage a higher turnover of prime on-street spaces and would help to mitigate traffic issues associated with searching for free parking spaces.

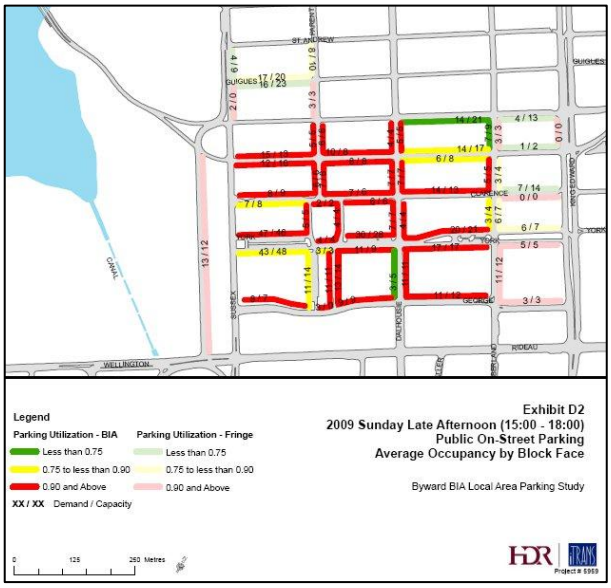
Further, the consulting firm hired to conduct the 2009/10 CAPS East update made a recommendation with respect to Sunday paid parking (which included the ByWard Market LAPS area) based on the data collected for the study. The recommendation stated that "it can be seen that on-street parking utilization on Sunday is over-capacity…paid on-street parking should be extended to include Sunday as a means of redistributing parking demand and discouraging long-term occupancy."[4]

[4] Page 52 of the *2009/10 Central Area Parking Study East of the Rideau Canal, Final Report*.

Exhibit 9 – Sunday On-Street Parking Occupancy Diagrams



Sunday Morning/Early Afternoon (10:30am-2:30pm) On-Street Occupancy (pg 77 of the Technical Report)



Sunday Late Afternoon (3pm-6pm) On-Street Occupancy (pg 77 of the Technical Report)

Setting the same time limits as during the week (8:30 am to 5:30 pm) could be appropriate from the perspective of ensuring a good supply of short term parking; however, this might have an impact on other stakeholders – Places of Worship on Sunday mornings. For this reason, close examination of all paid areas and hours will need to be done.

As per the Municipal Parking Management Strategy discussion paper, there could be a benefit to introducing paid parking on Sundays and holidays at a rate lower than the $3/hr rate currently applied in virtually all locations City-wide:

> *"Where paid parking is being introduced, the minimum introductory rate could be eased in, depending on the magnitude of the change. The introductory rate could, for example, start at 50% of the existing rates or $1.50 per hour, with a survey conducted the following year".*

Any changes to paid on-street parking, however, would be introduced **subject to detailed consultation and concurrence with stakeholders**.

Note that the majority of public parking in the ByWard Market BIA is already paid on Sunday and holidays – on-street parking represents less than 20% of public parking supply in the BIA.

Free parking on Sundays and holidays encourages drivers to spend time searching for a space on-street even if it is not readily available. Paid parking would help to redistribute parking demand and discourage long-term occupancy. Reducing the demand for on-street parking would encourage a higher turnover of prime on-street spaces and would help to mitigate traffic issues associated with searching for free parking spaces.

5 Stakeholder Issue Analysis

5.1 Overview

Key stakeholders, including the ByWard Market BIA raised a number of specific issues related to parking in the ByWard Market BIA LAPS area during consultations held while performing the study. Using this feedback, 16 high level issues were identified. They were presented as part of the Interim Report received by Transportation Committee on June 2, 2010[5] and were analysed as part of the LAPS.

5.2 Parking Issues – Approach

As part of the initial steps of the study, the BIA and the City's Markets Management staff were asked about parking issues in the area. The issues were grouped:

- Parking supply (opportunities to add parking, shared use parking);
- Regulations and signage;
- Specific days/times/blocks in detail;
- Special parking (bicycles, motorcycles, vendor stalls); and
- Parking garages (wayfinding, safety and security).

Each issue has been examined, and recommendations for implementation or further review have been made. The detailed "issues pages" identify:

- The specific parking issue or concern;
- Available data;
- A discussion on options and opportunities;
- A recommendation / conclusion;
- Budget implications; and
- Implementation timelines.

