Chinatown

Local Area Parking Study

August 2013

Submitted to:

City of Ottawa

Project No. 12-6952

Submitted by:

Dillon Consulting Limited

August 14, 2013

Ms. Mary Gracie, MCIP, RPP
Program Manager, Parking Studies
Parking Operations, Maintenance & Development
185 Slidell Street
Ottawa, ON K1Y 3B5

Re: Chinatown Local Area Parking Study
Final Report

Dear Ms. Gracie,

Dillon Consulting Limited (Dillon) is pleased to provide you with our final report for the Chinatown Parking Study.

Should you have any questions or comments, please do not hesitate to contact the undersigned at (613) 745-2213 ext. 3052.

Yours truly,

DILLON CONSULTING LIMITED

L. Douglas Green, P.Eng., PTOE

Encl.

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1.0 INTRODUCTION

1.1 Study Overview & Purpose

The ***City of Ottawa (City)*** retained ***Dillon Consulting Limited (Dillon)*** to conduct a parking study of the Chinatown area, a diverse area of the City featuring a mix of residential and institutional land uses, with a commercial district along Somerset Street. The area includes both on-street and off-street parking, including two municipal surface lots, which are located at 687 Somerset Street and at 760 Somerset Street.

The Council approved Municipal Parking Management Strategy requires Local Area Parking Studies to be undertaken for various areas of the City. The Chinatown Local Area Parking Study was part of the City's Parking Operations, Maintenance and Development Branch's 2012 work plan as approved by Council on March 28, 2012.

Municipal Parking Management Strategy Objectives

1. Provided and maintain an appropriate supply of affordable, secure, accessible, convenient, and appealing public parking
2. Provided 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 to encourage the use of alternative modes of transportation including public transit, car-van pooling, taxis, auto sharing, cycling and walking
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 lifecycle 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

The purpose of a Local Area Parking Study is to determine the need for, nature, and extent of municipal involvement in the provision of public parking services. It determines if the amount of parking, its location, and the price charged for it is appropriate. The focus of the parking study is Somerset Street from Preston Street to Bay Street.

There is a need to determine the current state of parking supply and demand in Chinatown to ensure that the parking supply is managed; to ensure that existing parking

demands are accommodated; to assist in setting parking pricing; and, to plan for future parking demands.

The study objectives were threefold:

1. Evaluate the current supply and demand for parking in Chinatown, and identify potential issues.
2. Assess future parking requirements due to infill development and redevelopment of existing properties.
3. Identify strategies to address current and future parking needs.

This study was undertaken in accordance with the Terms of Reference for Local Area Parking Studies, and supports objectives of the Municipal Parking Management Strategy.

1.2 Study Area

The study area for this report was developed based on a number of considerations, including:

- The study area includes the Chinatown Business Improvement Area (BIA);
- Preston Street was determined to be the westerly boundary, as it represents the start of Little Italy;
- The Plant Recreation Centre parking lot (southwest corner of Somerset Street and Preston Street) was included due to the number of complaints received regarding lack of parking at the facility; and,

- Acceptable walking distance between parking facilities and commercial destinations.

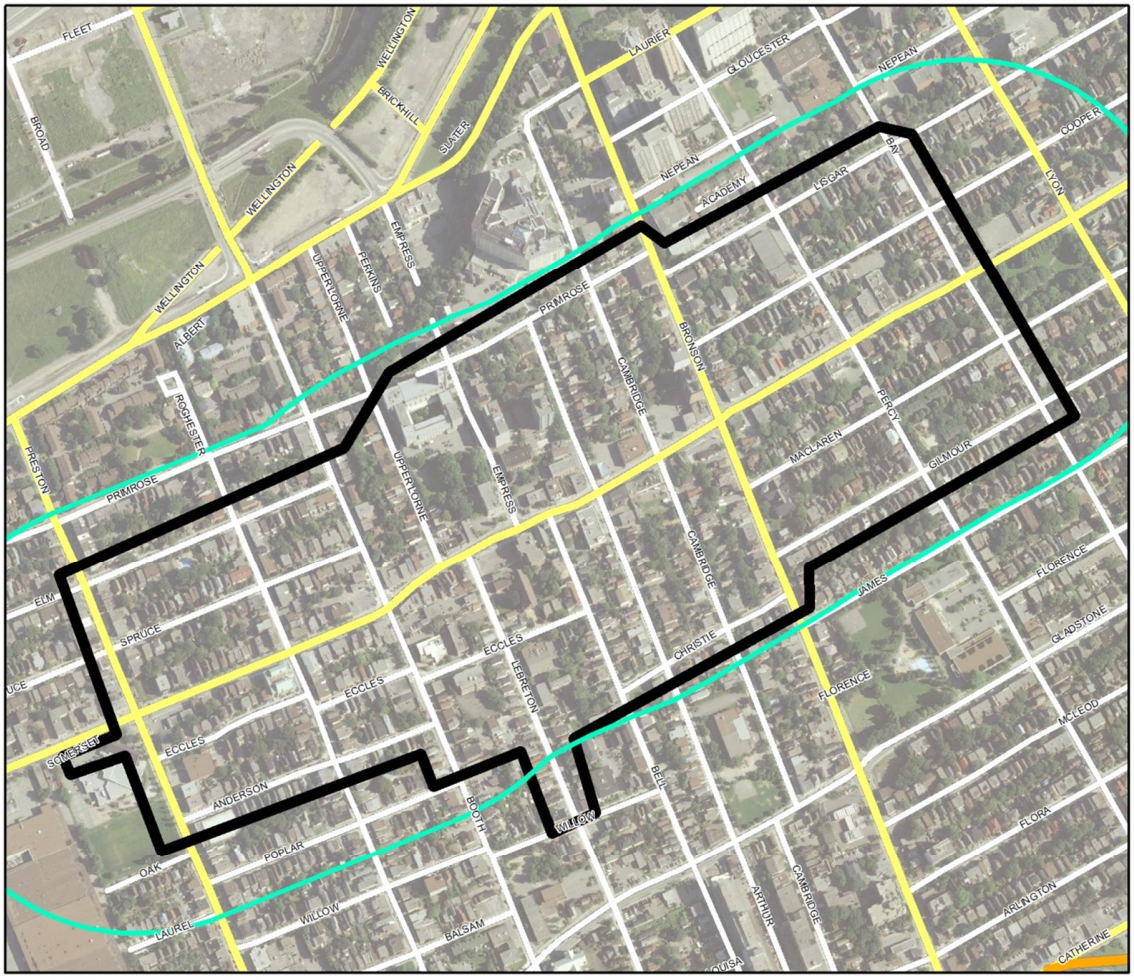
The Victoria Transport Policy Institute has identified acceptable walking distance from parking spaces to various types of destinations. As indicated in **Table 1**, the acceptable walking distance to grocery stores, professional services, medical clinics, and residences is 250m. It has also been determined that people are willing to park and walk further distances to general retail, restaurants, their place of work, entertainment centres, and places of worship.

Table 1: Acceptable Walking Distances to/from Parking

Adjacent (Less than 30m)	Short (less than 250m)	Medium (less than 365m)	Long (less than 480m)
- People with disabilities - Deliveries and loading - Emergency services - Convenience store	- Grocery stores - Professional services - Medical clinics - Residents	- General retail - Restaurant - Employees - Entertainment center - Religious institution	- Airport parking - Major sport or cultural event - Overflow parking

Source: Victoria Transport Policy Institute, TDL Encyclopaedia. http://www.vtpi.org/tdl/tdm89.htm

Within the Chinatown area there is free, time restricted parking on adjacent side streets off of Somerset Street. In reviewing the street pattern and with consideration for the topography of the area, it was determined that visitors to the area would generally be reluctant to walk further than two blocks north or south of Somerset Street. **Figure 1** is the Study Area Map, which illustrates the study area and covers the majority of the streets within an acceptable walking distance as defined by the Victoria Transportation Policy Institute.



CREATED BY: ES || CHECKED BY: LDG || LOCATION: \\DILLON.CA\DILLON_DFS\OTTAWA\OTTAWA CAD\CAD\2012\126952\FIGURE 1 - STUDY AREA (BUFFER).MXD || PROJECT: 12-6952 || DATE: 2013/05/12 || STATUS: FINAL

Legend

Study Area Boundary

250m Walking Distance from Somerset Street

Figure 1: Study Area

1.3 Parking Terminology

A number of terms related to parking are used throughout this report. For ease of reference, a glossary of key terms is provided below:

Total Parking Capacity – The total number of operational parking spaces at the time of the survey.

Practical Capacity – 85 percent of the *total parking capacity*; when parking occupancy exceeds the *practical capacity*, it is often perceived by motorists that the parking supply is near full.

Peak Occupancy – The highest observed number of parking spaces occupied by parked vehicles.

Peak Occupancy Rate – The highest percentage of occupied parking spaces relative to parking supply.

Average Duration – The average length of time that vehicles are parked on a particular street segment or parking lot.

Turnover – The number of unique vehicles parked on a particular street segment or parking lot over a period of time.

Metered Parking Space – A parking space requiring payment to park for some portion of the day; compliance is monitored and enforced via ticketing and/or towing.

Short-Term Parking – Parking durations of less than 3 hours – The maximum permissible on-street parking duration as per the City of Ottawa Parking By-Law.

Long-Term Parking – Parking durations exceeding 3 hours, typically permitted in off-street parking facilities.

Public Parking – An off-street parking lot or garage designated as a parking facility. These facilities may be metred, non-metred or require the purchase of a monthly parking permit. They may be managed by the City or privately.

Private Parking – Parking space on private property for use by employees, residents and/or customers, not for use by the general public.

On-Street Parking – Metered or non-metred parking space on City streets.

Off-Street Parking – A parking lot or garage located off of the roadway. These facilities may be available for either Public or Private Parking, or a combination of the two.

Critical Hour – The critical hour is defined as the hour with the highest on-street parking occupancy rate across the study area.

2.0 METHODOLOGY & DATA COLLECTION

2.1 Overview of Methodology

A well-managed parking system provides a balance between parking supply and parking demand. An imbalanced parking system can have a negative impact on commercial, institutional and neighbouring residential uses.

- Too little parking reduces the travel mode choice, particularly for shoppers, diners, and visitors. It also reduces accessibility for those who require a vehicle to get around.

- An appropriately supplied, but inappropriately low priced parking system is characterized by the most desirable spaces being full, giving the perception of a parking problem; even through the overall supply is sufficient to accommodate the demand. When faced with inconvenient parking choices, motorists will circle looking for a parking space, or choose to park in a no-parking or no-stopping zone or double parking to carry out their errands.

- A balanced parking system has an appropriate and appealing supply of parking that is priced and managed in a way that serves multiple users and destinations. One or two parking spaces on a block face should be available to receive the next arriving vehicle. The spaces are well used and the cost of parking is recovered directly from users. People coming to the area have reasonable choices to make in terms of how they travel, and if they choose to drive, where to park.

- Overpriced parking is characterized by drivers parking on and filling adjacent residential streets before choosing to park in the more desirable but over-priced spaces, resulting in frustrated customers, and neighbours.

- An oversupplied and underpriced parking system is inefficient. These types of areas are often characterized by a number of off-street parking facilities with low parking occupancy. The oversupply of off-street parking lots negatively impacts the aesthetics of the urban form and results in sprawl. The oversupply of underpriced parking results in increased automobile use, as visitors are more likely to drive rather than choosing to walk, bike, or take transit. Further, the cost of the providing the parking is not seen by the consumer.

There are a number of indicators used to assess the existing and future parking situation within the Chinatown study area. Indicators include existing parking occupancy rates, impact of anticipated land-use changes and intensification over time (including loss of existing parking supply), and travel and mode share forecasts. To fully understand the state of the current parking situation within the Chinatown area, detailed parking occupancy surveys were undertaken; face-to-face public opinion surveys were conducted; two meetings with key stakeholders were held; and, a public open house was conducted. Once existing and future parking needs were understood, strategies were identified to resolve each issue, considering their appropriateness within the Chinatown area. An overview of the study process is illustrated in **Figure 2**.

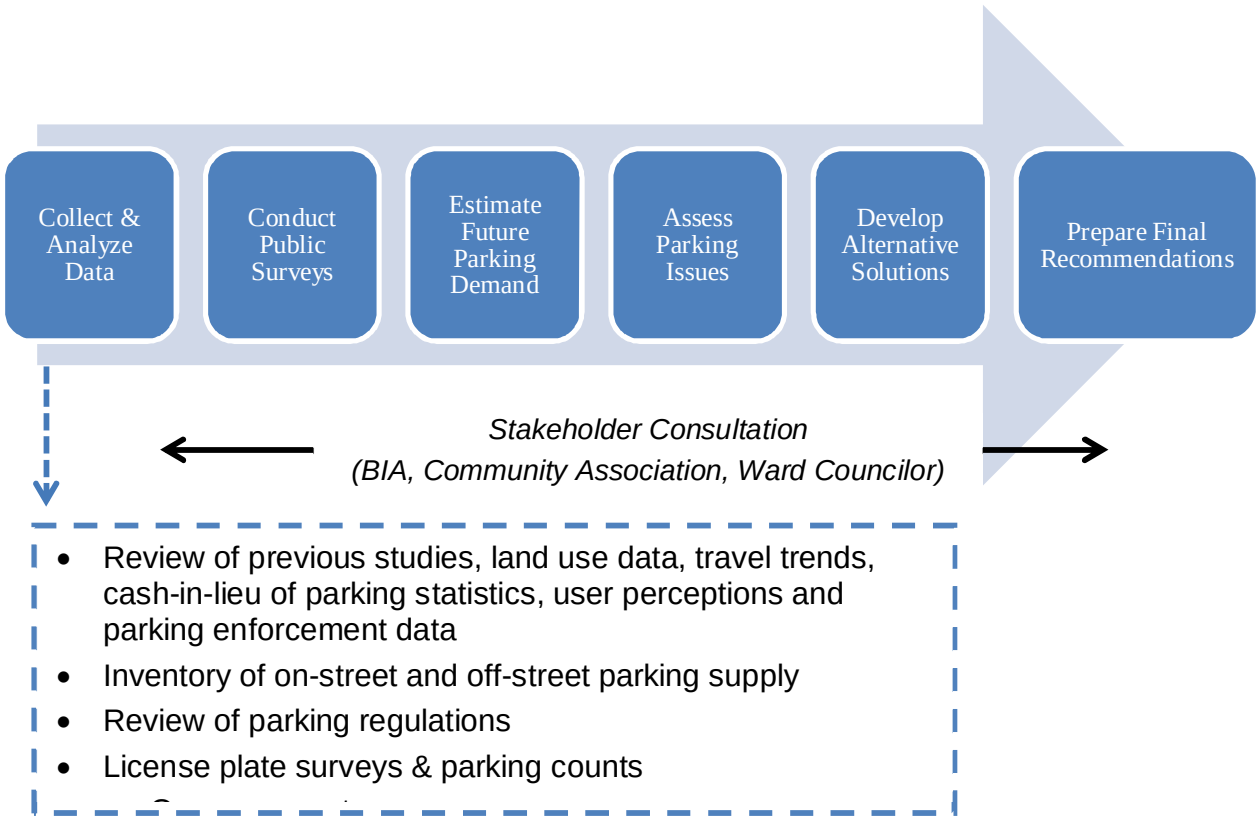


Figure 2: Parking Study Process

2.2 Construction on Bronson Avenue – Impact on Data Collection & Analysis

Bronson Avenue between Somerset Street and Highway 417 was under construction in 2012. During the data collection process, Bronson Avenue south of Somerset Street was closed to general traffic and parking was not permitted. Christie Street, between Bronson Avenue and Cambridge Street was also closed to general traffic, and parking was not permitted. The Bronson Avenue road closure impacted MacLaren Street and

Gilmore Street between Bronson Avenue and Percy Street. Parking on these two streets may have been higher than usual during this construction period. The construction may have also had an impact on other adjacent streets.

2.3 Review of Previous Parking Studies and Parking Management

In the past 25 years, there have been a total of three parking studies conducted within the Chinatown area. As a result of these studies, the installation of meters was approved in the fall of 1988. The approvals to purchase and build a surface lot at Somerset and Cambridge; and enter into a joint venture for an additional 20 spaces at Somerset and Empress followed in 1991. A brief summary of the study area and main conclusions from each study are provided in Appendix A.

Somerset Heights Parking Turnover Study, 2006

The most recent study, the 2006 Somerset Heights Parking Turnover Study, was limited to *paid* parking on and off-street between Preston Street and Bay Street.

The main conclusions from the 2006 Somerset Heights Parking Turnover Study were:

- Low off-Street parking occupancy was influenced by on-street rates;
- Occupancy peaks generally coincided with lunch and dinner periods; and,
- On-Street average duration was typically less than an hour.

The recommendations from the 2006 Somerset Heights Parking Turnover Study are listed below:

- Should average duration increase and approach the two hour maximum time restriction, or should the turnover rate drop significantly, consideration should be given to changing the posted maximum permitted parking time to 1 hour; and,
- Parking capacity was sufficient to meet observed demand. On Sunday mornings, however, the occupancy exceeded practical capacity. An option to be considered is to extend parking time restrictions to include Sunday as a means of increasing turnover on Sunday mornings.

Somerset Heights – Transportation and Parking Study, 1996

The 1996 study was initiated to address issues such as illegal parking, underutilized off-street parking lots and the need to meet high parking demands on Somerset Street. The study conclusions found:

- That during peak periods, parking on some streets was well over capacity and increased enforcement was needed;
- Parking lots were underutilized;
- There was a shortage of between 50 and 100 commercial parking spaces during peak periods; and,
- That Tour Buses were parking on residential streets illegally.

Recommendations included:

- Shortening parking times on residential streets to make Somerset Street relatively more attractive;
- To request parking be permitted on both sides of Somerset Street and to provide on-street angle parking where possible in the commercial portion of Somerset Street to increase parking supply;
- Install parking meters on side streets within the commercial portion of Somerset Street;
- Consider reviewing on-street parking rates to reduce commercial parking in residential areas;
- Promote off-street parking lots;
- Increase enforcement at critical times, specifically during evenings and weekends; and,
- Change the parking time restrictions to be consistent (7:00 a.m. – 7:00 p.m. throughout the study area).

Somerset Street West Planning Study, 1988

The study was initiated to determine if there was sufficient parking available to support the retail uses in the study between Rochester Street and Percy Street. The study conclusions found:

- There were parking deficiencies along Somerset Street;
- Weekday deficiencies during peak periods (lunch and dinner hours) were found to be between 50 to 70 spaces; and,
- The weekend deficiencies during peak periods were between 50 to 80 spaces.

Recommendations included:

- Install parking meters along Somerset Street and adjacent side streets;
- Introduce a residential parking permit system to allow residents and guests to park for longer periods of time;
- Parking time limits on side streets should be introduced and enforced to create short-term parking space; and
- Develop several smaller off-street parking lots (30 to 40 spaces each) located in areas with existing parking deficiencies.

2.4 Parking Occupancy Surveys

Parking surveys were undertaken by Dillon staff on Saturday, November 3rd, 2012; Sunday, November 4th, 2012; and, Thursday, November 8th, 2012 between 9:00 a.m. and 9:00 p.m. The occupancy surveys included a license plate survey and parking occupancy counts. License plate surveys were conducted along all street block faces (not closed to general traffic) within the study area, the two City operated public parking lots, and the Plant Recreation Centre. Parking occupancy counts were undertaken for private parking lots, and the two public parking lots operated by Capital Parking Inc. on Somerset Street.

Data Collection Techniques

License Plate Survey: In this type of survey, part of the license plate of each parked vehicle is recorded at predefined intervals for each specific parking space, providing information that can be used to calculate parking occupancy, duration, and turnover. This survey study was conducted for all on-street and City of Ottawa managed off-street parking facilities. For this survey type, a one-half hour interval was used.

Parking Occupancy Counts: This type of survey only provides information on parking occupancy, and simply involves counting the number of vehicles parked at a given location at certain intervals. This type of survey was conducted for all of the privately operated off-street parking facilities within the study area; a one-half hour interval was used.

The two survey types were conducted concurrently by data collection staff.

2.5 Business/Consumer Surveys

Face-to-face surveys were conducted on November 3rd, 4th and 8th, 2012 along Somerset Street between Bronson Avenue and Booth Street to gain a better understanding of general perceptions about parking in the Chinatown area.

Dillon staff surveyed 169 pedestrians in the corridor over the three day data collection period which took place on the same dates as other data collected for this study. Data was collected between 11:00 a.m. and 5:00 p.m.

The survey questions were based on the recently developed City of Ottawa business consumer survey template, which is intended to serve as a common framework for parking surveys across Ottawa. By using a similar set of questions in all parking surveys, it is possible to compare parking conditions and consumer attitudes over time and across neighbourhoods, providing a rich data set for the city. The survey questions and responses are summarized in Section 3.1.

3.0 OVERVIEW OF EXISTING CONDITIONS

3.1 Land Use

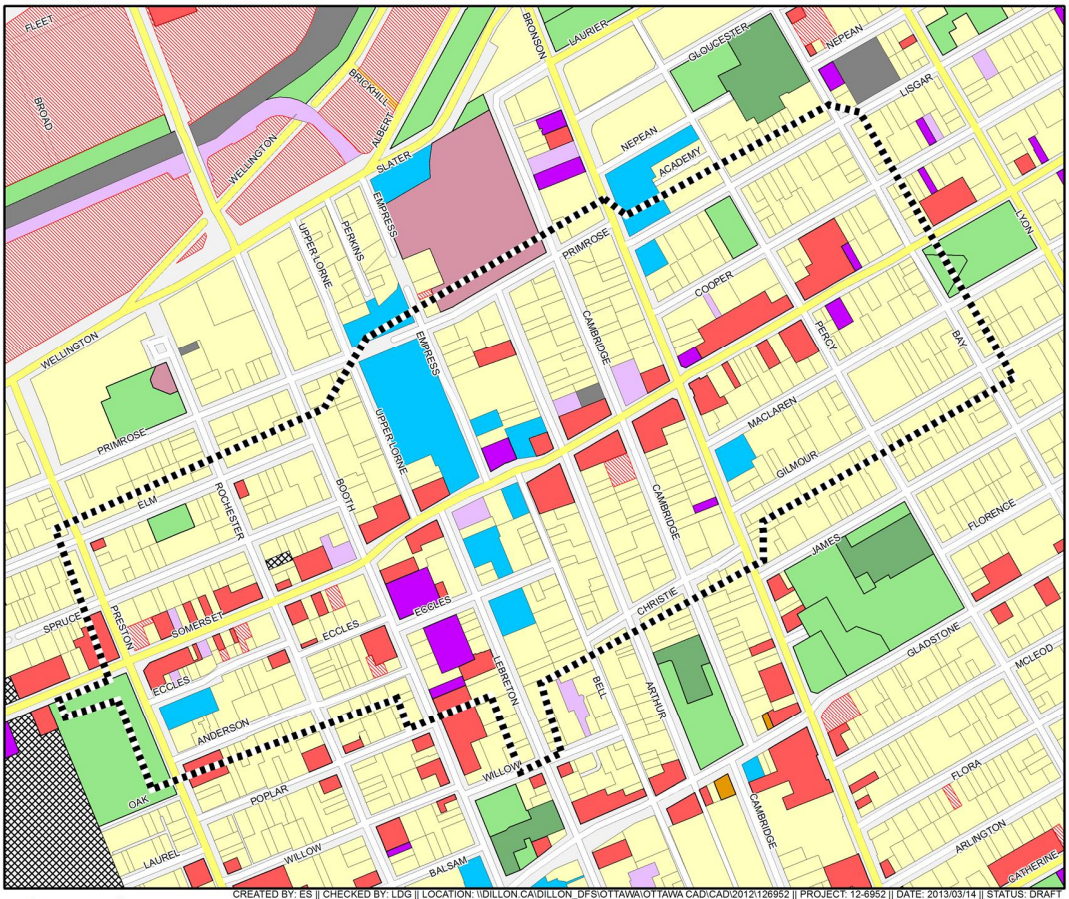
Parking demand is largely influenced by land-use. For example, a commercial area such as Somerset Street tends to generate short-term parking with high turnover. Residential areas such as the many side streets along Somerset Street have different parking demand patterns, requiring longer-term parking with low turnover. Therefore to understand parking demand, land-use patterns must be examined.

The Chinatown study area is primarily a residential neighbourhood, but also contains Somerset Street, a vibrant commercial area consisting of many small businesses and restaurants. In addition, the area contains a fire station, community center, numerous places of worship, the Dominican University College, and the Saint-Vincent Hospital located just north of the study boundary. Land uses within the Chinatown area are illustrated in **Figure 3.**

Land use patterns are well established within the Chinatown area and there has not been a lot of change in recent years. A small number of infill or redevelopment has occurred in the area. At the same time, a few parcels of land are now vacant, primarily along Somerset Street. There are also three public surface parking lots that could also be developed. The most recent developments include:

- **314 Booth Street:** A 4-storey, 42-unit apartment building with 3 residential floors with modest studio suites over a ground floor with a mix of common spaces. The existing parking lot on the north side of Eccles Street continues to provide parking for building staff. Residents do not have parking spaces.
- **345 Bronson Avenue:** A 3 storey stacked residential apartment building was built.
- **111 Eccles Street:** A 22 unit apartment building, six commercial units and 17 underground parking spaces.

Much of Somerset Street has been designated as a Traditional Mainstreet Zone (TM) which permits a broad range of uses including retail, office and residential but excludes automotive related uses. The TM zone promotes compact, mixed-use, pedestrian oriented development. Discussion on the potential impact of future redevelopment is included in Section 4.



(Land use data obtained from City of Ottawa Planning & Growth Management Department)

Figure 3: Chinatown Land Use Zoning

3.2 Cash-in-Lieu of Parking

Cash-In-Lieu (CIL) of parking can be defined as an agreement entered into between the owner and the City that exempts the owner from providing the required number of

parking spaces defined by the Zoning By-law. The owner makes cash payment in lieu of providing parking on-site. The City uses these funds to develop and/or manage public parking facilities in other locations to minimize the impact of the new parking demand on current supply**. Table 2** summarizes the cash-in-lieu parking permits issued since 1991 within the study area. In total, there have been 21 applications dating back to 1991 and only three applications since January 2003. **Figure 4** illustrates the location of the cash-in-lieu applications since 1991.

Table 2: Summary of Cash-in-Lieu of Parking Permits (1991 to 2013)

Type of Land-Use	Parking Spaces
Commercial	19
Residential	10
Restaurant/Coffeehouse	25
Service	2
Total	56

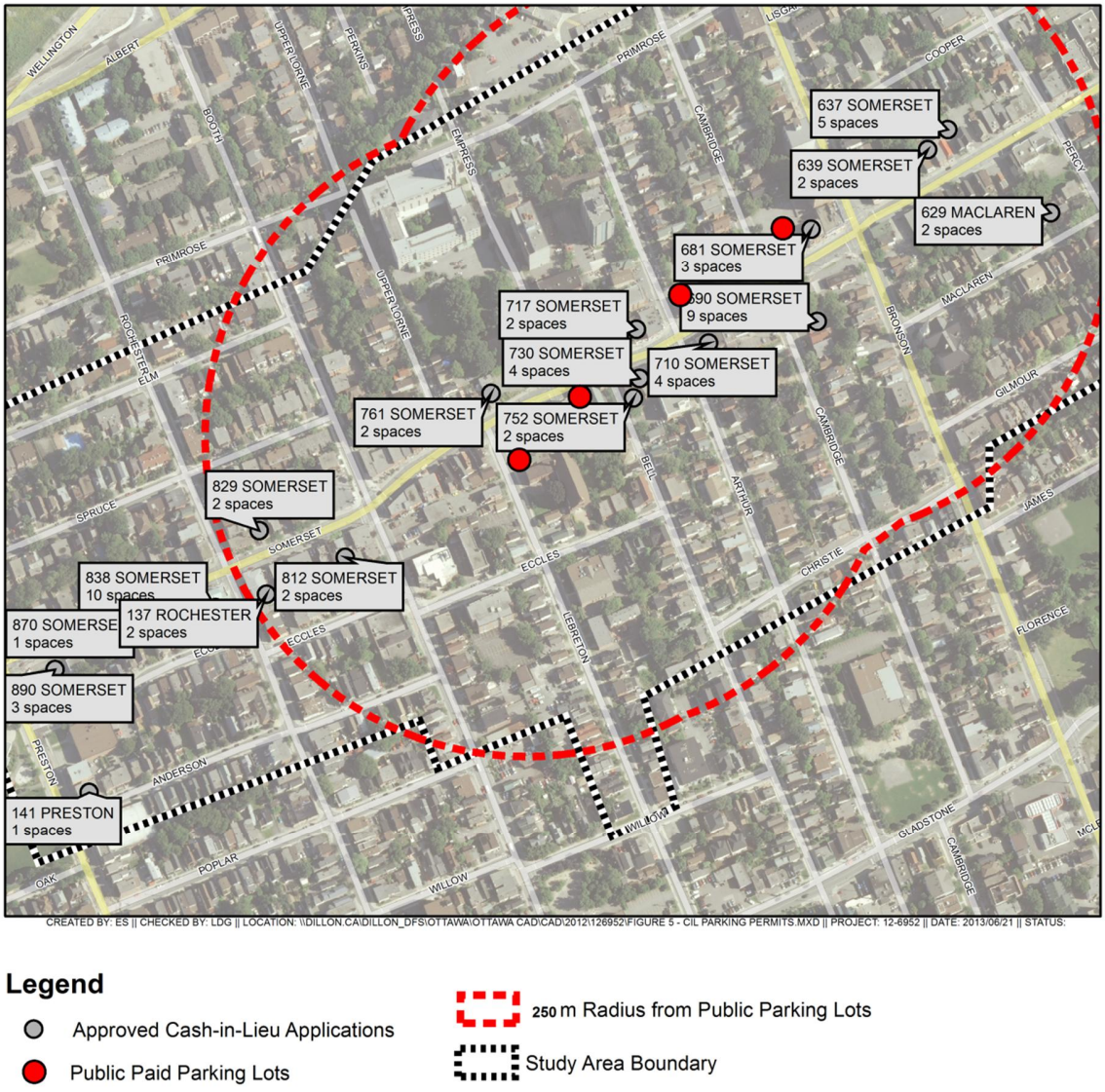


Figure 4: Cash-in-Lieu of Parking Permits Approved in Chinatown

3.3 Travel Trends

To gain an understanding of the current travel patterns of those destined to/from the Chinatown area, the 2011 Origin-Destination Travel Survey (2011 O-D Survey) data was examined. As illustrated in **Figure 5**, 44 percent of trips coming to Chinatown were made by automobile, 23 percent walked, 20 percent used transit, and 9 percent rode their bicycle. For trips made within Chinatown, 82 percent of trips were made by walking, 16 percent of trips were made by automobile, and 3 percent were made by transit.

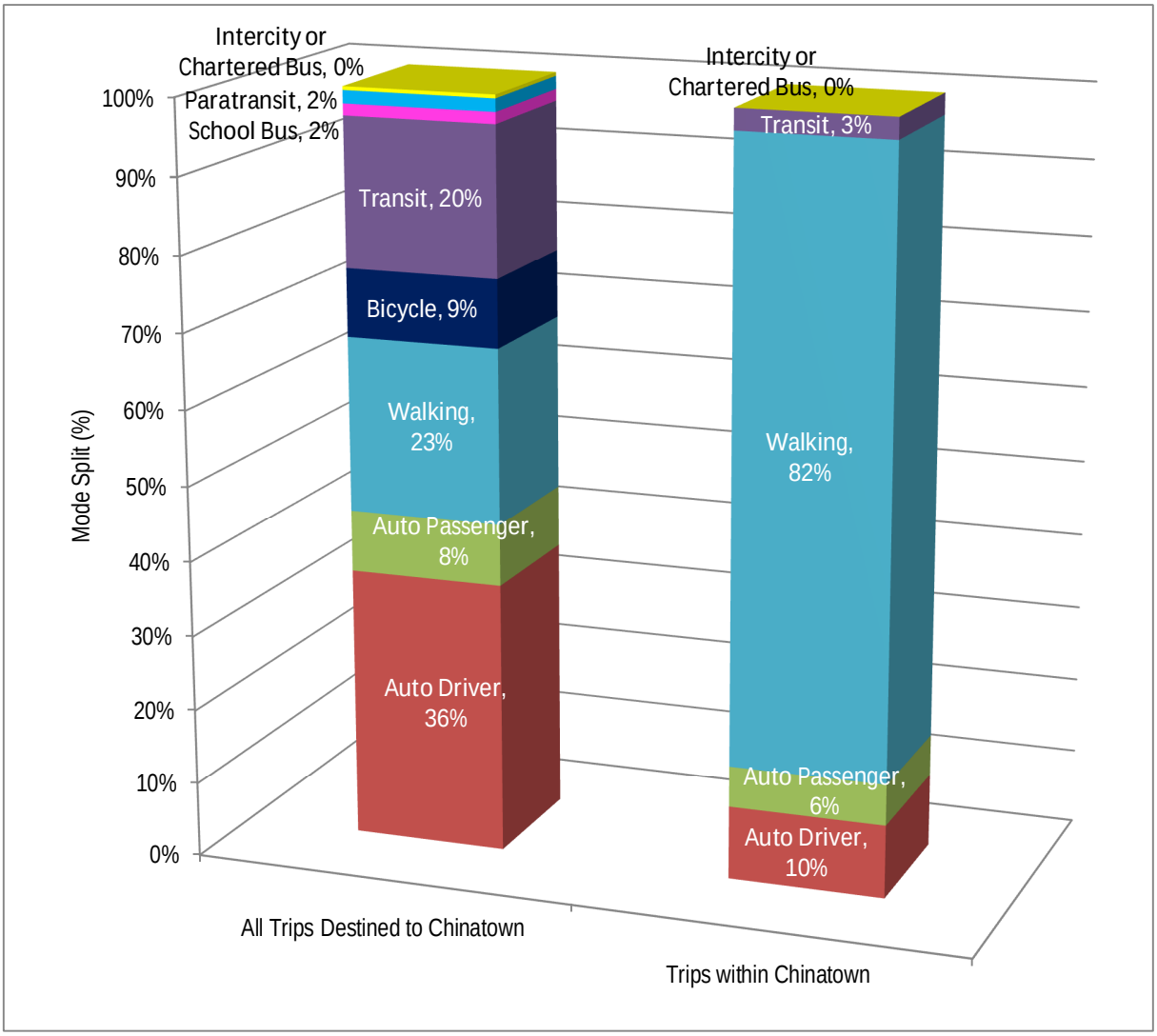


Figure 5: Modal Split for trips within the Chinatown Area

3.4 On-Street Parking Regulations

Parking regulations dictate when, where and how long people are permitted to park on public streets. They can be used to promote parking turnover and influence the number of available parking spaces. The parking restrictions within the study area were recorded by Dillon staff. **Figure 6**, **Figure 7** and

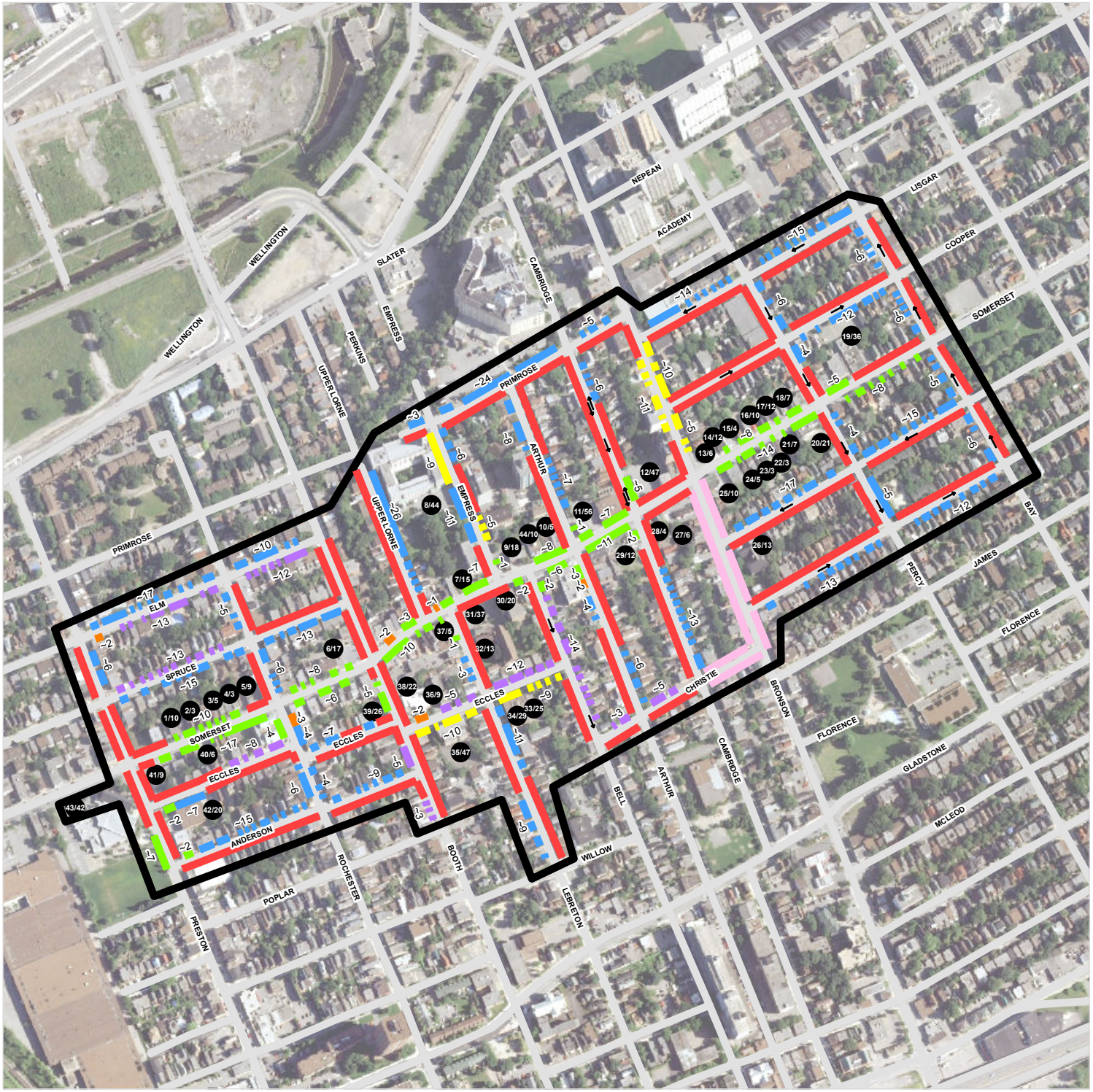
Figure 8 illustrate the parking regulations for a weekday, Saturday and Sunday respectively. Parking regulations vary significantly from street to street. Parking regulations are strictly enforced on weekdays. On weekends, parking in excess of posted time limit restrictions, known as overtime parking, is enforced on a reactive basis. Enforcement levels are evident in the parking study results, which show the average parking duration during the weekday is 81 minutes, and increases to 86 minutes and 109 minutes on Saturday and Sunday respectively.

3.4.1. On-Street Paid Parking

Parking along Somerset Street is metred by Pay & Display parking machines. Payment is required from 8:00 a.m. to 5:30 p.m., Monday to Friday with a 2-hour maximum time limit between 7:00 a.m. and 7:00 p.m., Monday-Saturday. Several of the side streets in the area also have Pay & Display metred parking spaces within a block of Somerset Street, utilizing the same regulations. Sunday parking is free.

3.4.2. Free Parking on Saturday

On-street paid parking has been standard within the Chinatown area for some time. On-street Saturday parking at metred spaces has been free since 2011 due to a special motion passed by Council, which stated *"...that temporary free on-street parking on Saturdays along Somerset Street within the limits of the BIA remain in effect as a temporary measure until the final report of the aforementioned Local Area Parking Study is submitted to Council or until July 1, 2013, whichever comes first."* The intent of the motion was to provide incentives to customers who may otherwise have avoided the area due to construction projects on Somerset Street and Bronson Avenue. This study is intended to provide parking supply and demand information that can be used by the City to determine an appropriate parking fee structure.



CHINATOWN

LOCAL AREA PARKING STUDY

FIGURE 6:

PARKING SPACE INVENTORY (TYPE & NO. OF AVAILABLE SPACES)

WEEKDAY

LEGEND

- Not Mereted Parking Space (unsigned)
- Not Metered Parking Space (signed)
- Metered Parking Space (free on weekends)
- No Parking (during Time-of-Day Restrictions)
- Loading Zone
- Construction (no data)
- No Parking (at any time)

Number of On-Street Parking Spaces

~xx — Number of legal parking spaces available for class of space per block face

Off-Street Parking Facility Spaces

yy/zz — yy : Dillon-Assigned Parking Lot ID; zz : Number of spaces available

Study Area

Perimeter of Study Area

MAP DRAWING INFORMATION:
ORTHO PHOTOS FROM CITY OF OTTAWA, 2010

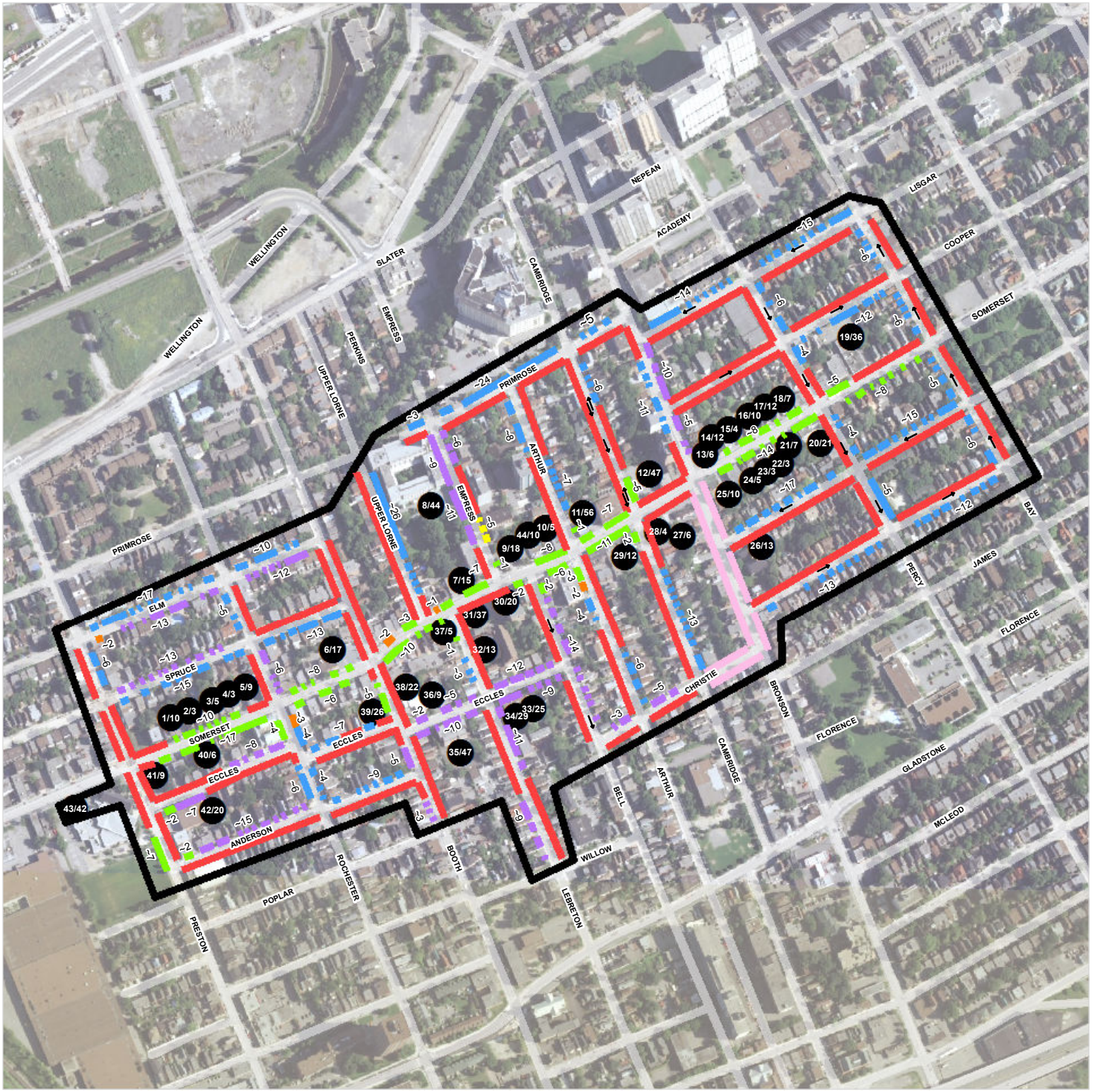
MAP CREATED BY: ES
MAP CHECKED BY: LDG
MAP PROJECTION: NAD 1983 UTM Zone 18N

Scale: 1:6,512
1 cm = 65 meters
1 in = 543 feet
on 8.5"x11" paper only

FILE LOCATION:
G:\CAD\2012\126952\Current\F06ParkingInventory08Nov2012Thursday.mxd

DILLON CONSULTING

PROJECT: 12-6952
STATUS:
DATE: 12 May 2013



CHINATOWN

LOCAL AREA PARKING STUDY

FIGURE 7:

PARKING SPACE INVENTORY (TYPE & NO. OF AVAILABLE SPACES)

SATURDAY

LEGEND

- Not Mereted Parking Space (unsigned)
- Not Metered Parking Space (signed)
- Metered Parking Space (free on weekends)
- No Parking (during Time-of-Day Restrictions)
- Loading Zone
- Construction (no data)
- No Parking (at any time)

Number of On-Street Parking Spaces

~xx — Number of legal parking spaces available for class of space per block face

Off-Street Parking Facility Spaces

yy/zz — yy : Dillon-Assigned Parking Lot ID
zz : Number of spaces avaialble

Study Area

Perimeter of Study Area

MAP DRAWING INFORMATION:
ORTHO PHOTOS FROM CITY OF OTTAWA, 2010

MAP CREATED BY: ES
MAP CHECKED BY: LDG
MAP PROJECTION: NAD 1983 UTM Zone 18N

Scale: 1:6,313
1 cm = 63 meters
1 in = 526 feet
on 8.5"x11" paper only

FILE LOCATION:
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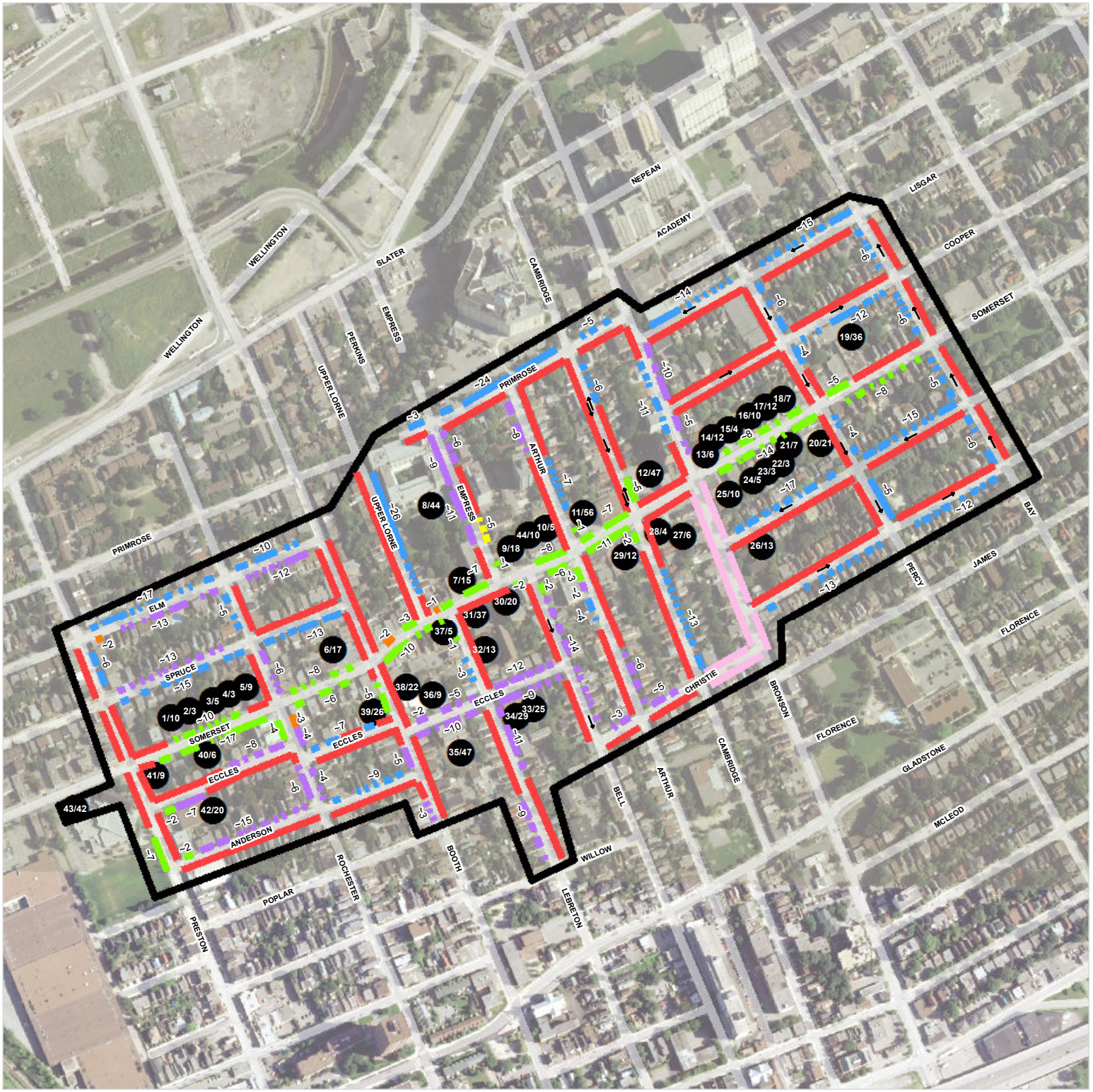
DILLON CONSULTING

PROJECT: 12-6952
STATUS:
DATE: 12 May 2013



CHINATOWN

LOCAL AREA PARKING STUDY

FIGURE 8:

PARKING SPACE INVENTORY (TYPE & NO. OF AVAILABLE SPACES)

SUNDAY

LEGEND

- Not Mereted Parking Space (unsigned)
- Not Metered Parking Space (signed)
- Metered Parking Space (free on weekends)
- No Parking (during Time-of-Day Restrictions)
- Loading Zone
- Construction (no data)
- No Parking (at any time)

Number of On-Street Parking Spaces

~xx — Number of legal parking spaces available for class of space per block face

Off-Street Parking Facility Spaces

yy/zz — yy : Dillon-Assigned Parking Lot ID
zz : Number of spaces avaialble

Study Area

Perimeter of Study Area

MAP DRAWING INFORMATION:
ORTHO PHOTOS FROM CITY OF OTTAWA, 2010

MAP CREATED BY: ES
MAP CHECKED BY: LDG
MAP PROJECTION: NAD 1983 UTM Zone 18N

Scale: 1:6,313
1 cm = 63 meters
1 in = 526 feet
on 8.5"x11" paper only

FILE LOCATION:
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PROJECT: 12-6952
STATUS:
DATE: 12 May 2013

3.4.3. Residential Parking Permits

Where residential parking permit zones have been designated, residents without access to off-street parking can apply for permits which allow them to park on-street for 48 hours in the same spot without being ticketed. Permit holders are also excluded from winter overnight parking restrictions.