In some cases, the analyses have yielded opportunities to add parking – mainly on-street – by adjusting curbs, removing redundant driveway depressions, and reviewing signage that may no longer be required.

In several areas, focused analyses have been undertaken on specific streets and blocks. In the ByWard Market parking conditions in the core area, including York Street (Sussex to Dalhousie), show very high occupancy rates at all times. This illustrates the importance of on-street parking, particularly to commercial areas such as Sussex Drive businesses which have no alternative short-term parking nearby.

In other cases, more complex options have been identified. Other options involve the need for further study/consultation, such as parking changes that may affect tour bus parking and taxi zones.

Delegated Authority (for changes to the Traffic and Parking By-law) and the Municipal Parking Management Strategy (rate setting guidelines) provide the necessary tools to process changes to

[5] For the full text of the report, see http://ottawa.ca/calendar/ottawa/citycouncil/trc/2010/06-02/ACS2010-COS-PWS-0008%20EN.htm

parking regulations, subject to concurrence with stakeholders, including the Ward Councillor, BIA, Community Associations, Places of Worship, and other stakeholders.

5.3 Ongoing Monitoring

It is recognized that this list represents a current inventory of the parking-related issues in the area. As this is a very dynamic and active area, issues related to parking will need to be monitored on a continuous basis and addressed where possible.

Quarterly meetings with the BIA and other stakeholders are suggested, on an ongoing basis to address parking concerns. Implementation of the Pay & Display machines has provided a new opportunity to closely monitor paid parking activity by area that was not easily available before. This will allow continuing monitoring of areas of concern, in order to study/consider ongoing minor adjustments to paid parking locations and effective times/days.

5.4 Issues Analysis

As part of the initial steps of the study, the BIA and the City's Markets Management staff were asked about parking issues in the area. The issues were grouped into 15 topics, some which address specific locations: parking supply (opportunities to add parking, shared use parking); regulations and signage; specific days/times/blocks in detail; special parking (bicycles, motorcycles, vendor stalls); and parking garages (wayfinding, safety and security).

Each issue has been examined, including available data, a discussion on options and opportunities, a recommendation/conclusion, budget implications, and implementation timelines. In some cases, the analyses have yielded opportunities to add parking (mainly on-street) by adjusting curbs, removing redundant driveway depressions, and reviewing signage that may no longer be required. In other cases, more complex options have been identified. Other options involve the need for further study/consultation, such as parking changes that may affect tour bus parking and taxi zones.
The findings are summarized as follows:

Topic	Recomm-endations Made
1. Examine opportunities to provide additional on-street parking (7 additional on-street spaces)	**5**
2. Review existing Parking Regulations on several streets (2 additional on-street spaces)	**3**
3. Identify opportunities for convertible or shared use parking spaces/curb use (for example, tour bus parking daytime, taxi zone at night)	**2**
4. Identify opportunities to provide for bicycle and motorcycle / scooter parking, as well as for other alternative modes of transportation (spaces TBD)	**4**
5. Review of parking needs and specific challenges associated with vendor stalls in the ByWard Market	**3**
6. Review existing Loading Zones (requirement, relocation options, additional loading zones)	**1**
7. Review existing Tour Bus Parking locations (6 additional regular vehicle on-street spaces)	**2**
8. Review Taxi Zones	**1**
9. Examine wayfinding and directional signage to/from Municipal Parking Lots	**1**
10. ByWard Garage and Clarence-Murray Garage (review utilization patterns, identify future opportunities, examine signage/entrances)	**5**
11. Detailed review of on-street parking on priority blocks (as identified by BIAs)	**1**
12. Review safety and security, determine impacts on the desirability of existing parking	**—***
13. Identify and examine barriers between parking facilities and destinations	**1**
14. Study specific time periods of high parking utilization / low turnover (including Friday evening and Sunday in the ByWard Market)	**1**
15. Identify opportunities for additional off-peak public use of private parking lots	**—***
Total	**30**

*No specific recommendations identified; recommend ongoing consultation/discussion with stakeholders as required.