Within the study area, four residential permit parking zones have been established: Centre Town West, Dalhousie North, Eccles Street and Anderson Street. **Table 3** indicates the various residential parking permit zones, their geographic boundaries, the number of active permits and the number of available permits in the zone. It is noted that the Center Town West and Dalhousie North zones extend well beyond the study boundaries, therefore the number of active permits within the study area is significantly lower than the total number of active permits indicated. The number of active permits issued in all zones is well below the number of available permits.

Table 3: Residential Parking Permits

Zone	Description	From	To	Active Permits	Available Permits
Zone #27 Anderson,	Anderson Street	Preston Street	Booth Street	2	17
Zone #5, Centre Town West	Bound by Bronson Avenue in the West, Bank Street to the east, Arlington Street to the south, and Nepean Street to the north	--	--	116	320
Zone #26 Eccles	Eccles Street	Rochester Street	Booth Street	1	3
Zone #17, Dalhousie North	Bound by Wellington/Albert/Slater Streets in the north, Somerset Street in the south, Bronson Avenue in the east, and City Centre Avenue in the west	--	--	15	175

3.5 Parking Supply

The parking supply in the Chinatown area comes in many forms:

- **On-street paid parking:** Generally found on Somerset Street and on side streets immediately adjacent to Somerset Street, however also found on the west side of Preston Street, and near Preston Street on Anderson Street and Eccles Street.
- **On-street unpaid parking:** Generally found on most of the adjacent streets.
- **Off-street parking:** Typically:
  - City/private parking lots available for general public use;
  - Private parking lots available for customer or employee parking only; and,
  - Private parking lots not open to the general public.

The surveyed public and private off-street parking lots are illustrated in **Figure 9.** Each lot is indicated by a dot with the size of the dot representing the capacity of the lot. The locations of the paid parking lots are indicated by a circle containing a dollar sign. The parking lots are color-coded to represent the various land-use types they serve. Figures 6, 7, and 8 provide detailed mapping of the parking space inventory. **Appendix B** provides detailed mapping of the time-of-day parking restrictions.

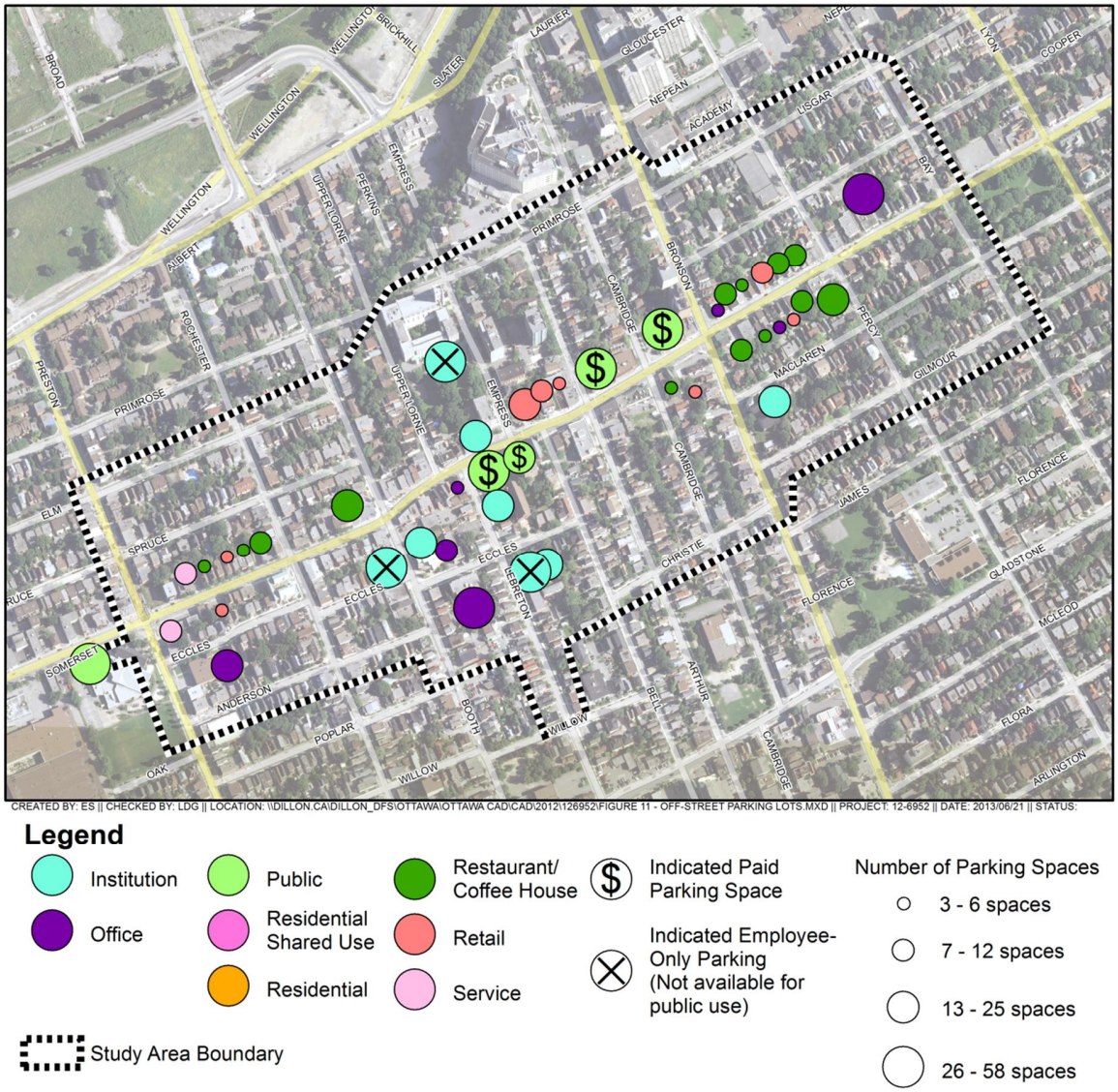


Figure 9: Off-Street Parking Lots

Table 4 indicates the parking space inventory of the various on-street and off-street parking facilities. The number of metered and unmetered on-street spaces varies by day of the week.

Table 4: Parking Supply in Chinatown 9:00 a.m. – 5:00 p.m.

Type	Number of Spaces			Percentage of Spaces		
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
On-Street Paid Parking	165	165	172	11%	11%	12%
On-Street Unpaid Parking	559	587	587	39%	41%	41%
City Off-Street Paid	67			5%		
Private Off-Street Paid	93			6%		
PLANT Recreation Centre	42			3%		
Private Off-Street Private & Customer	511			36%		
Total Paid	325			23%		
Total Unpaid	1112			77%		
Total	1437			100%		

Note: Metered = Pay 'n' Display

The parking supply increases by 33 spaces for weekday evenings and by 5 spaces for weekend evenings as compared to earlier in the day. The parking inventory increases by 28 spaces on Saturday above the weekday supply, and then increases an additional 7 spaces on Sunday due to changes in posted parking restrictions.

During the winter months, the parking regulations are modified to restrict parking on Eccles Street, between Booth Street and Bell Street. In total, 18 evening and weekend parking spaces are lost during the winter season on these streets.

3.6 On-Street Parking Occupancy Rates

Parking occupancy rates are one of the key indicators in determining the balance of parking supply versus demand. If occupancy rates are too low, then parking spaces are

underutilized. If parking occupancy rates exceed 85 percent of the parking supply, it may indicate that there is insufficient parking supply, and users may have difficulty finding a parking space.

The study area was divided into three sections. These sections capture the parking characteristics between the major north/south arterial roadways that divide the study area. The western section is bounded by Preston Street and Booth Street. The central section extends from Booth Street to Bronson Avenue and the eastern section extends from Bronson Avenue to Bay Street.

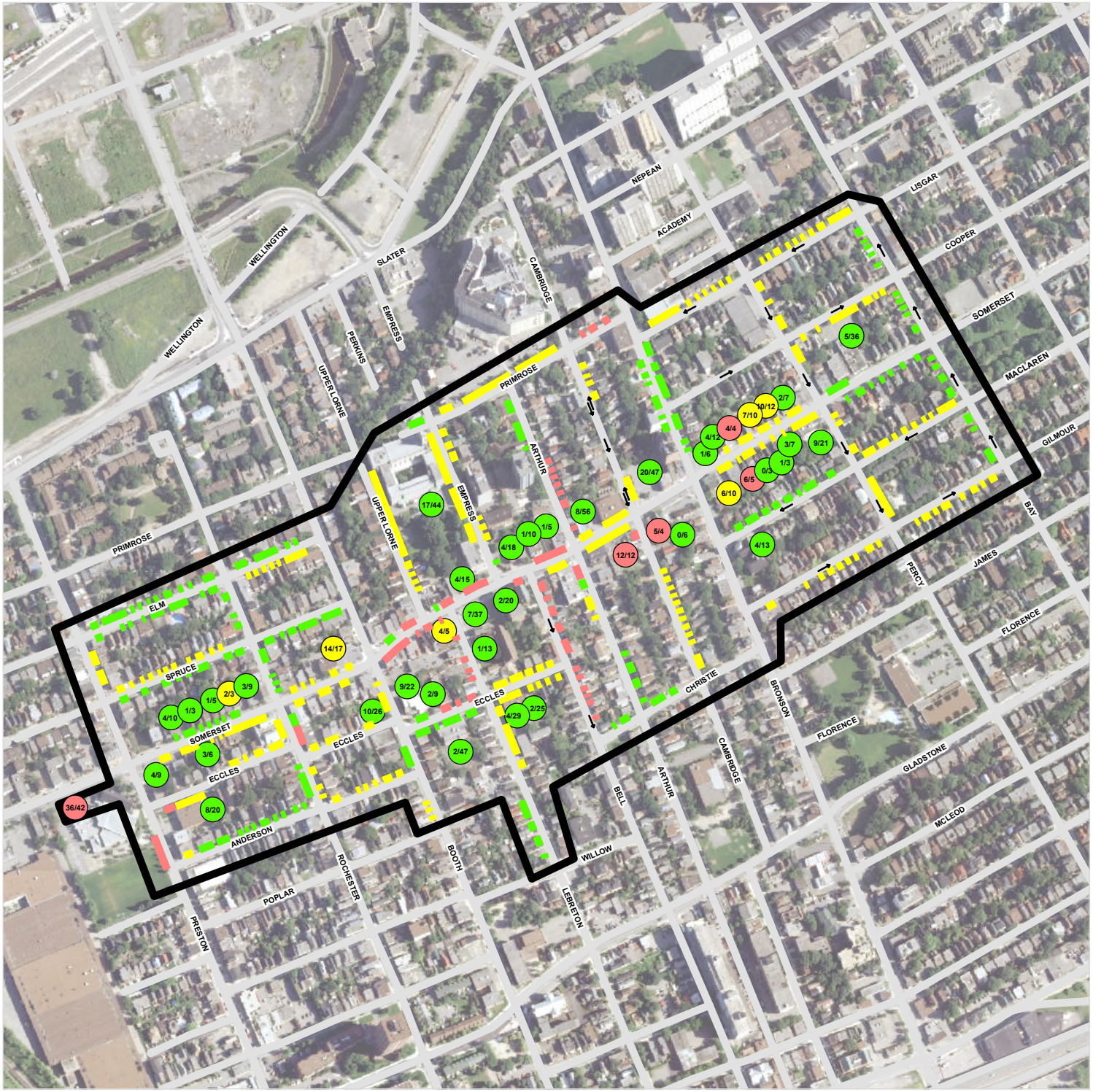
Table 5 summarizes the On-Street Parking Occupancy Rates during the critical hour. The on-street parking demand approaches 100 percent of the overall parking supply in the central section between Booth Street and Bronson Avenue on Sundays around noon. Parking space occupancy did not exceed practical capacity (85 percent of the overall parking supply) during any other time period or in the other two sections.

Figure 10, **Figure 11** and **Figure 12** illustrate the Occupancy Rate across the three subareas during the Critical Hour on a Thursday, Saturday and Sunday respectively. **Figures 13, 14 and 15** illustrate the on-street parking accumulation in the western, central and eastern sections throughout the survey day.

Table 5: On-Street Parking Occupancy Rates during the Critical Hour

Section	Streets	Critical Hour (start of hour)	Parking Supply	Parking Occupancy	Occupancy Rate
West (Preston to Booth)	All streets	Thursday, November 8, 2012 – 6:30 p.m.	244	138	57%
		Saturday, November 3, 2012 – 6:30 p.m.	244	141	58%
		Sunday, November 4, 2012 – 12:30 p.m.	251	174	69%
	Somerset Street West (subset)	Thursday, November 8, 2012 – 6:30 p.m.	41	24	59%
		Saturday, November 3, 2012 – 6:30 p.m.	41	36	88%
		Sunday, November 4, 2012 - 12:30 p.m.	48	34	71%

Table 5: On-Street Parking Occupancy Rates during the Critical Hour					
Section	**Streets**	**Critical Hour (start of hour)**	**Parking Supply**	**Parking Occupancy**	**Occupancy Rate**
Central (Booth to Bronson)	All streets	Thursday, November 8, 2012 – 6:30 p.m.	323	216	67%
		Saturday, November 3, 2012 – 6:30 p.m.	323	259	80%
		Sunday, November 4, 2012 – 12:30 p.m.	318	293	92%
	Somerset Street Central (subset)	Thursday, November 8, 2012 – 6:30 p.m.	57	53	93%
		Saturday, November 3, 2012 – 6:30 p.m.	57	55	96%
		Sunday, November 4, 2012 – 12:30 p.m.	57	56	98%
East (Bronson to Bay)	All streets	Thursday, November 8, 2012 – 6:30 p.m.	190	115	61%
		Saturday, November 3, 2012 – 6:30 p.m.	190	140	74%
		Sunday, November 4, 2012 – 12:30 p.m.	190	150	79%
	Somerset Street East (subset)	Thursday, November 8, 2012 – 6:30 p.m.	35	21	60%
		Saturday, November 3, 2012 – 6:30 p.m.	35	27	77%
		Sunday, November 4, 2012 – 12:30 p.m.	35	27	77%



CHINATOWN

LOCAL AREA PARKING STUDY

FIGURE 10:

OCCUPANCY RATE DURING THE CRITICAL HOUR

THURSDAY, NOV 8, 2012

6:30PM TO 7:30PM

Note: Critical Hour based on
On-Street Parking Space Occupancy Rate

LEGEND

On-Street Parking Spaces Critical Hour Occupancy

- 0 - 50 %
- 51 - 85 %
- > 85 %

Off-Street Parking Lot Critical Hour Occupancy

- 0 - 50%
- 51 - 85%
- > 85%
- yy/zz — yy : Number of Occupied Spaces; zz : Dillon Parking Lot Inventory

Study Area

- Perimeter of Study Area

MAP DRAWING INFORMATION:
ORTHO PHOTOS FROM CITY OF OTTAWA, 2010

MAP CREATED BY: ES
MAP CHECKED BY: LDG
MAP PROJECTION: NAD 1983 UTM Zone 18N

Scale: 1:6,512
1 cm = 65 meters
1 in = 543 feet
on 8.5"x11" paper only

FILE LOCATION:
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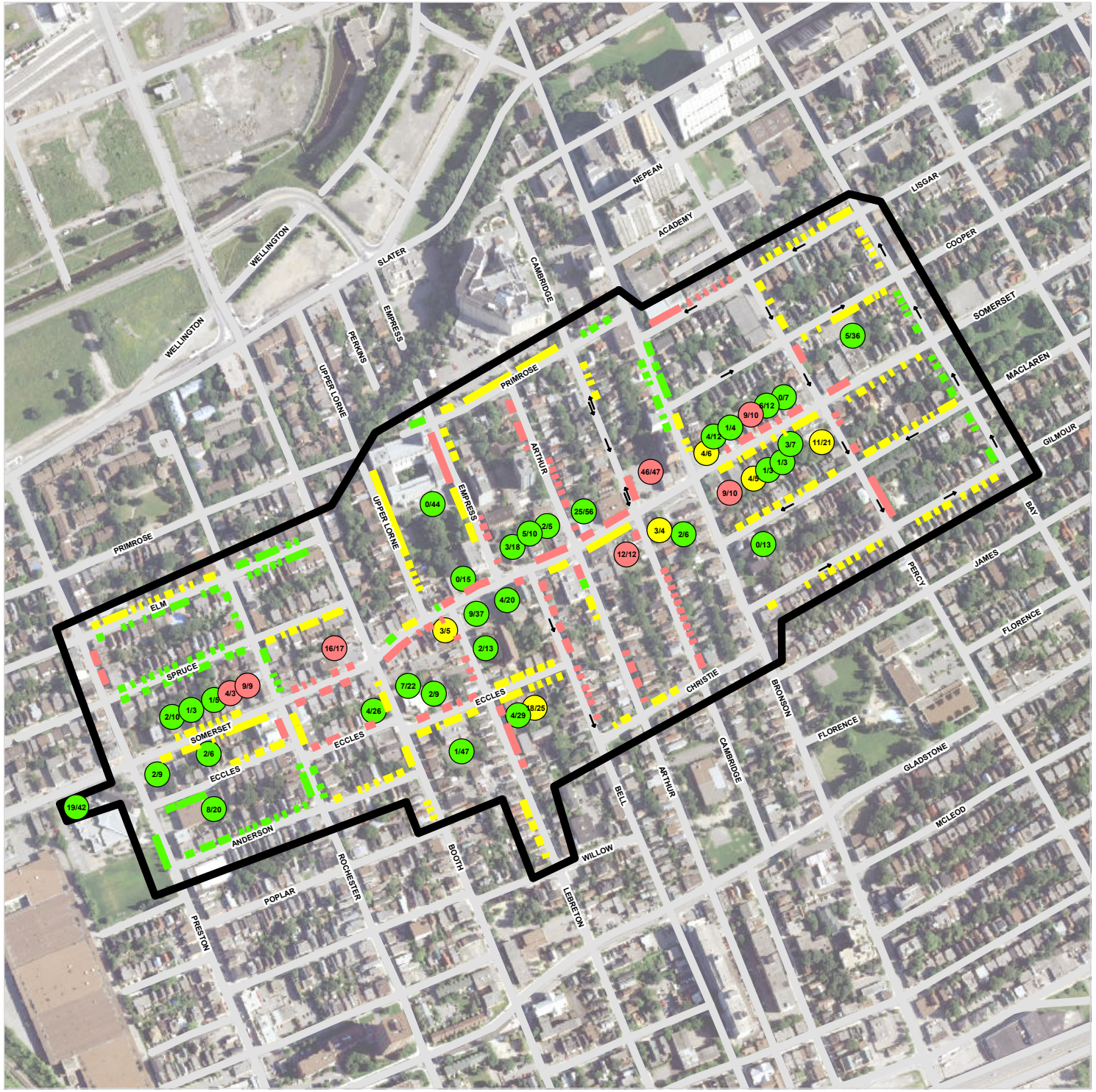
PROJECT: 12-6952
STATUS:
DATE: 12 May 2013



CHINATOWN

LOCAL AREA PARKING STUDY

FIGURE 11:

OCCUPANCY RATE DURING THE CRITICAL HOUR

SATURDAY, NOV 3, 2012

6:30PM TO 7:30PM

Note: Critical Hour based on
On-Street Parking Space Occupancy Rate

LEGEND

On-Street Parking Spaces Critical Hour Occupancy

- 0 - 50 %
- 51 - 85 %
- > 85 %

Off-Street Parking Lot Critical Hour Occupancy

- 0 - 50%
- 51 - 85%
- > 85%
- yy/zz — yy : Number of Occupied Spaces; zz : Dillon Parking Lot Inventory

Study Area

- Perimeter of Study Area

MAP DRAWING INFORMATION:
ORTHO PHOTOS FROM CITY OF OTTAWA, 2010

MAP CREATED BY: ES
MAP CHECKED BY: LDG
MAP PROJECTION: NAD 1983 UTM Zone 18N

Scale: 1:6,512
1 cm = 65 meters
1 in = 543 feet
on 8.5"x11" paper only

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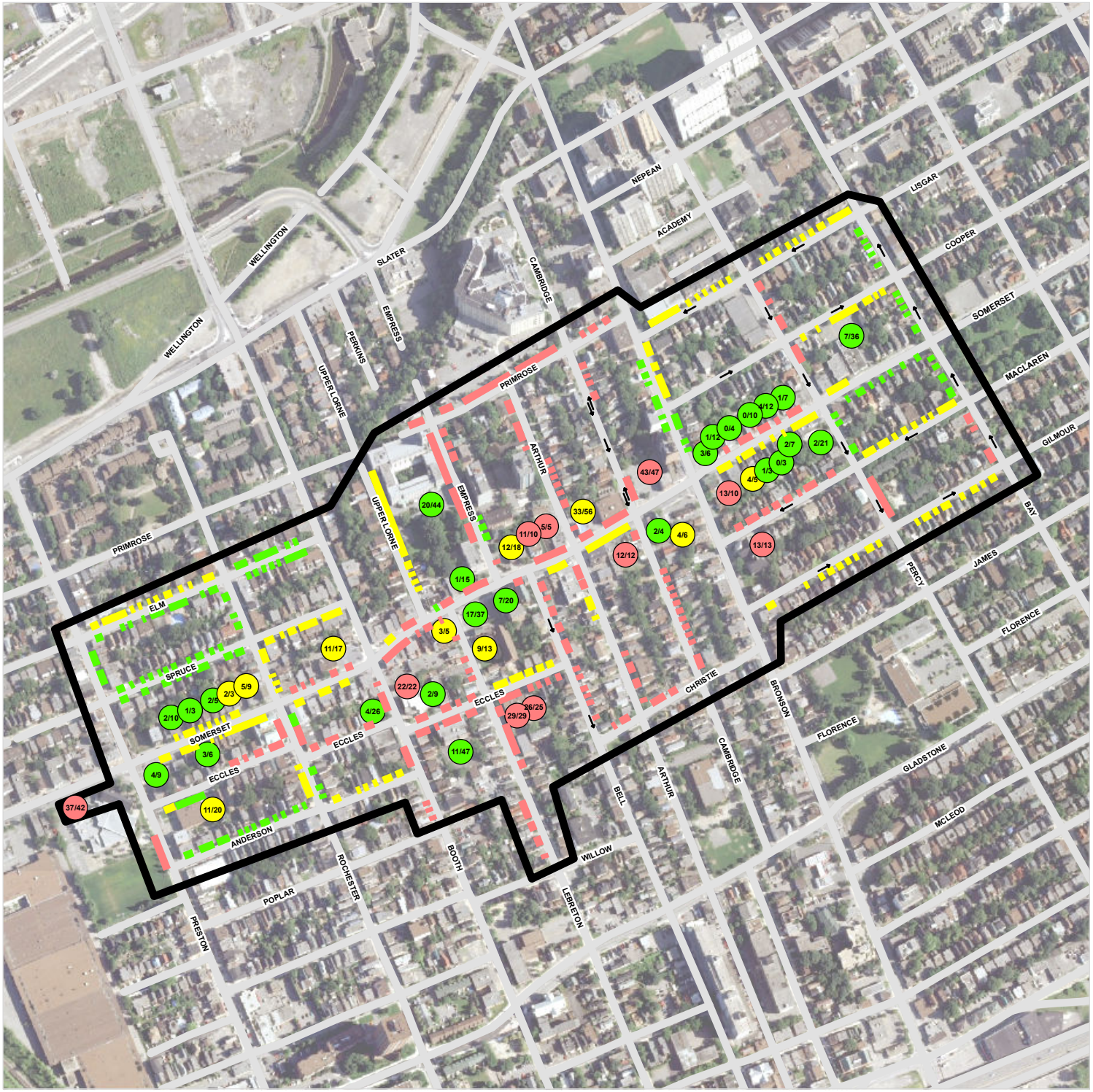
STATUS:
DATE: 28 May 2013



CHINATOWN

LOCAL AREA PARKING STUDY

FIGURE 12:

OCCUPANCY RATE DURING THE CRITICAL HOUR

SUNDAY, NOV 4, 2012
11:30PM TO 12:30PM

Note: Critical Hour based on
On-Street Parking Space Occupancy Rate

LEGEND

On-Street Parking Spaces Critical Hour Occupancy

- 0 - 50 %
- 51 - 85 %
- > 85 %

Off-Street Parking Lot Critical Hour Occupancy

- 0 - 50%
- 51 - 85%
- > 85%
- yy/zz — yy : Number of Occupied Spaces; zz : Dillon Parking Lot Inventory

Study Area

- Perimeter of Study Area

MAP DRAWING INFORMATION:
ORTHO PHOTOS FROM CITY OF OTTAWA, 2010

MAP CREATED BY: ES
MAP CHECKED BY: LDG
MAP PROJECTION: NAD 1983 UTM Zone 18N

Scale: 1:6,512
1 cm = 65 meters
1 in = 543 feet
on 8.5"x11" paper only

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DILLON CONSULTING

PROJECT: 12-6952
STATUS:
DATE: 12 May 2013

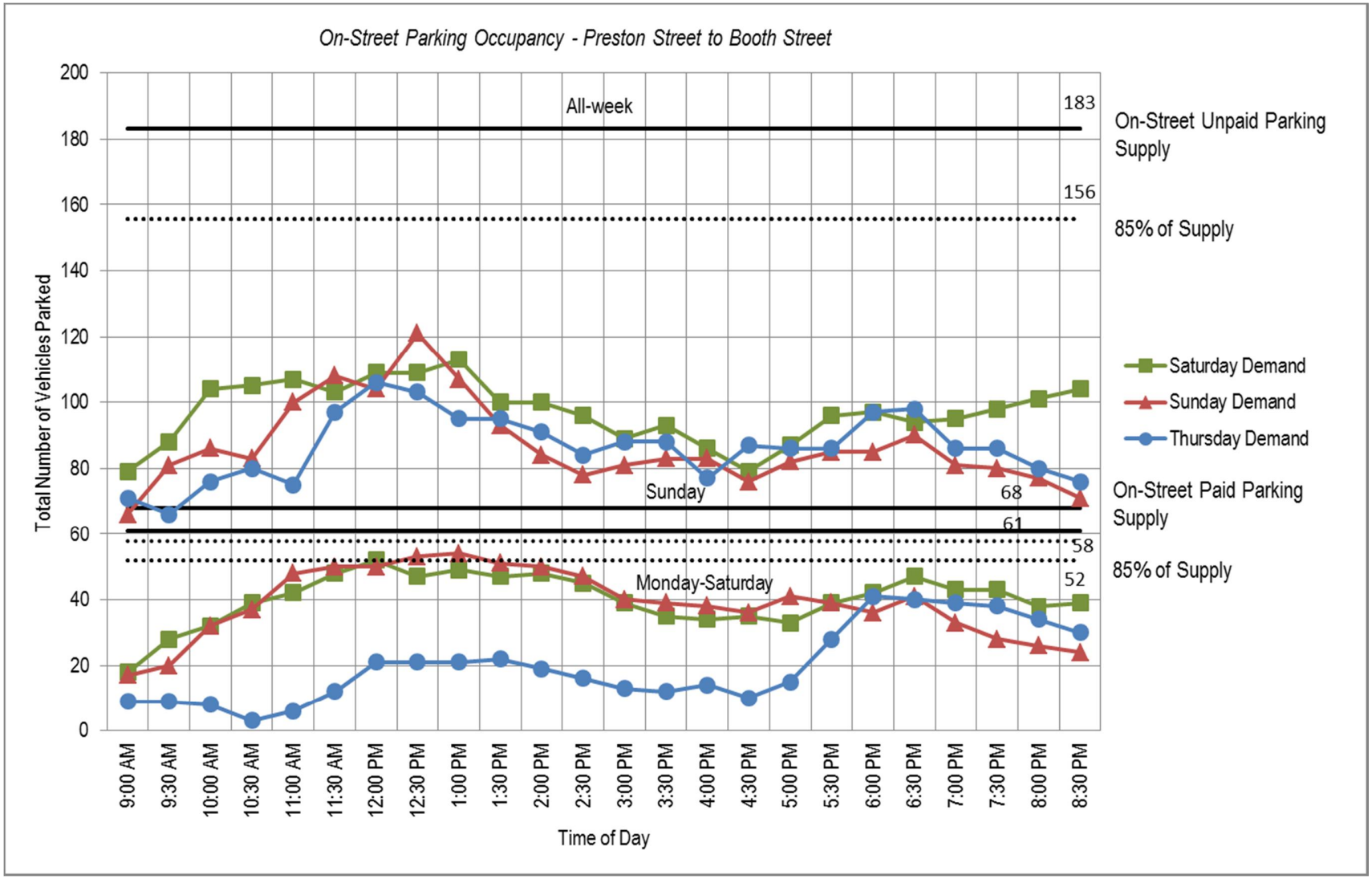


Figure 13: On-Street Parking Accumulation - Preston Street to Booth Street

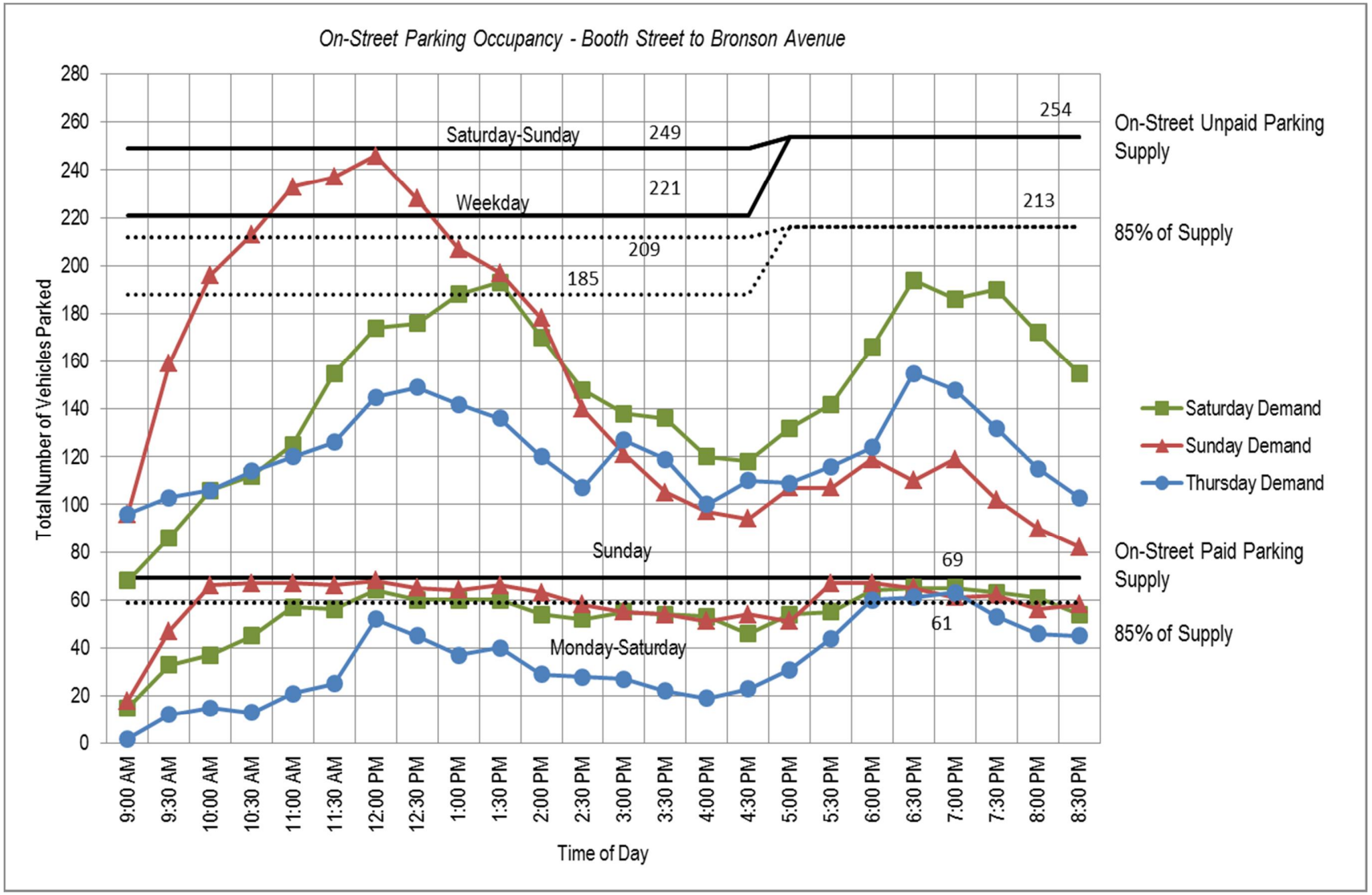


Figure 14: On-Street Parking Accumulation - Booth Street to Bronson Avenue

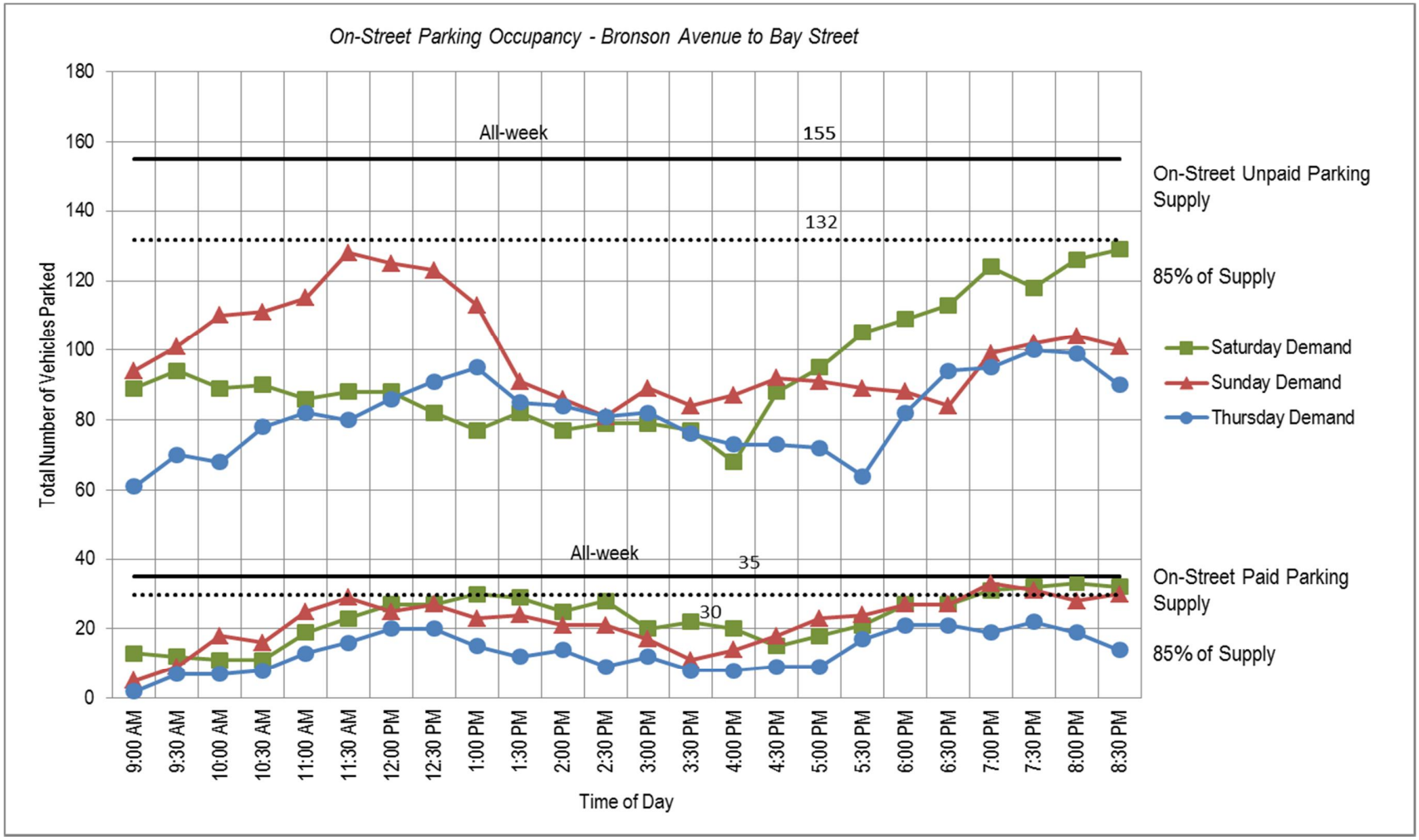
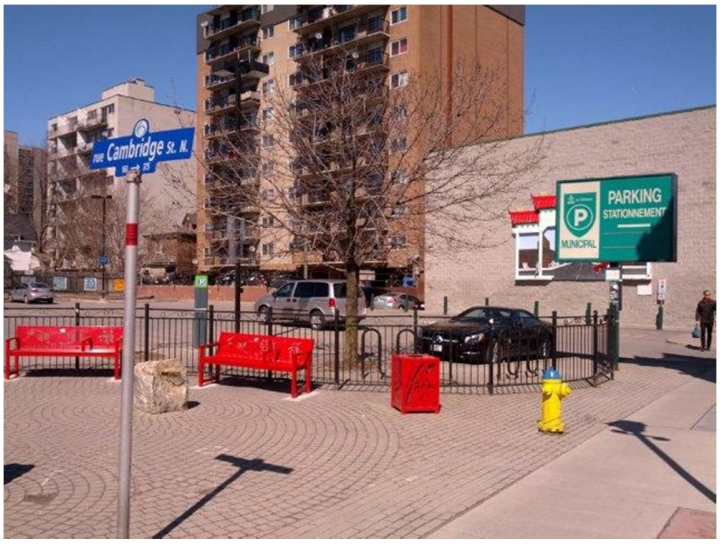


Figure 15: On-Street Parking Accumulation - Bronson Avenue to Bay Street

3.7 Off-Street Parking Occupancy Rates



The off-street parking inventory consists of both public and private parking spaces. Public parking facilities are located within the central section of the study area only, between Bronson Avenue and Booth Street. The private parking spaces are located throughout the study area and service individual land uses. The occupancy of private parking facilities varies significantly based on day-to-day activities occurring within the adjacent land uses. In some cases, these private parking facilities service office buildings or places of worship. Peak parking demand for office space typically occurs during the weekday, where peak parking demand for places of worship occurs on the weekends, typically Sunday mornings. The public facilities are:

- The Cambridge Public Parking Lot located at 687 Somerset Street;
- The Empress Public Parking Lot located at 760 Somerset Street;
- Capital Parking Inc. Lot located at 705 Somerset Street; and,
- Capital Parking Inc. Lot located at 770 Somerset Street.

Table 6 provides a summary of the public and private off-street parking lot supply and occupancy rates during the critical hour. Off-street public parking supply includes spaces managed by the City and private operators, for general access by the public. This table demonstrates that off-street parking is generally underused throughout the study area.

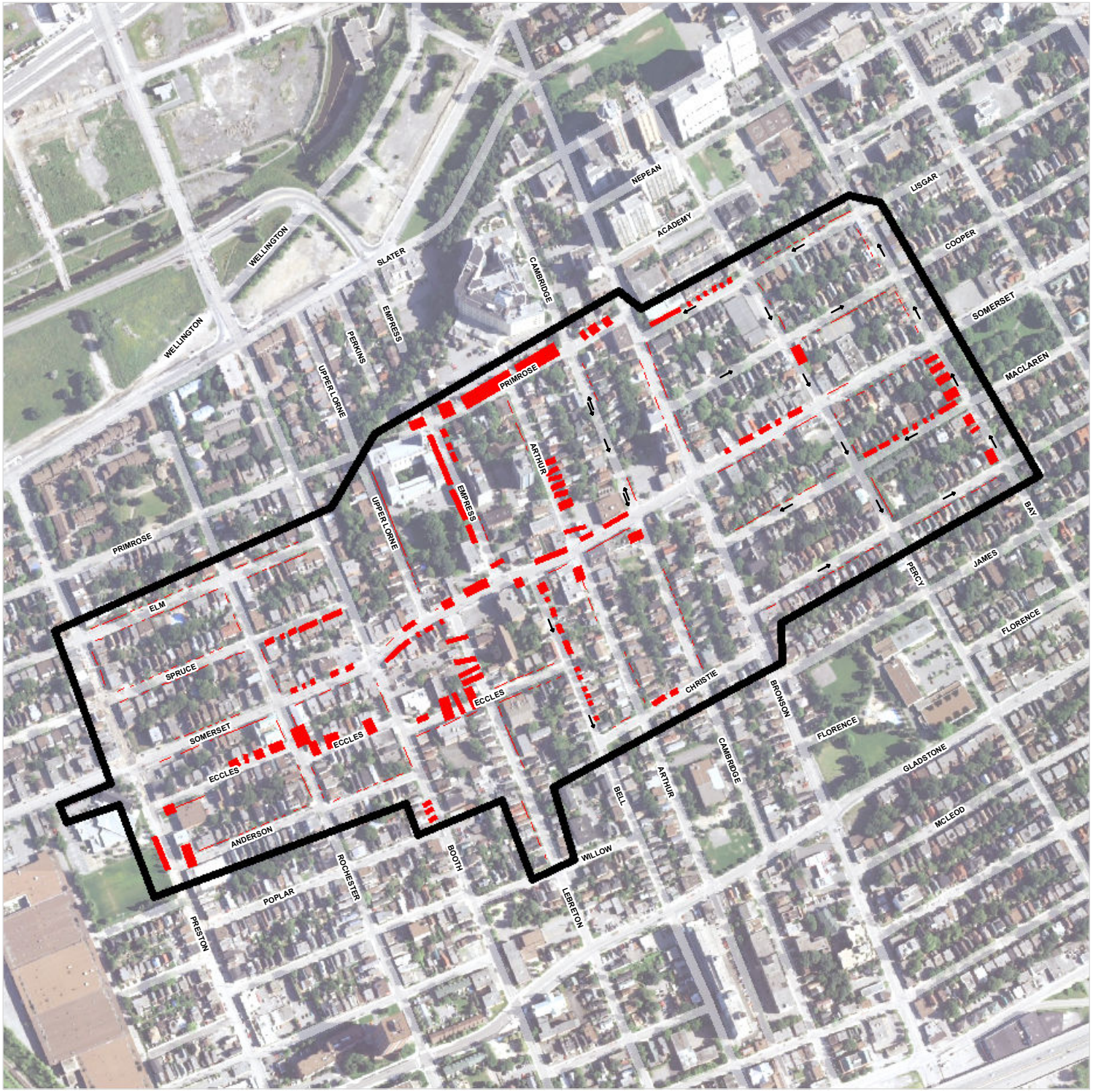
Figure 16, **Figure 17**, and **Figure 18** indicate the number of half-hour intervals that occurred on the Thursday, Saturday, and Sunday where the occupancy rate for each street segment was observed to exceed 85 percent. As these figures indicate, generally the weekday does not experience many periods of parking demand in excess of practical capacity that would cause an inconvenience to customers; however, on

Saturdays and Sundays, the central section experiences demand in excess of practical capacity throughout much of the day, particularly along Somerset Street.

Table 6: Off-Street Parking Lot Occupancy Rates during the Critical Hour

Location	Day of Week / Critical Hour	Parking Supply		Parking Occupancy		Occupancy Rate		
		Public	Private	Public	Private	Public	Private	Total
West	Thurs, Nov 8, 6:30 p.m.	--	133	--	72	--	54%	54%
	Sat, Nov 3, 6:30 p.m.	--	133	--	52	--	39%	39%
	Sun, Nov 4, 12 p.m.	--	133	--	71	--	53%	53%
Central	Thurs, Nov 8, 6:30 p.m.	160	281	37	82	23%	29%	27%
	Sat, Nov 3, 6:30 p.m.	160	281	84	80	53%	28%	37%
	Sun, Nov 4, 12 p.m.	160	281	100	180	63%	64%	63%
East	Thurs, Nov 8, 6:30 p.m.	--	149	--	62	--	42%	42%
	Sat, Nov 3, 6:30 p.m.	--	149	--	58	--	39%	39%
	Sunday, Nov 4, 12 p.m.	--	149	--	51	--	34%	34%
Total	Thurs, Nov 8, 6:30 p.m.	160	563	37	216	23%	38%	35%

Table 6: Off-Street Parking Lot Occupancy Rates during the Critical Hour								
Location	**Day of Week / Critical Hour**	**Parking Supply**		**Parking Occupancy**		**Occupancy Rate**		
		Public	**Private**	**Public**	**Private**	**Public**	**Private**	**Total**
	Sat, Nov 3, 6:30 p.m.	160	563	84	190	53%	34%	38%
	Sunday, Nov 4, 12 p.m.	160	563	100	302	63%	54%	56%



CHINATOWN

LOCAL AREA PARKING STUDY

FIGURE 16:

NUMBER OF HALF-HOUR INTERVALS WITH OCCUPANCY RATE ABOVE 85%

THURSDAY, NOV 8, 2012

LEGEND

Number of Half-Hour Intervals During the Study with Occupancy Rate Above 85% for On-Street Parking

- 1 - 2 Half-Hour Intervals
- 3 - 5 Half-Hour Intervals
- 6 - 9 Half-Hour Intervals
- 10 - 14 Half-Hour Intervals
- 15 - 24 Half-Hour Intervals