1. Examine opportunities to provide additional on-street parking

- 1 additional on-street space at 307 Dalhousie St could be added by slightly shortening an adjacent bus zone (subject to concurrence with Traffic Management and Transit Staff)
- 1 additional on-street space at 62 York St to be added by removing a redundant curb depression (subject to implementation by Infrastructure Services)
- 3 additional on-street spaces at 85 Murray St to be added by removing a redundant curb depression (subject to implementation by Infrastructure Services)
- 1 additional on-street space each at 97 and 101 Clarence St to be added by removing a redundant curb depression (subject to implementation by Infrastructure Services)
- 2-3 additional on-street parking spaces along the west side of William St immediately north of York will be added during the market off-season

2. Review existing Parking Regulations on several streets

- A no parking regulation at 347 Dalhousie St between 05:30 to 08:30 was reviewed (to be removed)
- A tour bus parking zone at 35 George St was reviewed (recommend converting to regular on-street parking; specific duration subject to concurrence with stakeholders)
- No stopping signs Sussex Dr. between George St and York St were reviewed (recommend no changes)

3. **Identify opportunities for convertible or shared use parking spaces/curb use (for example, tour bus parking daytime, taxi zone at night)**

    - One shared taxi/loading zone was implemented on Clarence Street, north side, east of Parent Street
    - Additional opportunities on York Street, between Dalhousie and Cumberland (subject to Tour Bus Study, 2012)

4. **Identify opportunities to provide for bicycle and motorcycle / scooter parking, as well as for other alternative modes of transportation**

    - Additional bicycle parking possible around the municipal parking lot located at 70 Clarence
    - Additional bicycle parking along the south side of the York St parking median between Sussex Dr and ByWard Market St
    - Additional bicycle parking along Murray Street east of Parent
    - Wayfinding / identification and advertisement of existing bicycle parking

5. **Review of parking needs and specific challenges associated with vendor stalls in the ByWard Market**

    - Vendor activity along York St between Sussex Dr and Dalhousie St was analyzed (high occupancy rates during the market season)
    - Vendor activity along ByWard Market St between George St and York St was analyzed (high occupancy rates during the market season)
    - Vendor activity along William St between George St and York St was analyzed (high occupancy rates during the market season)

6. **Review existing Loading Zones (requirement, relocation options, additional loading zones);**

    - In addition to 4 designated loading zones, many no parking zones in the ByWard Market function as de facto loading zones (the 4 designated loading zones could be converted to no parking zones for consistency)

7. **Review existing Tour Bus Parking locations**

    - 1 tour bus parking space along the south curbface of York St (recommend no changes)
    - 1 tour bus parking space along the west side of Cumberland St immediately north of Clarence (recommend replacing with regular paid vehicle parking, subject to Tour Bus Study)
    - 2 tour bus parking spaces at 134 York St (recommend replacing with regular paid vehicle parking (complete, tour bus spaces relocated to York Street, south side, just west of King Edward Avenue)

8. **Review Taxi Zones**

    - The north side of York St between Sussex Dr and ByWard Market St was reviewed (recommend designating 50% as taxi zones during the evenings)

9. **Examine wayfinding and directional signage to/from Municipal Parking Lots**

    - Wayfinding and directional signage to/from both municipal parking lots was analysed (recommend improved signage and/or a "Parking Guidance System", subject to consultation with Traffic Management staff)

10. **ByWard Garage and Clarence-Murray Garage (review utilization patterns, identify future opportunities, examine signage/entrances)**

    - Usage of the garages was reviewed (70 Clarence has high occupancy rates, 141 Clarence has lower occupancy rates)
    - Security and safety was reviewed (recommend continued security presence)
    - Circulation including entrances and exits was reviewed (no recommendation within the scope of the study; issue to be reviewed as part of ongoing study of potential improvements to the ByWard Garage)

11. **Detailed review of on-street parking on priority blocks (as identified by BIAs)**

    - York St between Sussex Dr and Cumberland St (high occupancy rates, high number of illegally parked/overtime vehicles; recommend continuing enforcement)
    - ByWard Market St between George and Clarence St (high occupancy rates; recommend continuing enforcement)
    - William St between George and Clarence St (high occupancy rates; recommend continuing enforcement)
    - Clarence St between Sussex Dr and Dalhousie St (high occupancy rates, high number of illegally parked vehicles; recommend continuing enforcement)

12. **Review safety and security, determine impacts on the desirability of existing parking**

    - The northeast corner of the ByWard Market (area bounded by Clarence St, King Edward Ave, St. Patrick St, and Dalhousie St) was examined for safety and security (recommend no action at this time)

13. **Identify and examine barriers between parking facilities and destinations**

    - Based on stakeholder feedback and relatively low occupancy rates in the municipal parking lot located at 141 Clarence, wayfinding was identified as a potential barrier. Considering 141 Clarence comprises 35% of municipally provided parking within the ByWard Market, it is imperative that the garage be easily accessed (recommend enhanced wayfinding).