Study Area

- Perimeter of Study Area

MAP DRAWING INFORMATION:
ORTHO PHOTOS FROM CITY OF OTTAWA, 2010

MAP CREATED BY: ES
MAP CHECKED BY: LDG
MAP PROJECTION: NAD 1983 UTM Zone 18N

Scale: 1:6,512
1 cm = 65 meters
1 in = 543 feet
on 8.5"x11" paper only

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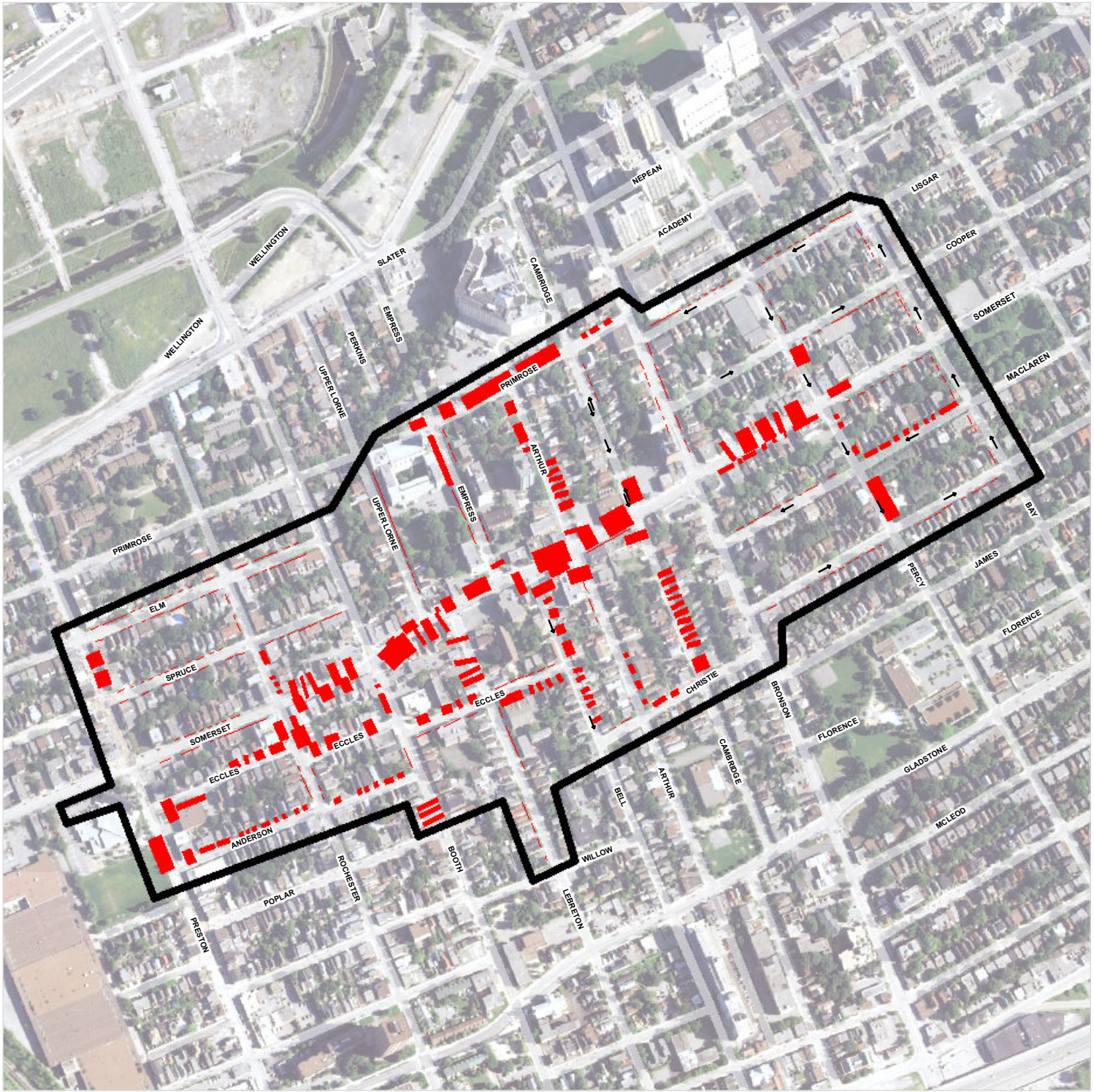
PROJECT: 12-6952
STATUS:
DATE: 12 May 2013



CHINATOWN

LOCAL AREA PARKING STUDY

FIGURE 17:

NUMBER OF HALF-HOUR INTERVALS WITH OCCUPANCY RATE ABOVE 85%

SATURDAY, NOV 3, 2012

LEGEND

Number of Half-Hour Intervals During the Study with Occupancy Rate Above 85% for On-Street Parking

- 1 - 2 Half-Hour Intervals
- 3 - 5 Half-Hour Intervals
- 6 - 9 Half-Hour Intervals
- 10 - 14 Half-Hour Intervals
- 15 - 24 Half-Hour Intervals

Study Area

- Perimeter of Study Area

MAP DRAWING INFORMATION:
ORTHO PHOTOS FROM CITY OF OTTAWA, 2010

MAP CREATED BY: ES
MAP CHECKED BY: LDG
MAP PROJECTION: NAD 1983 UTM Zone 18N

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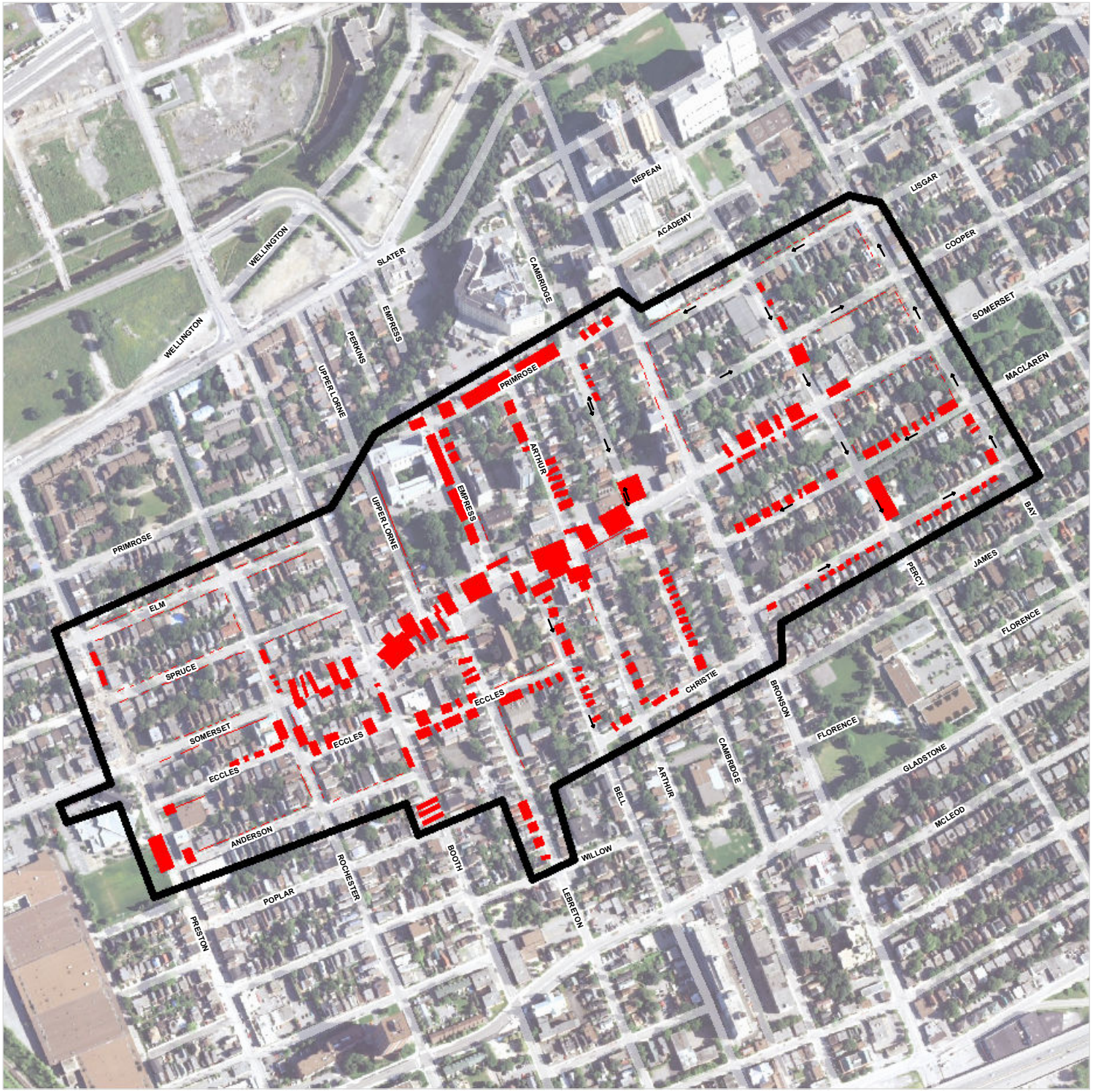
STATUS:
DATE: 12 May 2013



CHINATOWN

LOCAL AREA PARKING STUDY

FIGURE 18:

NUMBER OF HALF-HOUR INTERVALS WITH OCCUPANCY RATE ABOVE 85%

SUNDAY, NOV 4, 2012

LEGEND

Number of Half-Hour Intervals During the Study with Occupancy Rate Above 85% for On-Street Parking

- 1 - 2 Half-Hour Intervals
- 3 - 5 Half-Hour Intervals
- 6 - 9 Half-Hour Intervals
- 10 - 14 Half-Hour Intervals
- 15 - 24 Half-Hour Intervals

Study Area

- Perimeter of Study Area

MAP DRAWING INFORMATION:
ORTHO PHOTOS FROM CITY OF OTTAWA, 2010

MAP CREATED BY: ES
MAP CHECKED BY: LDG
MAP PROJECTION: NAD 1983 UTM Zone 18N

Scale: 1:6,512
1 cm = 65 meters
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on 8.5"x11" paper only

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DILLON CONSULTING

PROJECT: 12-6952
STATUS:
DATE: 12 May 2013

3.8 Parking Duration

The ability to find a parking space is dependent on the amount of turnover in the parking inventory that occurs throughout the day. For instance, if a vehicle is parked in the same parking space all day, then that space is unavailable for anyone else to park in. Therefore in areas where the parking duration is found to be too long, parking will not be available for those that arrive throughout the day. The average parking duration within Chinatown was analyzed based on the various parking time restrictions**. Table 7** provides a summary of the various parking time restrictions found throughout the study area and indicates the average parked duration within those posted time limits. As indicated, in many areas with a one hour posted time limit, the parking duration is often exceeded, specifically on the weekends when overtime parking is not proactively enforced.

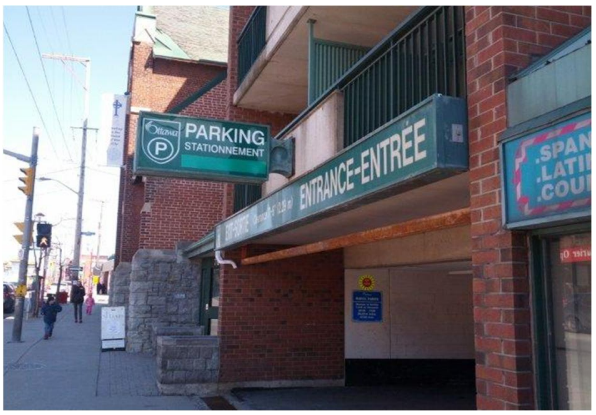
Table 7: Average Parking Duration in Chinatown

Date	Location	1 hour Posted Parking Limit (60 min)	2 hour Posted Parking Limit (120 min)	3 hour Posted Parking Limit (180 min)	Overall
Thursday, Nov 8, 12	On-Street Paid Parking	--	63 min / 57 min under	--	63 min
	Side Streets – Unpaid Parking	89 min / 29 min over	122 min / 2 min over	120 min / 60 min under	109 min
Saturday, Nov 3, 12	On-Street Paid Parking	--	74 min / 46 min under	--	74 min
	Side Streets – Unpaid Parking	108 min / 48 min over	139 min / 19 min over	115 min / 65 min under	117 min
Sunday, Nov 4, 12	On-Street Paid Parking	--	91 min / 29 min under	--	91 min
	Side Streets – Unpaid Parking	125 min / 65 min over	150 min / 30 min over	151 min / 29 min under	141 min

Figures contained in Appendix C illustrate the average parking duration throughout the study area. It is interesting to note that the parking duration along Somerset Street typically does not exceed 60 to 90 minutes during the weekday. Longer durations were observed on Saturdays and Sundays when overtime parking restrictions are not proactively enforced.

3.9 Municipal Parking Lots, 687 & 760 Somerset Street

The City of Ottawa operates and maintains two public paid parking lots on Somerset Street between Bronson Avenue and Booth Street, within the central portion of the study area. The Cambridge Street parking lot located at 687 Somerset Street contains 47 public parking spaces. The Empress Street parking lot, located at 760 Somerset Street, contains 20 parking spaces.



3.9.1. Municipal Parking Lot Utilization

The City operated parking facilities were observed over a 12 hour period, on a half hour basis during the data collection program. **Figure 19** illustrates the parking accumulation for each of the two City managed facilities on Saturday November 3, Sunday November 4, and Thursday November 8, 2012. Appendix G provides parking accumulation figures for a number of other surveyed parking lots.

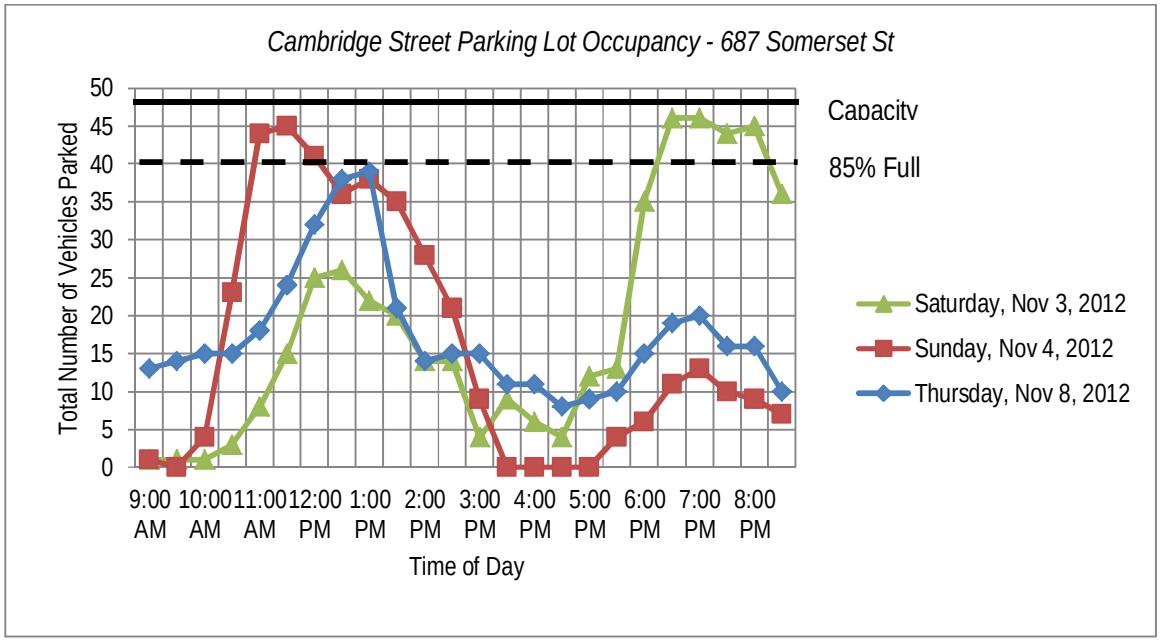
Cambridge Street Parking Lot - 687 Somerset Street

As illustrated in **Figure 19**, the Cambridge Street Parking Lot located at 687 Somerset Street experiences periods where the parking occupancy exceeds practical capacity. This occurs on Sunday mornings between 10:30 a.m. and 12:00 p.m., with the number of parked vehicles dropping off significantly on Sunday afternoons. During the Thursday survey, the parking lot occupancy approached practical capacity over the lunch period, and then dropped off significantly throughout the rest of the afternoon, peaking again in the evening at less than half of capacity. The low parking occupancy levels during weekday evenings is likely a result of free evening on-street parking and the lack of a maximum parking rate during evening hours.

Figure 20 illustrates the duration of parked vehicles within the Cambridge Street Parking Lot. As indicated, within the Cambridge Street Parking Lot, the majority of vehicles remained parked for approximately 2 hours in duration or less.

Empress Street Parking Lot - 760 Somerset Street

The Empress Street Parking Lot was generally underutilized, with occupancy just exceeding 50 percent of capacity during the November 2012 survey period. Again, it was found that the parking facility did not have a maximum parking rate. Poor visibility from the street, people loitering in the facility, and no maximum parking rate are potential reasons for the low observed occupancy rate. **Figure 20** illustrates the duration of parked vehicles within the Empress Street Parking Lot. At the Empress Street Parking Lot, the majority of vehicles remained parked for approximately 3 hours or less with some vehicles remaining throughout the day.



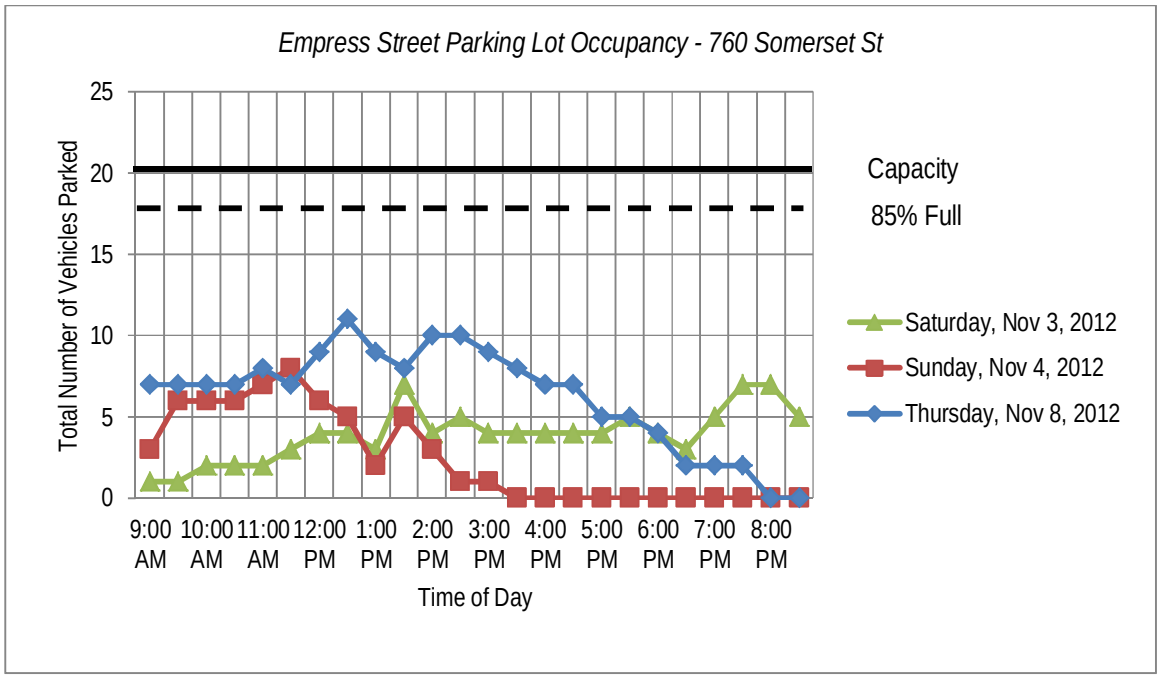
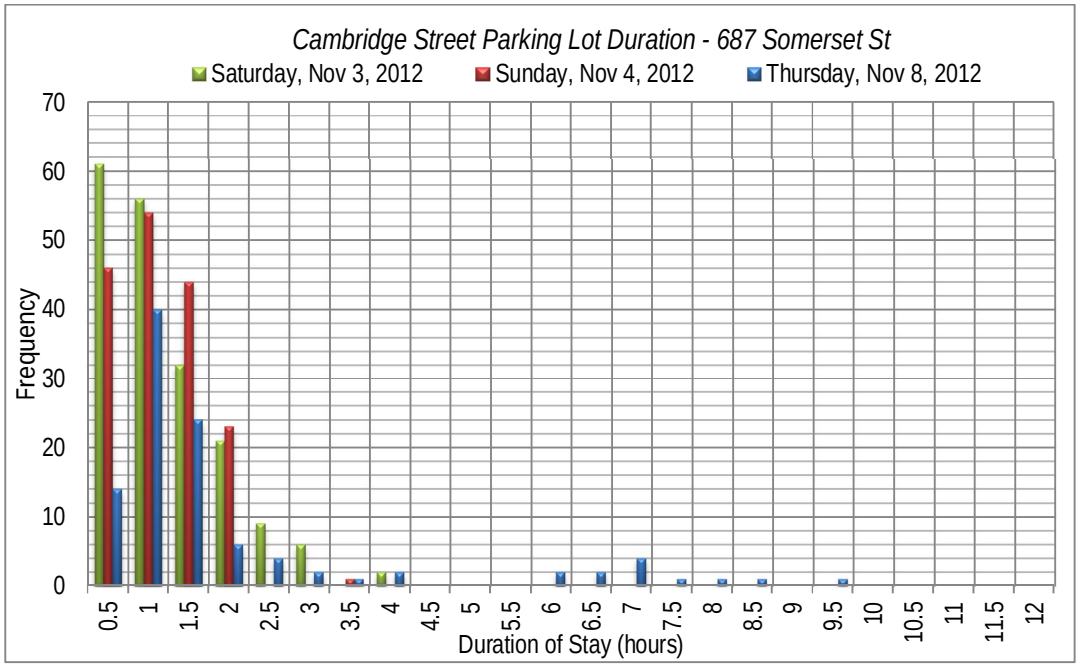


Figure 19: City Operated Public Parking Facility Utilization by Time of Day



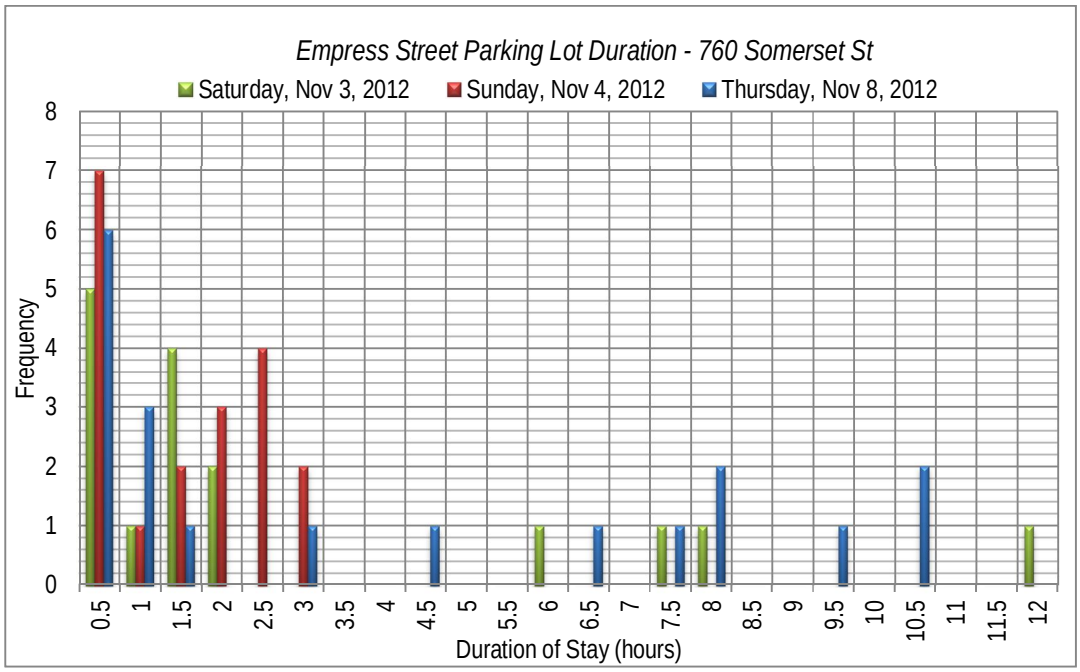


Figure 20: Duration of Stay of Parked Vehicles within Municipal Parking Lots

3.9.2. Municipal Parking Lot Rates

Table 8 provides a summary of the City operated public parking lots, number of parking spaces provided, parking rates, and time restrictions.

Table 8: Municipal Lots in Chinatown

Parking Lot Location	Meter Type	No. of Spaces	Parking Rates*	Time Limits
687 Somerset Street (Cambridge Street Lot)	Pay & Display Machine	47 public	$0.50 / 12 minutes	- 8:30 – 21:00 Mon-Sun - No maximum
760 Somerset Street (Empress Street Lot)	Pay & Display Machine	20 public	$0.25 / 6 minutes	- 8:30 – 21:00 Mon-Sun - No maximum

With reference to Table 8 above, the following is noted:

- As of March 1st, 2013, a $6 and $5 maximum rate was implemented for 687 and 760 Somerset Street respectively.
- As of April 4, 2013, following monitoring of the revised rates and parking utilization, the City is in the process of implementing free evening parking in the Cambridge Street Lot from Sunday evening to Thursday evening. The Empress Street Lot will be free during the evening hours, seven days per week.

3.10 User Perceptions of Parking Supply & Demand

In addition to the parking occupancy and duration surveys undertaken within the Chinatown area, face-to-face surveys were also undertaken to gain an understanding of the general public perception regarding parking in the area. Regardless of what the occupancy rates reveal, people may base their decisions about how, if and when they travel to the area based on their perception of parking availability. If they've experienced difficulty in finding parking in the past, they may decide not to come to the area on a specific day or time, they may look for alternative parking locations or take an alternative mode of transport. If parking is too readily available, it may influence those coming to the area to take their automobiles.

As indicated in **Figure 10**, **Figure 11** and **Figure 12**, the on-street parking occupancy rate exceeds practical capacity at certain times. During these times, there is a perception that there is a lack of parking; however the majority off-street spaces are underused during these peak periods.

3.10.1. Face to Face Public Opinion Surveys

Surveyors were stationed along Somerset Street between Booth Street and Bronson Avenue. Surveying was undertaken between 11:00 a.m. and 5:00 p.m. and surveying dates coincided with the occupancy and duration surveys. Surveyors randomly approached people on the street to participate in the parking survey. Surveys were carried out in English however some surveyors were multi-lingual, representing the neighbourhood. The responses to questions asked are summarized below:

How did you get to Chinatown today?

The majority of those surveyed responded that they were automobile drivers. It is noted that the cycling mode share was almost nil, due to the cold temperatures at the time that the survey was undertaken (November 2012). **Figure 21** illustrates the travel mode share responses.

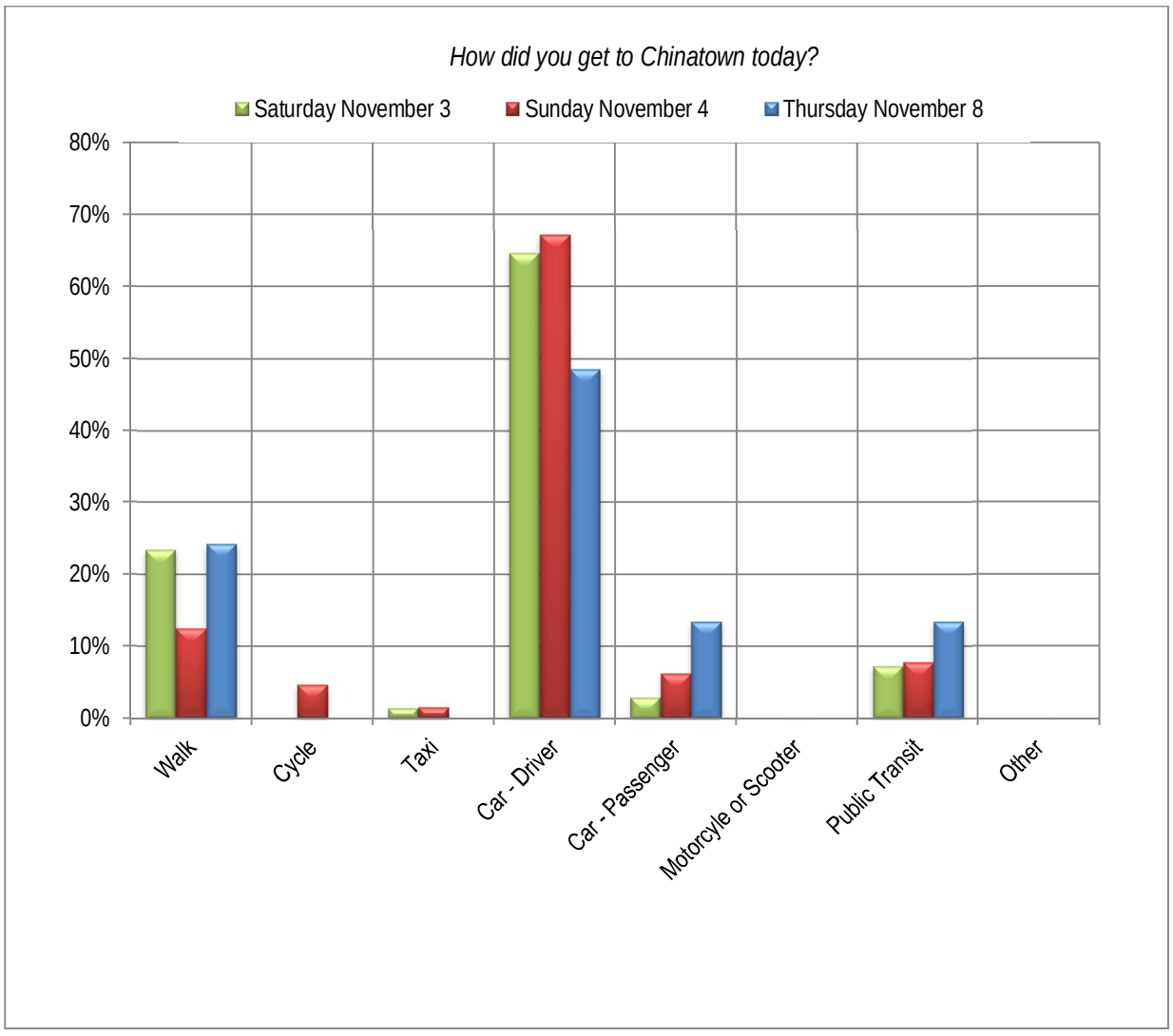


Figure 21: Travel Mode Share of Face to Face Respondents

What is the purpose of your trip?

The majority of weekend respondents indicated that they were in the area for a shopping or dining experience. During the week, approximately 43 percent of respondents indicated that they were in the area for an appointment. During the Thursday, work trips accounted for 14 percent of the respondents, with only 3 and 9 percent on Saturday and Sunday respectively.

Figure 22 summarizes the trip purpose responses.

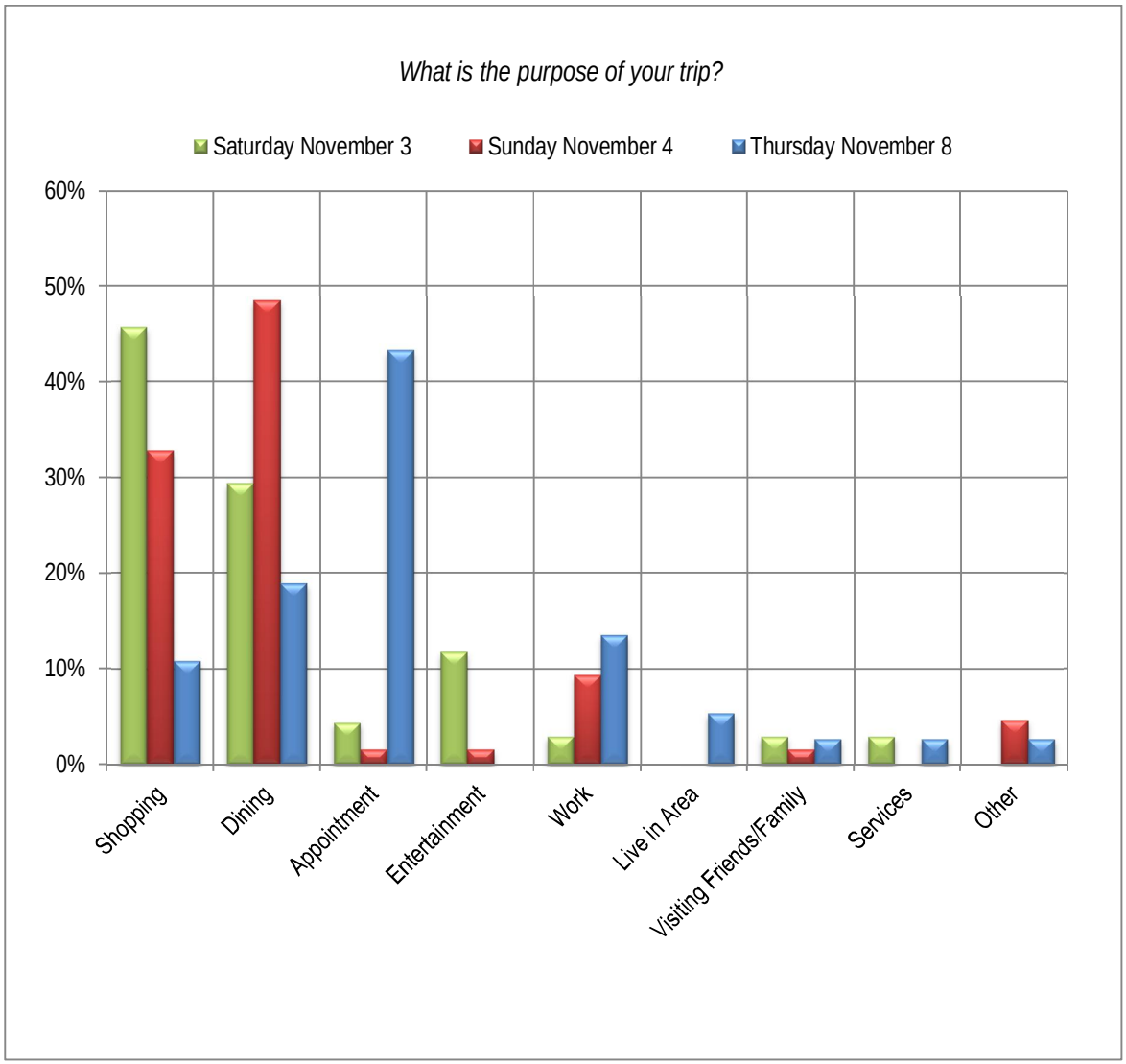


Figure 22: Trip Purpose

When you park here, how easy is it for you to find a parking space?

Of those that drove to the Chinatown area, they were generally equally split as to the ease of finding parking, with approximately 30 percent indicating that they occasionally have difficulty finding parking and another 30 percent to 50 percent indicating that they often have difficulty finding parking. Interestingly, the Thursday respondents indicated that they often have the most difficulty finding parking, even though parking occupancy peaks on Sunday and Saturday. The results are indicated in **Figure 23.**

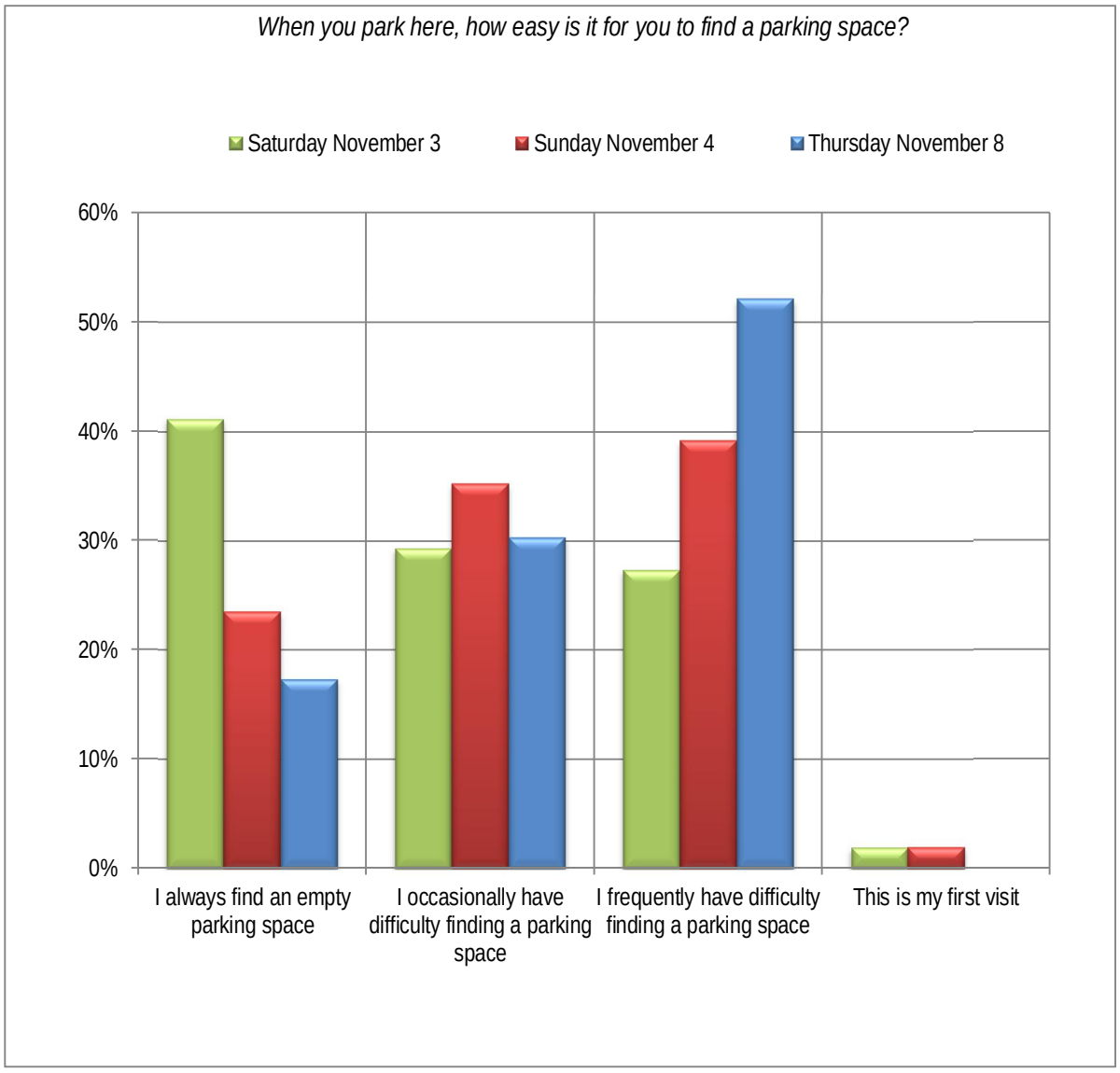


Figure 23: Availability of Parking Space

How long did it take you to find a parking space today?

Of the vehicle drivers, 40 to 60 percent indicated that it took them less than 5 minutes to find a parking space, where 50 percent of Sunday respondents indicated that it took them between 5 and 10 minutes to find a parking space, see **Figure 24**. Peak Parking occupancy occurred on Sunday.

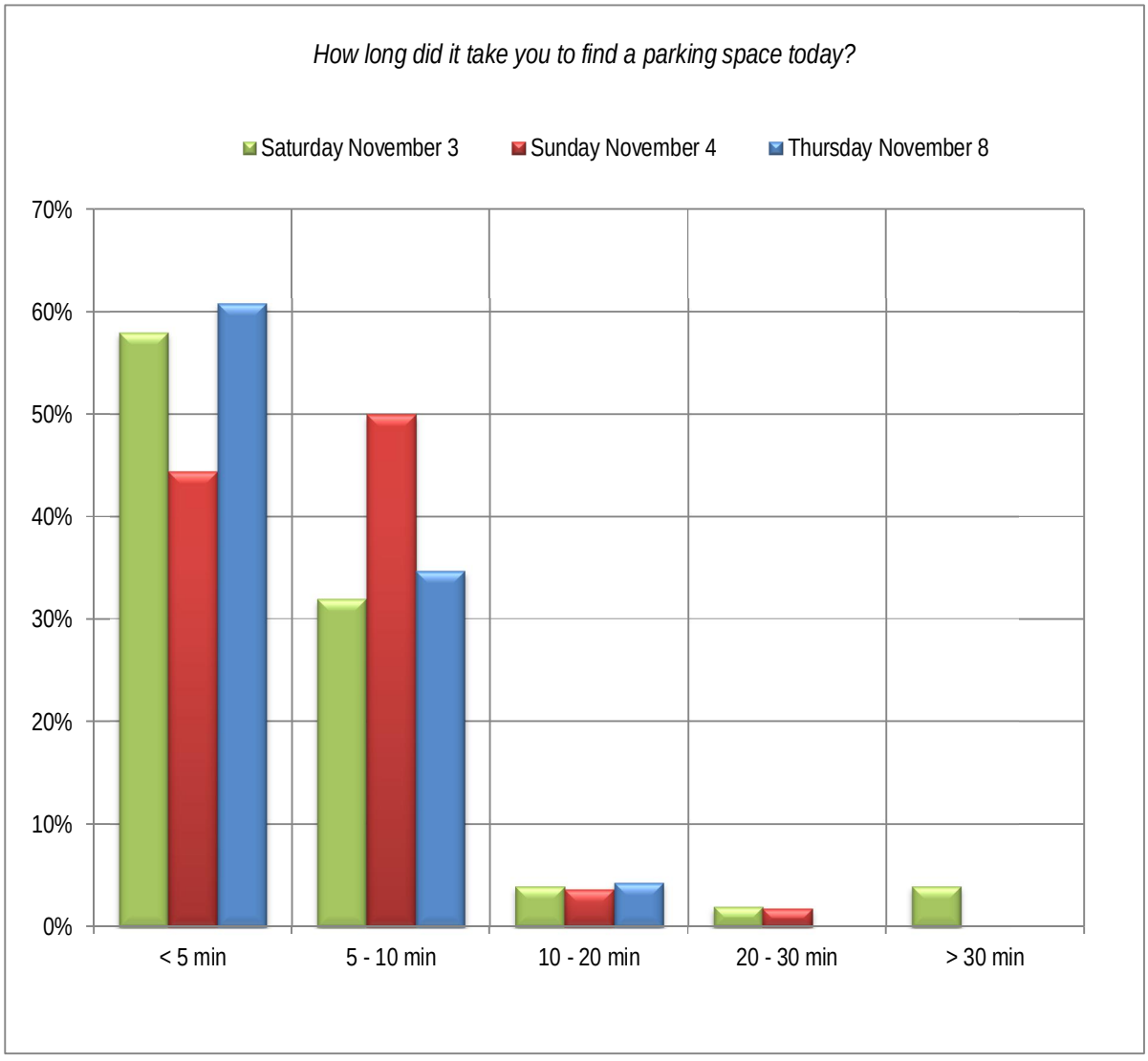


Figure 24: Time to Find an Available Parking Space

Approximately, how much did you or will you spend on stores/services during your visit?

Figure 25 indicates that many of the respondents were spending approximately $10 to $100 on their visit that day.

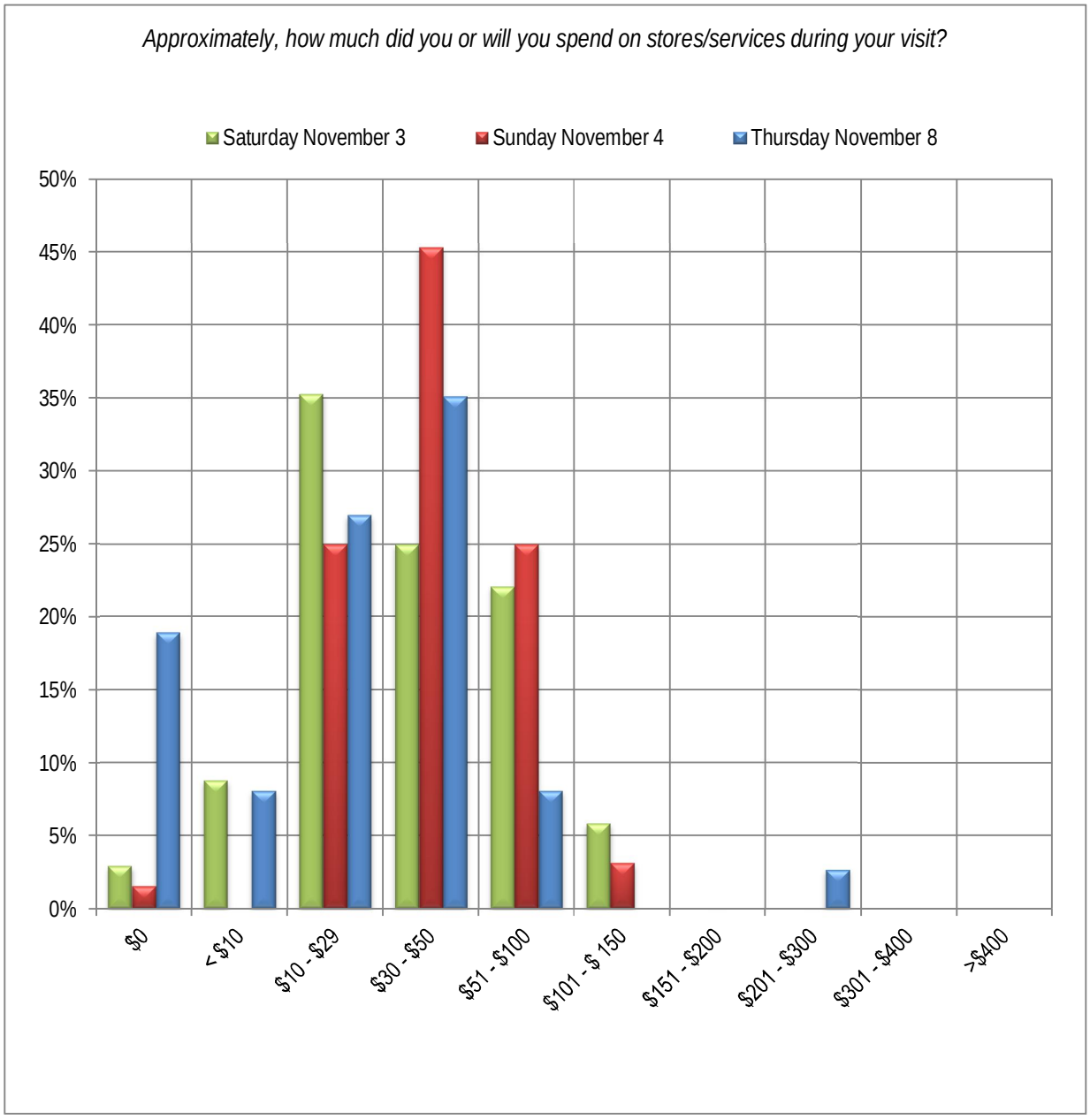


Figure 25: Amount Spent in Chinatown

What are your concerns travelling to this area?

The primary concern among those traveling to the area was finding a parking spot, with approximately 28 percent of respondents indicating this concern. Parking rates on weekdays and Saturdays were also noted along with limited maximum posted parking times. Transit service and parking enforcement were not significant, with approximately 5 percent of respondents indicating this concern in **Figure 26**.

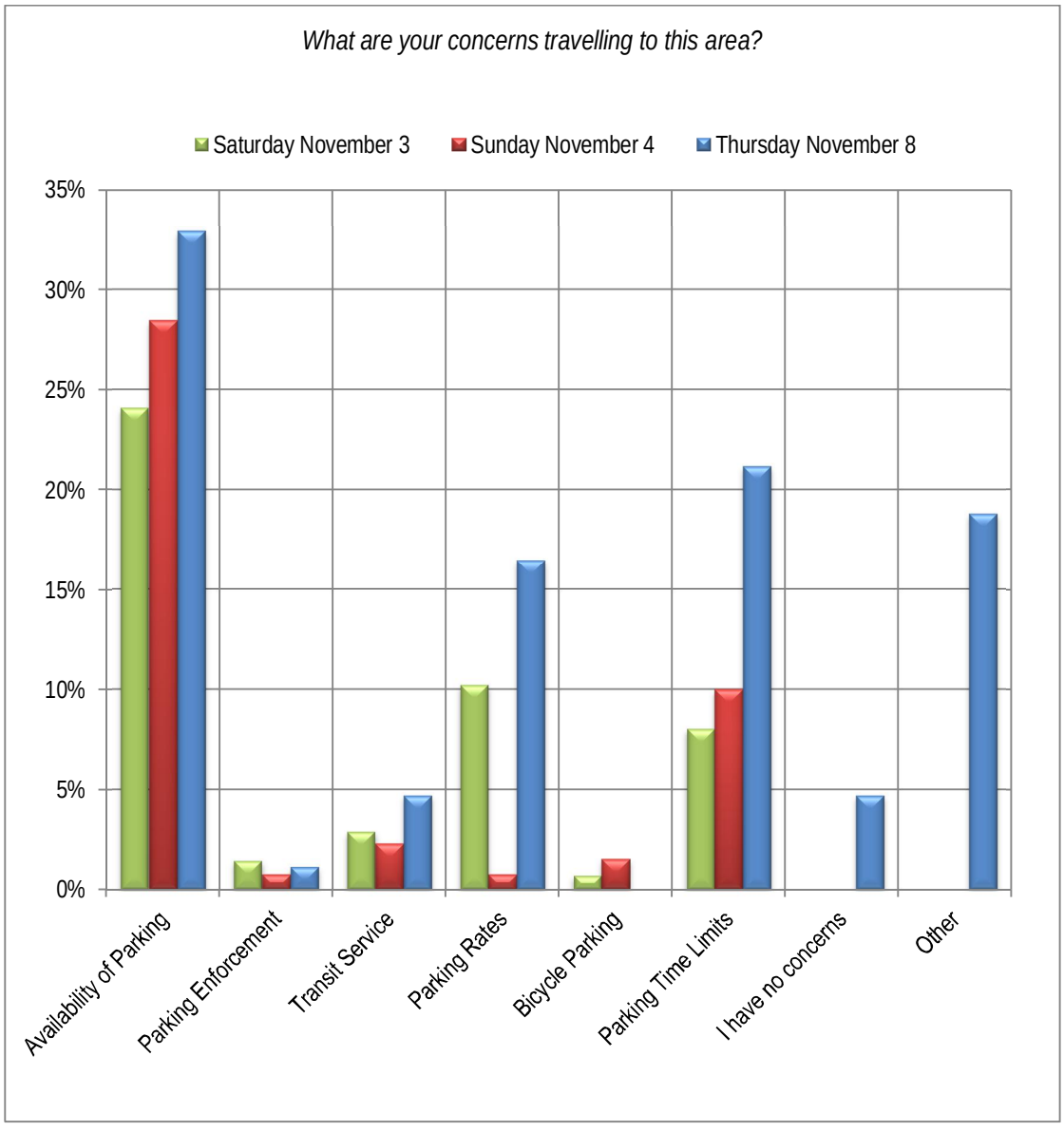


Figure 26: Concerns with Traveling to Chinatown

What kind of parking did you use?