14. **Study specific time periods of high parking utilization / low turnover (including Friday evening and Sunday in the ByWard Market)**

    - Friday evenings and Sundays were identified as time periods with high parking utilization and low turnover and were analysed extensively as part of the LAPS Technical Reports.

- Further Sunday analysis can be found in this report as part of the Sunday paid parking discussion (recommend continuing enforcement; recommend introducing paid parking on Sundays subject to consultation with stakeholders).

15. Identify opportunities for additional off-peak public use of private parking lots

- Only 15% of parking spaces in the ByWard Market are non-residential private spaces and therefore suitable for off-peak public use (recommend no further action).

6 Future Opportunities

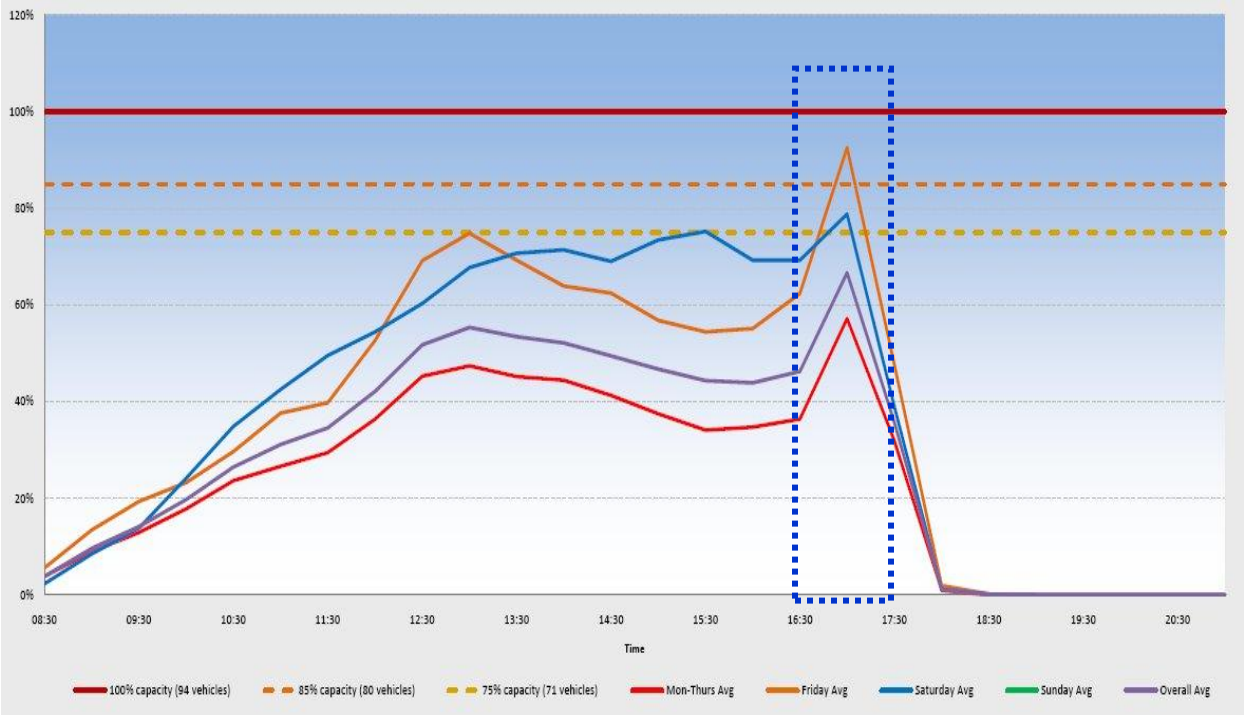
In addition to the measures above, there are other opportunities that may be considered for future review and action, as summarized below.