Approximately 30 percent of motorists parked on-street in a non-metered (unpaid) parking space, as indicated in **Figure 27**. On-street parking at metered spaces had the highest response rate at 40 percent on Saturday, when parking was free in the area. On weekdays and on Sunday, the on-street metered space response rate was approximately 20 percent.

Off-street metered parking use was highest during the weekday, which may correspond to longer duration of available parking and/or close proximity to various restaurants in the area. The off-street Sunday period was also high, likely due to the on-street parking supply being near capacity on Sunday between Bronson Avenue and Booth Street.

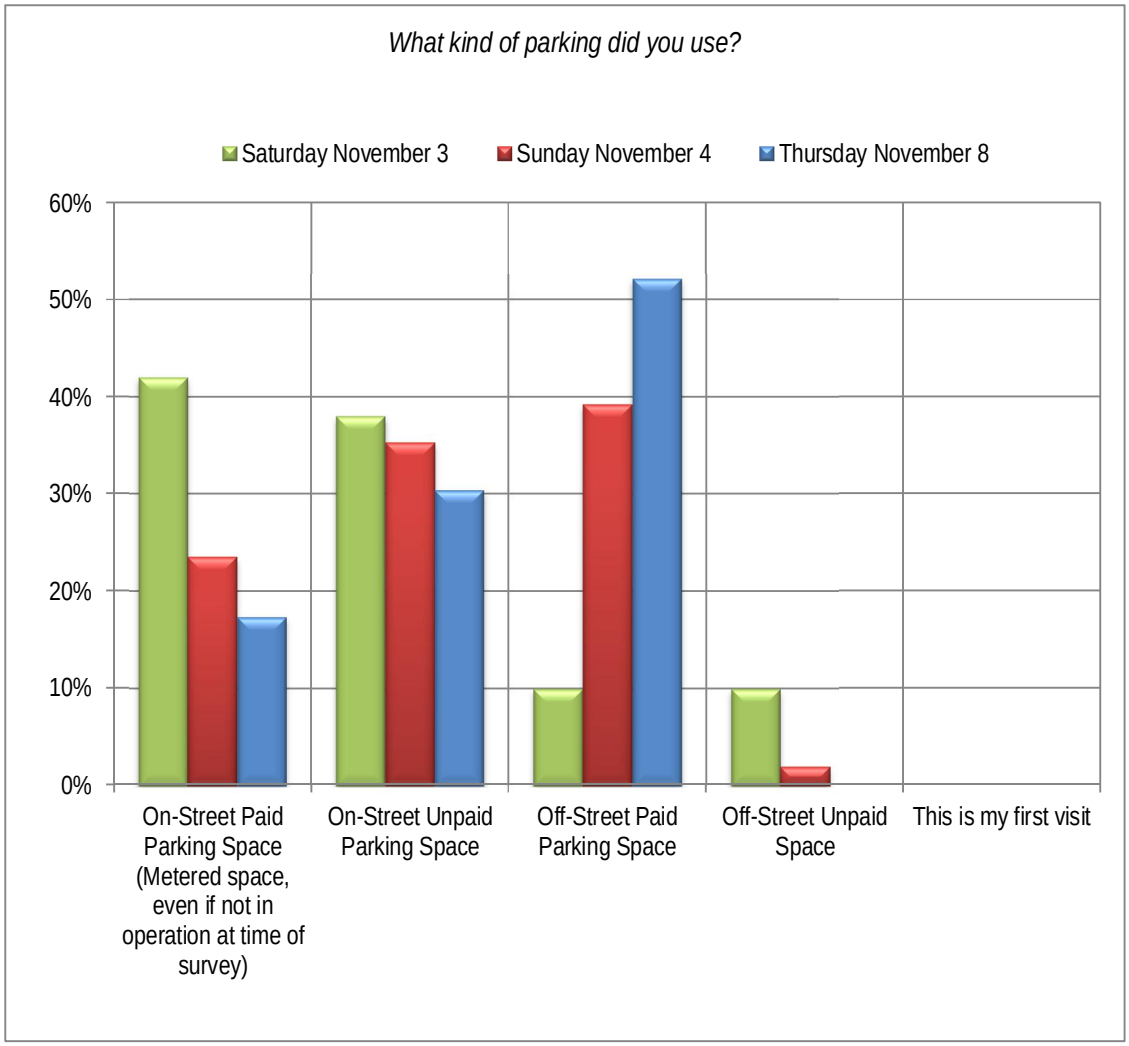


Figure 27: Type of Parking Space Used

Why did you choose to park where you did?

Respondents indicated that location and ease of use was the primary factor in considering where to park. However, parking pricing was considered a factor among approximately 25 percent of respondents during the weekday and on Saturdays. Pricing was not a factor on Sunday when parking is free at on-street metered parking spaces and when parking demand was at its peak, see **Figure 28**. It is also interesting to note that parking was free at the on-street meters on Saturday, although some members of the public were observed attempting to pay the meters on the Saturday.

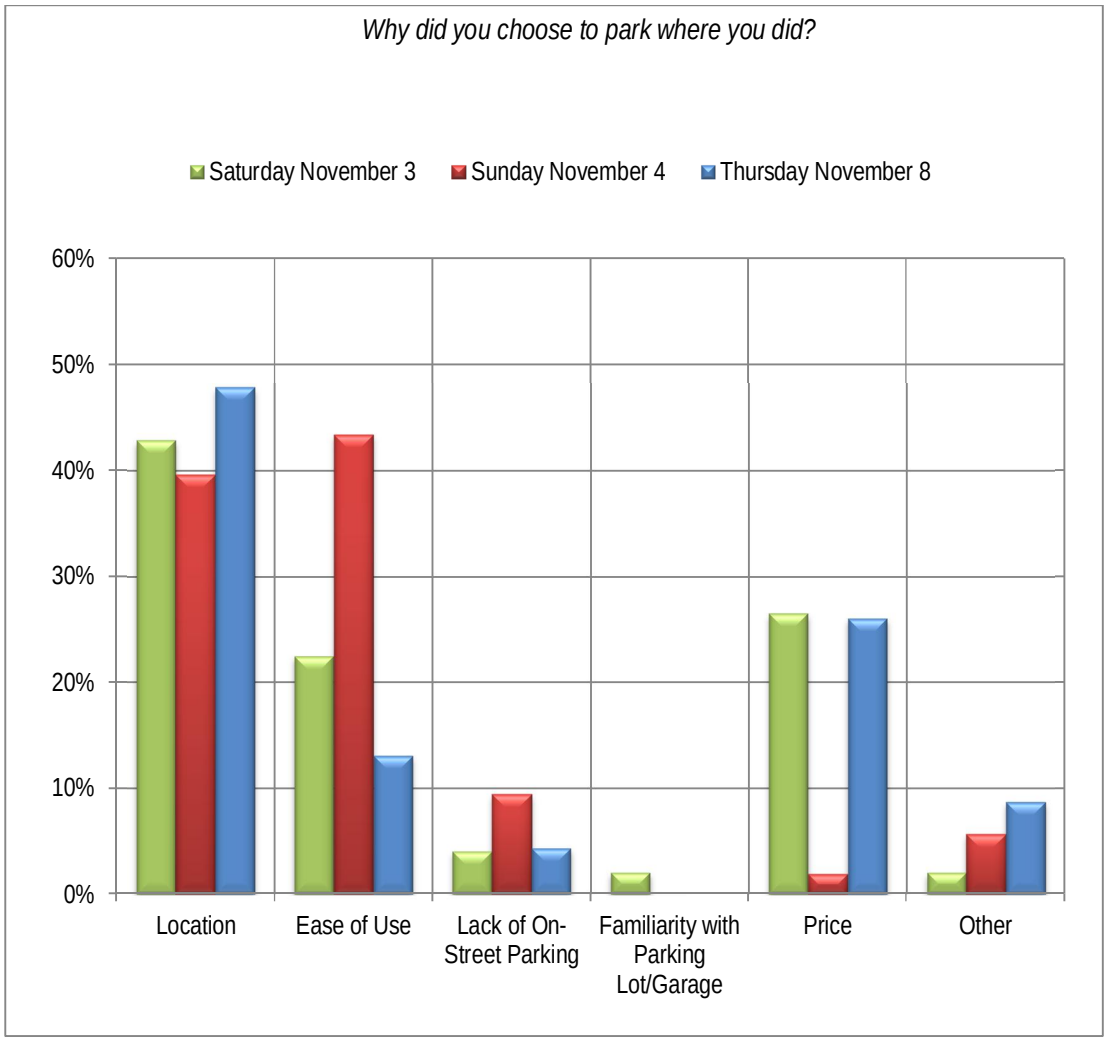


Figure 28: Choice of Parking Used

How often do you come to the area?

Respondents were asked “How often do you come to the area?” The question is worded such that the respondent provides the answer that most closely reflects their travel patterns to the area. The summary does not consider that a person who answered “daily” is also someone who traveled to the area several times per week, several times per month or several times per year. For example, to obtain a true representation of the number of respondents that come to the area several times per month, you must add the daily, weekly and monthly responses together.

As indicated in **Figure 29,** approximately 70 percent of the weekend respondents come to the area at least several times a month. Of those interviewed over the weekend, approximately 80 percent come at least several times per month.

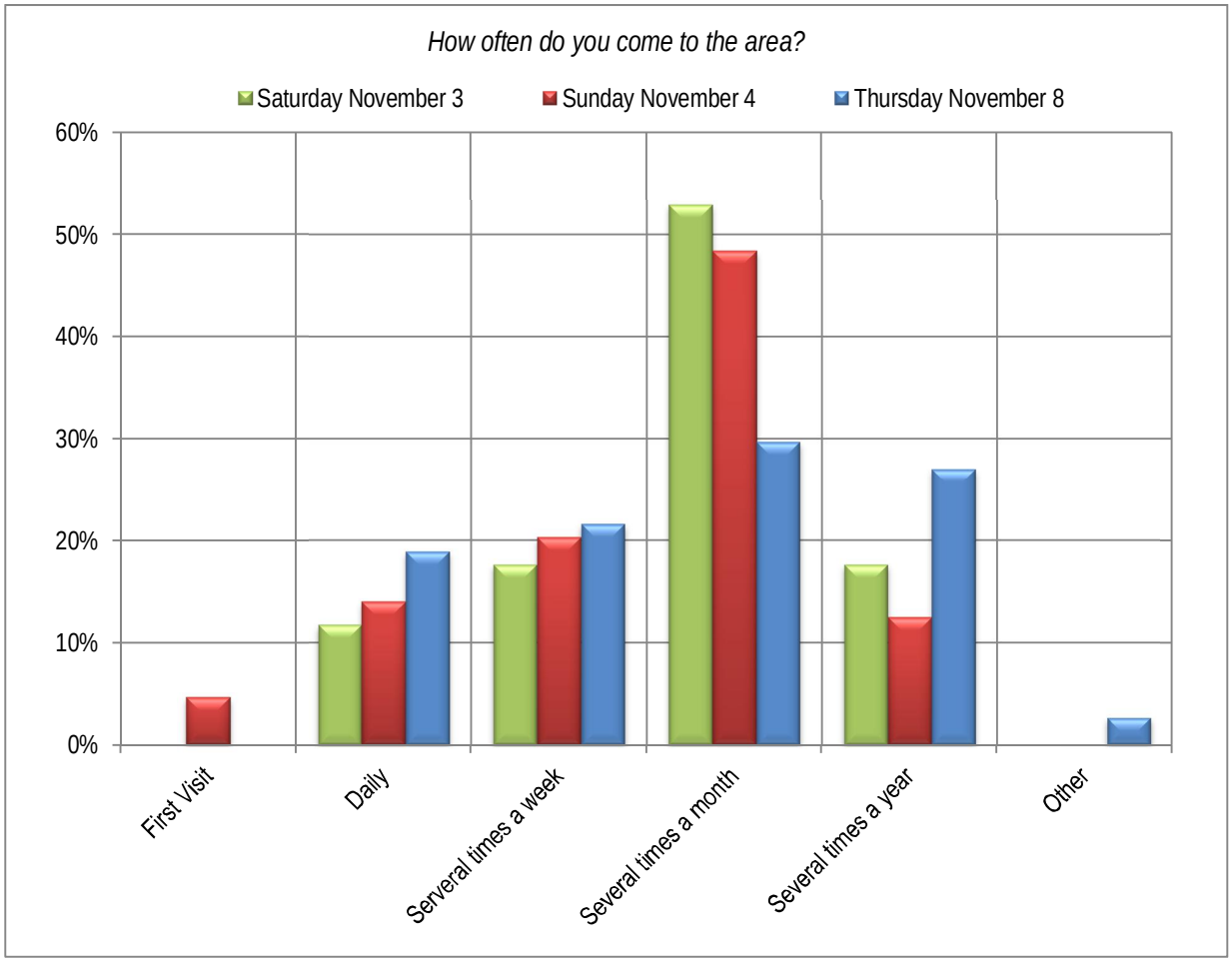


Figure 29: Frequency of Trips to Chinatown

How long do you expect to stay in the area?

Approximately 70 percent of those interviewed expected to stay in the Chinatown area for less than two hours. This response indicates the need to maintain short term parking supply, see **Figure 30**.

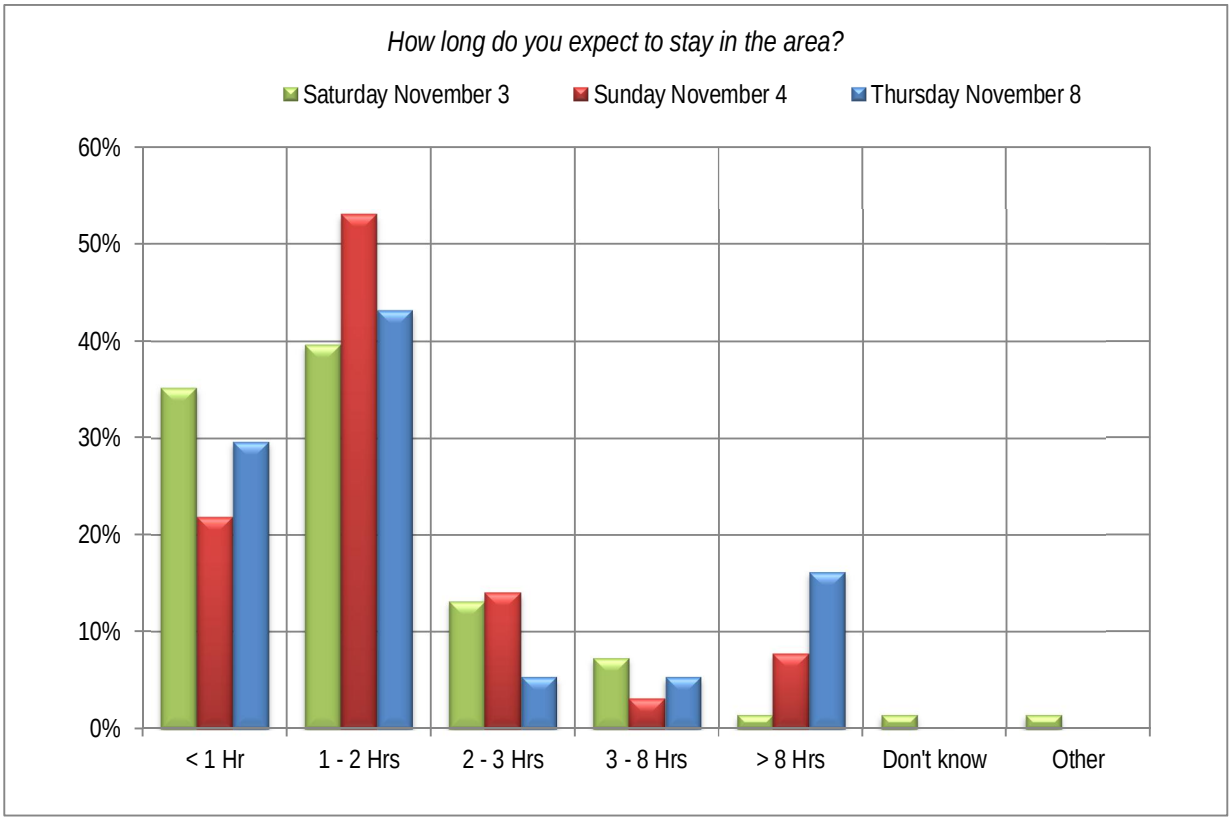


Figure 30: Expected Trip Duration

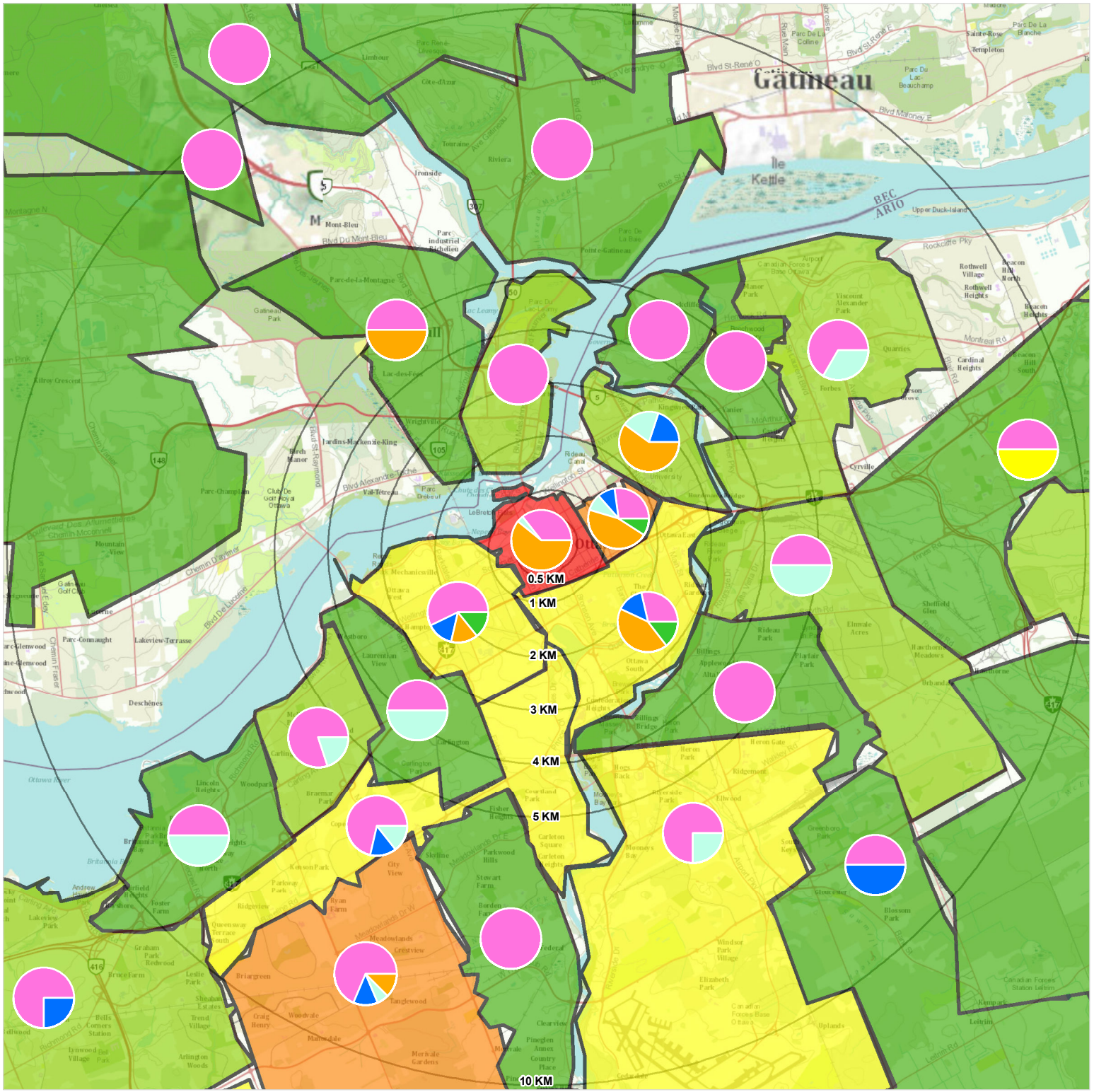
Where do you reside?

In addition to the questions above, respondents were also asked to provide the first three digits of their postal codes. The majority of the respondents live in close proximity to Chinatown however some came from as far away as northern Quebec.

Figure 31 indicates where respondents live and their mode of travel.

How far did you walk from your parked vehicle?

Automobile users indicated that they walked on average, approximately 215m to their destination from their parked vehicle.



CHINATOWN

LOCAL AREA PARKING STUDY

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FIGURE 31:

GEOGRAPHIC PROFILE OF FACE-TO-FACE SURVEY RESPONDENTS

SATURDAY, SUNDAY, AND THURSDAY
NOV 3, 4, AND 8, 2012

LEGEND

Percentage of Interviewees Indicating This Area as Their Point of Origin

- < 1 %
- 1 - 3 %
- 3 - 6 %
- 6 - 10 %
- 10 - 17 %

Mode-of-Travel Interviewees Took to Chinatown

- Car - Driver
- Car - Passenger
- Public Transit
- Taxi
- Walk
- Cycle
- Motorcyle or Scooter

MAP DRAWING INFORMATION:
ORTHO PHOTOS FROM CITY OF OTTAWA, 2010

MAP CREATED BY: ES
MAP CHECKED BY: LDG
MAP PROJECTION: NAD 1983 UTM Zone 18N

Scale: 1:100,000
1 cm = 1,000 meters
1 in = 8,333 feet
on 8.5"x11" paper only

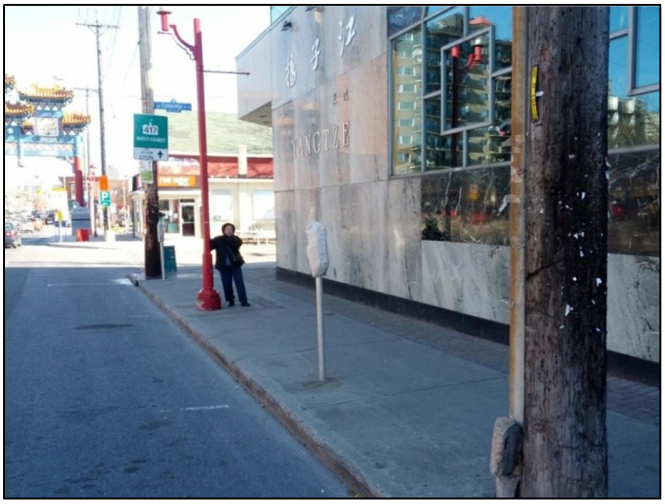
FILE LOCATION:
G:\CAD\2012\126952\Current\F33GeographicProfileSurveyRespondents.mxd

DILLON CONSULTING

PROJECT: 12-6952
STATUS: .
DATE: 12 May 2013

3.11 Tour Bus Parking

Chinatown draws tourists to see the Arch located on Somerset Street at Cambridge Avenue. Tour bus parking is available in front of the Yangtze Restaurant, with the restaurant renting the on-street parking spaces and bagging the single space meters. According to the Chinatown BIA, tour buses that stop to visit the Arch no longer stay for a meal the way they used to, resulting in a lost opportunity for the Chinatown restaurants.



The adjacent photo shows what appears to be two single space bagged parking metres in front of the Yangtze restaurant. These spaces are often occupied by passenger vehicles and are located within the area covered by a Pay & Display parking metre.

3.12 Parking Enforcement Data

In 2010 and 2011, failure to display a pay and display ticket receipt was the most frequent ticketed violation issued within the metered parking spaces in Chinatown. Parking in excess of the posted time limit was the most frequent violation issued on side streets in unmetered areas.

The central part of the study area, which lies between Bronson Avenue and Booth Street, had the most tickets issued in 2010 and 2011. This was particularly noticeable along Somerset Street Where the majority of the neighbourhood's commercial activity takes place. The combined factors of many loading zones for businesses; bus stops; and, high on-street parking occupancy rates, result in motorists taking chances and results in this section of Somerset Street experiencing a higher number parking violations.

Saint-Vincent Hospital is located in the central portion of the study area, generating on-street parking demand for staff and visitors. Primrose Avenue, adjacent the Hospital, typically has parking occupancy rates greater than practical capacity for much of the day. Many tickets are issued for parking in excess of the time limits on this street. It is also the only street in the study area that had tickets issued for vehicles parked within 300m of their previous parking space. These tickets are typically issued to long-term parkers parking their cars on the street and moving their cars every three hours, as a way to avoid having to pay for parking.

On side streets, the central section of the study area had the most parking tickets issued; the eastern section of the study area did not have as many tickets as the central section; and, the fewest parking violations issued were in the western part of the study area.

Parking Enforcement Data is contained within Appendix D.