6.1 Extended Paid Parking Hours

Based on occupancy rates observed and duration, the data for on-street parking on Friday evenings also suggests that paid parking might be considered. However, the typical customer in the evening is visiting restaurants, etc., and the need to encourage turnover is not the same as during the day.

One section of York Street, between Sussex Drive and ByWard Street **was examined in detail based on** data obtained from the new Pay and Display machines. This data reveals high occupancy rates, and a distinct "peak" towards the end of the paid time period, where spaces fill to capacity (see Exhibit 11). By paying for a short period of time, cars can remain parked throughout the evening at no cost, and when parking time limits are no longer in effect.

Exhibit 11 – The 5:00 pm Peak at York St between Sussex Dr and ByWard Market St



Future monitoring will be undertaken to further examine the evening hours. One possible option that may be considered to help ensure the maximum supply of on-street parking for customers (as opposed to employees) would be to extend the paid parking period until 7:00 pm (currently 5:30pm).

6.2 Expanded Paid Parking Areas

The parking study data reviewed occupancy rates on all blocks in the area – both paid and unpaid. In some cases, it was noted that paid parking may help to encourage additional turnover on certain streets.

This would require focussed consultation with adjacent businesses and residents prior to implementation.

6.3 Parking Rates by Zone

The current industry "best practice" is that peak occupancy should be in the range of 85%. In some municipalities, parking rates can be set based on the actual occupancy rates recorded – basing price on actual demand. Such an approach is in effect in Vancouver. The approved Municipal Parking Management Strategy includes Rate Setting Guidelines which state that public parking rates, hours and locations are to be set based on Local Area Parking Studies (LAPS). One of the principle criteria to determine the priority for undertaking LAPS is peak parking occupancy rates of below 75% or above 85%.

> *"Convenient on-street parking provides business areas with a competitive advantage over those locations without it, but only if customers are actually able to find a space in a reasonable amount of time and at an acceptable cost. If the parking is priced too low, as the cost recovery approach may result in, or the supply is insufficient, it will be constantly full, making it difficult and time consuming to find a space, which dilutes the competitive advantage of having it. Pricing on-street parking appropriately ensures that a person has a chance of finding a space in a reasonable amount of time, thereby reducing congestion, as well as the lost time, fuel costs and pollution generated by cruising around the block looking for a space.*
>
> *"The utilization rate typically used in the parking industry to increase rates is 85% utilization during peak periods".*
>
> *"Recent industry research has suggested that this factor should be used as the primary objective measure to determine when to raise or lower rates and when to introduce paid on-street parking into an area as well, and specifically that pricing should be set such that 15% of parking spaces are vacant and available at any time[6]."*

6.4 Progressive Pricing

Calgary has a system of progressive pricing for on-street parking in some areas, where the first hour will be set a one price, and the second hour at a higher price to encourage shorter stays, thus making the parking spaces available to more customers.

6.5 Paid Loading Zones

Similar to tour bus spaces, loading zones could be converted to "paid" loading zones. This would serve to discourage the current practice of some motorists taking advantage of the current no cost loading zones for very short-term parking. Pricing the loading zones would help to ensure that they are available to those who need a temporary location to load or unload merchandise in close proximity to their destination

[6] See the article, *Parking Management: Strategies, Evaluation and Planning*, (November 2008) from the Victoria Transport Policy Institute for more information. http://www.vtpi.org/park_man.pdf

7 Conclusion

The ByWard Market and Downtown Rideau are the most active areas of the City, with on-street parking pressures on all days and times and well into the evening. In the core of the ByWard Market, parking demand extends well into the overnight hours. This has led to some unique challenges and opportunities. During the day, the characteristics are typical of a main street commercial area. However, during the evening, weekends and overnight, there continues to be demand for parking due to the nature of this entertainment district.

In summary, on-street parking in the area is well utilized and is over capacity at peak times and days. However, off-street parking utilization was found to be moderate. This indicates that although on-street utilization is of concern, the overall short-term parking supply is sufficient to meet present levels of public parking demand.

As this is a very dynamic and active area, issues related to parking will need to be monitored and a continuous basis and addressed as possible. Quarterly meetings with the BIA and other stakeholders are recommended on an ongoing basis to address parking concerns