3.13 311 Calls in Chinatown

The City received 1282 calls through the 311 system regarding parking within Chinatown from 2010 to the end of 2012, as follows:

- 31 requests regarding municipal lot monthly permits (new, cancel, update)
- 56 requests and queries regarding on-street parking permits (residential, consideration, etc.)

- 194 requests for service related to parking signs and equipment (service, hood/un-hood, temporary signage up/down)

- 1282 request for attendance of Parking Enforcement Officers.

Table 9 provides a further breakdown of Parking Enforcement calls received through the 311 call centre. The majority of these calls related to cars parking in areas where they should not be parked – private property, blocking laneways, and in no-parking zones. This typically is a result of a lack of available and convenient legal parking spaces.

Table 9: Chinatown 311 Calls (2010-2012)

Call Description	Number of Calls	Further Description
Designated Parking	579	Car parked in private laneway, fire route, parking lot
Laneways	388	Car parked too close to, or blocking a laneway
No Parking	131	Car parked in no parking zone
No Stopping	37	Car parked in a no stopping zone
Overnight	1	Car parked in the way of snow removal
Overtime Parking	29	Cars parked longer than posted time permits
Roads and Sidewalks	49	Blocking the facility or parked too far from curb face.
Zones	26	Bus, Construction Zone, Tow-away Zones
Miscellaneous	29	

4.0 FUTURE PARKING DEMAND AND SUPPLY

4.1 Overview

Future parking demands within the Chinatown area are likely to be influenced by several factors:

- Changes in land use due to development and redevelopment of properties in keeping with the Traditional Mainstreet zoning designation;
- Retail vacancy levels;
- Changes in travel behavior, such as increased use of transit, cycling and walking; and,

- The attractiveness of the Chinatown area in relation to other commercial activity centers.

Our ability to accurately predict the future is limited; however, historical trends, population and employment projections, travel demand forecasts, retail vacancy levels, and intensification opportunities can be reviewed to assist in understanding the future potential parking supply and demand in the area.

4.2 Historical Trends from Past Studies

One way to predict the future is to examine and forecast based on historical trends. There have been three previous parking studies undertaken in the past 25 years within the study area. Comparison of the results of these studies is difficult as there are numerous differences in the study areas, approach and number of parking spaces surveyed. Parking management has changed over time as well: paid parking was introduced and two off-street lots were established between 1988 and 1992. This study area is larger than the three previous studies, having surveyed 759 on-street parking spaces, an additional 250 on-street parking spaces as compared to the next largest study conducted in 1996. The smallest study, completed in 2006 examined only 149 on-street parking spaces along Somerset Street between Preston Street and Bay

Street. Given these differences, drawing any comparison of an empirical nature would not be appropriate.

What can be noted however is that parking deficiencies along Somerset Street have been indicated in each of the studies dating back to the 1988 study. Off-street parking lots have been underutilized during peak periods when on-street parking has been free. The 1988 and 1996 studies concluded that there were parking shortages at peak periods, coinciding with lunch and dinner periods.

The findings of the three previous studies are similar in nature to this study. In 2012, on-street peak parking demand occurred on Sunday around the lunch period, with parking occupancy nearing maximum capacity between Bronson Avenue and Booth Street. During this time, off-street paid parking lots were below capacity. Peak parking demand continues to occur around the lunch and dinner periods. Current parking demands can be met by the overall supply if demand were spread across all parking types.

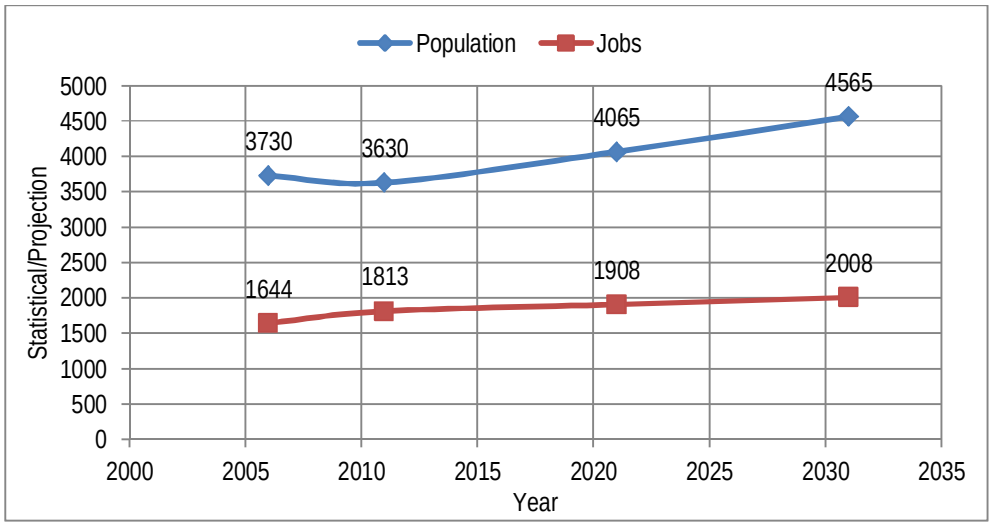
Over the past 25 years, it appears that the Chinatown parking supply and demand fundamentals have remained relatively stable.

4.3 Population & Employment Projections

Population and employment data was obtained from the City of Ottawa Planning and Development section for the study area. The City is expecting employment growth in the area to be relatively stable to the year 2031. From the employment data, we can derive the potential increase in parking demand due to increased employment. In total, there are 195 new jobs anticipated, which can be expected to generate 70 new parking spaces (based on current auto driver mode share). The employment data provided does not distinguish working hours or the types of jobs created, which may not coincide with peak parking occupancy periods within the Chinatown commercial area. Retail employment is likely to generate demand for on-street short term spaces, whereas office employment will generate demand for long-term spaces that the City does not have the mandate to provide on-street or in public facilities.

The City has also projected population growth within the Chinatown area of approximately 25 percent between the years 2011 and 2031 as illustrated in **Figure 32**. Parking requirements of residential housing varies based on the location of the development. Typically, proximity to the urban environment results in a higher travel mode share for walking, cycling and transit, resulting in reduced parking requirements.

Further, if residential parking demand is generally met on-site, then a population increase in the area will not have a significant on-street or public off-street impact; however, if too little on-site parking is provided it can increase demand for on-street spaces, particularly for visitor parking. The residents themselves will likely walk to local amenities as evident from existing travel trends within the community, where 82 percent of all trips within Chinatown are walking trips, as indicated in **Figure 5**.



(Source: City of Ottawa, Planning & Development)

Figure 32: Population & Employment Growth – Chinatown (TAZ 651)

4.4 Travel Demand Forecasts

While population and employment forecasts provide one method of estimating parking generation demands, travel demand forecasts also provide insight into expected travel characteristics within a neighbourhood. The City provided travel forecasts from their EMME travel demand model, which indicates the number of trips taken from Chinatown to elsewhere; elsewhere to Chinatown; and trips within Chinatown during the a.m. peak travel period. The weekday a.m. model data does not coincide with peak period parking occupancy within Chinatown, which occurs on Sunday morning and around the dinner hours during the weekday and on Saturdays. Thus the travel demand forecast data is not particularly relevant to this study. Between the years 2005 and 2031, the City is forecasting that auto driver trips into Chinatown from outside of the area will increase by 15 percent during the a.m. peak period, or 72 trips which generally corresponds to the number of trips anticipated to be generated by new employees within the planning area.

4.5 Retail Vacancy Levels and Sales Trends

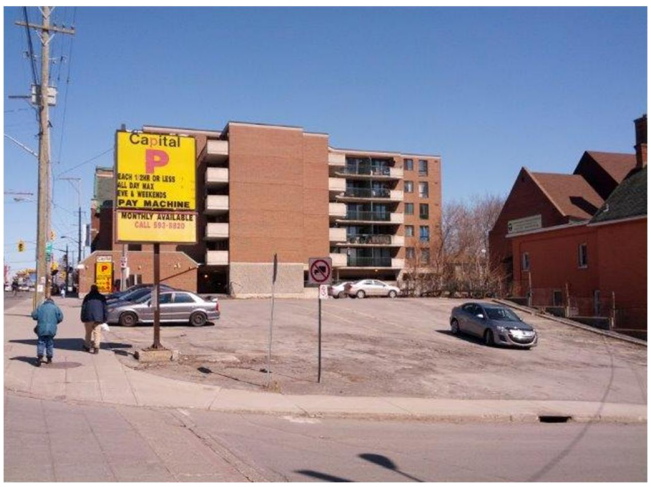
The Chinatown BIA indicated that vacancy rates at the time of the surveys in November 2012 were very low. It was the opinion of the BIA that any vacancies once occupied would have a very minor impact on parking demand in the area.

In assessing parking demand, it is also important to consider the current economic health of the region to determine if retail activity is being impacted by a slowdown in the economy. Although economic sales figures are not available for Chinatown specifically, the City of Ottawa's Annual Development Report, September 2012, provides figures on retail sales for Ottawa-Gatineau. Historic trends indicate that retail sales have been trending upward in the Capital Region between 2006 and 2011. This trend indicates that the economy has remained relatively healthy over the past number of years with a 20 percent increase in retail sales between 2006 and 2011. Retail sales growth has climbed each year since 2006, with the exception of 2009 which was slightly lower than 2008 levels.

Bronson Avenue was under construction between Somerset Street and Highway 417 during the data collection period. The construction activity may have affected those accessing Chinatown. This would mean that the 2012 parking demand data might be lower than normal. Bronson Avenue north of (and including the intersection of) Somerset Street is under construction in 2013, which may also have an impact on 2013 parking demand.

4.6 Intensification Opportunities

There are a number of vacant parcels of land within the study area, particularly adjacent to Somerset Street. These parcels, as well as surface parking lots are prime candidates for infill development. The following indicates the potential infill development opportunities and their related potential parking demand.



4.6.1. Current Development Applications

At present, there is one active and one dormant development application within the study area. **Table 10** indicates the status of current site plan control applications within the study area. It is noted that a re-zoning and site plan application has been made for the property at 770 Somerset Street (Capital Parking Inc. Parking Lot) to convert the property from a public parking lot to a mixed use site with the existing general public parking to be displaced.

Table 10: Site Plan Control Application Status

Application Type	Address	Application Status	Proposed Development
Site Plan Control	770 Somerset / 13 Lebreton Street	Active	75 Unit Condominium, ground floor supermarket, and restaurant, including 87 parking spaces, 35 for tenant use and 52 public stalls intended for customer and employee parking
Site Plan Control	288 Booth Street	Dormant	7 Storey mixed use building with 54 dwelling units and commercial on ground floor.

4.6.2. Additional Intensification Opportunities

Table 11 indicates the potential development levels permitted by the current Zoning By-law and the parking space requirements for the various land uses assumed for the potential infill development sites within the study area. Two scenarios have been developed to assess the potential future parking demand of these sites. The low infill growth scenario considers a partial buildout scenario in which the sites most likely to develop are included. The high infill growth scenario considers all vacant lands to be fully developed within the study area. **Table 12** indicates the properties that have been considered as potential future infill developments.

Table 11: Potential Development Permitted By The Current Zoning By-Law			
Land Use Type	**Parking Requirement (Spaces)**	**Low Scenario**	**High Scenario**
Apartment Building (dwelling units)	0.5 per unit + 0.2 per unit for visitors (above 12 units)	78	151
Museum	2 per 100 m^2	800 m^2	800 m^2
Medical/Dental	4 per 100 m^2	300 m^2	476 m^2
Office Space	2 per 100 m^2	401 m^2	634 m^2
Restaurant	0 spaces for first 150 m^2 3 spaces, 150 to 200 m^2 10 spaces for every 100m^2 above 200m^2	676 m^2	1070 m^2
Retail Store (ground floor)	0 spaces for first 150m^2 of GFA 2.5 per 100m^2 over 150m^2	1,127 m^2	1,783 m^2

Table 12: Intensification Opportunities					
Location	**Current Zoning**	**Infill Development Scenario**	**No. of Parking Spaces Displaced due to infill development**	**Parking Demands**	
				Low (spaces)	**High (spaces)**
288 Booth Street	Traditional Mainstreet [112]+ R4H	Low & High	0	17	17
770 Somerset Street	Traditional Mainstreet [112] H(16)	Low & High	37	30	30

Table 12: Intensification Opportunities					
Location	**Current Zoning**	**Infill Development Scenario**	**No. of Parking Spaces Displaced due to infill development**	**Parking Demands**	
				Low (spaces)	**High (spaces)**
Capital Parking Inc.					
105 Preston Street	Traditional Mainstreet [112] H(16)	Low & High	0	16	16
160, 164, 168 Cambridge Street	RH4 [915]	Low & High	0	19	19
848,850, 852 Somerset Street	Traditional Mainstreet [78] H(15)	Low & High	0	3	3
816 Somerset Street	Traditional Mainstreet [112] H(16)	Low & High	0	7	7
881 Somerset Street	Traditional Mainstreet [78] H915)	High	10	--	5
760 Somerset Street, Empress Street Lot (End of Lease –	Traditional Mainstreet [112] H(16)	High	20	--	2

Table 12: Intensification Opportunities					
Location	**Current Zoning**	**Infill Development Scenario**	**No. of Parking Spaces Displaced due to infill development**	**Parking Demands**	
				Low (spaces)	**High (spaces)**
2016)					
705 Somerset Street, Capital Parking Inc.	Traditional Mainstreet [112] H(16)	High	56	--	36
687 Somerset Street, Cambridge Street Lot	Traditional Mainstreet [112] H(16)	High	0*	0	27

** Note: It is assumed that redevelopment of the Cambridge Street Parking Lot will provide public parking, off-setting any loss. GFA = Ground Floor Area*

Given that these sites may be years away from being developed, a number of assumptions were made, including the mixture of site use. By applying the parking requirements of the Zoning By-law to the assumed mix of commercial uses, the total number of parking spaces required for each land use was determined.

Not all parking requirements will be satisfied on the property being developed. The greatest pressure on the on-street supply will come from customer parking for main floor retail uses, and visitor parking for residential uses. Further, planning approvals often include a reduction in parking requirements from that specified in the Zoning By-law, through Zoning By-law amendments or through requests to pay cash-in-lieu of parking. Assuming future infill development will accommodate 70 percent of the parking requirements on each site, it is estimated that 61 to 167 vehicles will need to be accommodated by on and off-street public parking facilities. **Table 13** provides a summary of the number of parking spaces that may need to be accommodated within

the Chinatown study area based on these assumptions. Additional information regarding the forecasting of intensification opportunities can be found in Appendix F.

Table 13: Net Impacts of Intensification Scenarios

	Low Scenario	High Scenario
Total Parking Spaces required by Zoning By-law	92	162
Parking Spaces Provided On-Site (assume 70% of required By-law, calculated and rounded for each individual site)	**68**	**118**
Parking Spaces Provided Off-Site (assume 30% of required By-law)	24	44
Displaced Parking Spaces due to infill development*	37	123
Total Parking Needed to be Accommodated Off-Site**	**61**	**167**

Note:

** It was assumed that the Cambridge Street Lot would maintain public parking when developed.*

** Assumed to be accommodated on-street or in a public parking facility

4.7 Overall Demand and Supply Projection

4.7.1. Summary of Parking Supply and Demand Projections

Table 14 provides a summary of the Parking Supply and Demand implications of the various trends, projections, forecasts and intensification opportunities. Potential future parking demand as a result of infill development and growth within the Chinatown area is expected to generate between 24 and 72 parking spaces, which can be accommodated by the existing on-street and off-street parking supply. The potential loss of parking supply due to redevelopment of the larger public parking lots is expected to have a significant impact, potentially resulting in the loss of 123 parking spaces.

Table 14: Summary of Parking Supply and Demand Implications				
		Parking Demand Implication	**Parking Supply Implication**	**Comments**
Historical Trends		Parking Demand Stable	Negligible	Parking demand has remained fairly stable.
Population & Employment Projections		+ 70 spaces	Not known	The population & employment data indicates a modest increase in parking demand from new jobs and additional residents.
Travel Demand Forecasts		+ 72 spaces	Not known	Travel demand into Chinatown closely matches the anticipated new employee trips to the area.
Retail Vacancy Levels		Minimal	N.A.	Retail vacancy was low at the time of the study. Completion of Bronson Ave. construction may have a minor impact.
Intensification Opportunities	Low Infill Scenario	+24	-37	Public parking demand by infill development can be expected to generate demands of 24 to 44 additional parking spaces. The redevelopment of existing parking at the Empress Street Parking Lot, and the two privately operated public lots could result in the loss of 37 to 123 parking spaces.
	High Infill Scenario	+44	-123	

4.7.2. Accommodation of Projected Parking Demand

The projected net new parking demand as determined in the previous section is 61 to 167 spaces, see **Table 13**. In order to determine the amount of parking required in the future to balance parking supply and demand, we must determine how much of this increase in demand can be accommodated within existing parking spaces.

Table 15 provides a summary of the existing parking conditions for the study area, between Preston Street and Bay Street.

Table 15: Summary of Existing Parking Conditions – Preston Street to Bay Street				
	Thursday		Saturday (6:30 p.m. to 7:30 p.m.)	Sunday (11:30 a.m. to 12:30 p.m.)
	Noon Peak (11:30 a.m. to 12:30 p.m.)	Critical Hour (6:30 p.m. to 7:30 p.m.)		
On-Street Paid Parking Supply	165	165	165	172
On-Street Paid Parking Demand	90	122	137	143
No. of Available On-Street Paid Parking Spaces	**75**	**43**	**28**	**29**
On-Street Unpaid Parking Supply	559	592	592	587
On-Street Unpaid Parking Demand	340	338	405	475
No. of Available On-Street Unpaid Parking Spaces	**219**	**254**	**187**	**112**
Off-Street Paid Parking Supply	160	160	160	160
Off-Street Paid Parking Demand	121	37	84	100
No. of Available Off-Street Paid Parking Spaces	**39**	**123**	**76**	**60**
Existing Conditions				
Existing Demand	**551**	**497**	**626**	**718**
Existing Supply	884	917	917	919
Existing Occupancy Rate	**62%**	**54%**	**68%**	**78%**

Table 16 provides a summary of the projected future parking demand and supply changes due to the impact of the low and high infill development scenarios.

Table 16: Projected Impact of Future Parking Demand and Supply Changes – Preston Street to Bay Street

	Thursday				Saturday (6:30 p.m. to 7:30 p.m.)		Sunday (11:30 a.m. to 12:30 p.m.)	
	Noon Peak (11:30 a.m. to 12:30 p.m.)		Critical Hour (6:30 p.m. to 7:30 p.m.)					
Existing Conditions								
Existing Demand	551		497		626		718	
Existing Supply	884		917		917		919	
Future Infill Scenario	Low	High	Low	High	Low	High	Low	High
Addition Demand	24	44	24	44	24	44	24	44
Loss of Supply	37	123	37	123	37	123	37	123
Total Future Conditions	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**
Future Demand	575	595	521	541	650	670	742	762
Future Supply	847	761	880	794	880	794	882	796
Future Occupancy Rate	68%	78%	59%	68%	74%	84%	84%	96%
No. of Spaces Required to meet Demand	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
No. of Spaces Required to attain Practical Capacity	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**100**

Table 16 illustrates that if no action were taken to manage parking demand and, if parking demands were spread evenly across the entire study area; the existing parking supply could accommodate the projected high infill development scenario parking demands. Parking demands can be accommodated in all cases but for Sunday at midday, when an additional 100 parking spaces would be required to meet demand. However, the City should not build new parking supply before taking other actions to manage parking demand.

Furthermore, parking demand is not spread evenly throughout the study area. The majority of demand is generated in the central section from Booth Street to Bronson Avenue. As described in **Table 1**, acceptable walking distances for retail, restaurant, and employment uses should be less than 365 meters. The face to face survey confirmed that there is a limit to the distance that motorists are willing to walk from their parking location to their destination. The respondents walked an average of 215 meters from their parked vehicle to their furthest destination.

Therefore, a further analysis is necessary, focussing on the central portion of the study area where the greatest demand for parking occurs. The four existing paid public parking lots that could be redeveloped are also located within this section of the study area. **Table 17** provides a summary of the existing parking supply and demand within the central section of the study area. **Table 18** provides a summary of the projected impact of future parking demand and supply changes within the central portion of the study area.

Table 17: Summary of Existing Parking Conditions – Central Section				
	Thursday		Saturday (6:30 p.m. to 7:30 p.m.)	Sunday (11:30 a.m. to 12:30 p.m.)
	Noon Peak (11:30 a.m. to 12:30 p.m.)	Critical Hour (6:30 p.m. to 7:30 p.m.)		
On-Street Paid Parking Supply	69	69	69	69
On-Street Paid Parking Demand	49	62	65	67
No. of Available On-Street Paid Parking Spaces	**20**	**7**	**4**	**2**
On-Street Unpaid Parking Supply	221	254	254	249
On-Street Unpaid Parking Demand	147	152	190	242
No. of Available On-Street Unpaid Parking Spaces	**74**	**102**	**64**	**7**
Off-Street Paid Parking Supply	160	160	160	160
Off-Street Paid Parking Demand	121	37	84	100
No. of Available Off-Street Paid Parking Spaces	**39**	**123**	**76**	**60**
Existing Conditions Summary				
Existing Parking Demand	317	251	339	409
Existing Parking Supply	450	483	483	478
Existing Occupancy Rate	**70%**	**52%**	**70%**	**86%**

Table 18: Projected Impact of Future Parking Demand and Supply Changes - Central Section								
	Thursday				**Saturday (6:30 p.m. to 7:30 p.m.)**		**Sunday (11:30 a.m. to 12:30 p.m.)**	
	Noon Peak (11:30 a.m. to 12:30 p.m.)		**Critical Hour (6:30 p.m. to 7:30 p.m.)**					
Existing Conditions Summary								
Existing Parking Demand	317		251		339		409	
Existing Parking Supply	450		483		483		478	
Future Infill Scenario	Low	High	Low	High	Low	High	Low	High
Addition Demand	24	44	24	44	24	44	24	44
Loss of Supply	37	123	37	123	37	123	37	123
Total Future Conditions	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**
Future Demand	341	361	275	295	363	383	433	453
Future Supply	413	327	446	360	446	360	441	355
Future Occupancy Rate	83%	110%	62%	82%	81%	106%	98%	128 %
No. of Spaces Required to meet Demand	0	34	0	0	0	23	0	98
No. of Spaces Required to attain Practical Capacity	0	98	0	0	0	91	68	178

Table 16 illustrates that if no action were taken to manage parking demand, the existing supply could accommodate the low infill development projection in all cases except for Sunday at midday.

The high infill development parking demand projection cannot be accommodated by existing parking supply, even for the weekday noon period when paid on-street parking is in effect and parking is proactively enforced. The weekday critical hour can accommodate the high infill development scenario as parking demand is lower and supply is higher as compared to the weekday noon hour peak period.

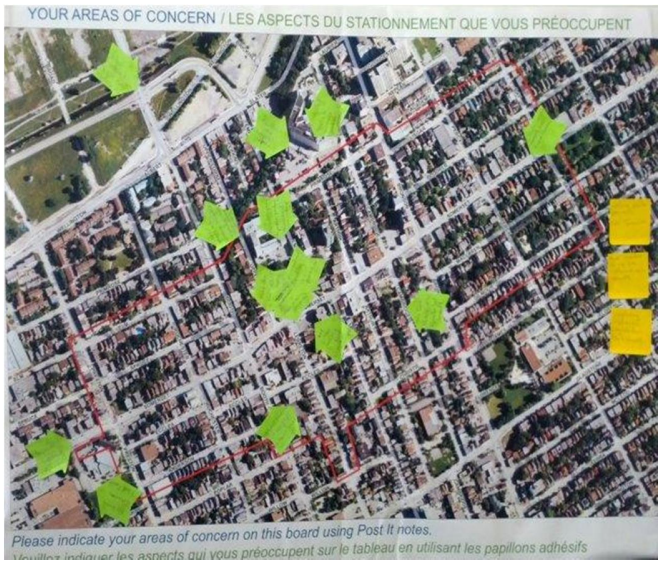
The parking supply will need to be managed against future demands to ensure a balanced parking system.

5.0 STAKEHOLDER CONSULTATION

Stakeholder consultation is an important part of any study where the results have the potential to impact the public. While the analysis of the data collected provides imperial information regarding the operation of parking within the Chinatown area, it is a snapshot of the operations on those days that the data was collected. It is the experience of those living and working in the area that can provide information that may have otherwise not been noticed by the study team during field observations.

Stakeholder events were carried out at multiple points during the study to seek their input. Key stakeholder events include:

- **Stakeholder Meetings**, held October 18, 2012 and January 7, 2013 – The stakeholders included the Chinatown BIA, Somerset West Community Health Centre, Dalhousie Community Association, Centretown Citizens Ottawa Corporation, VrtuCar and a representative from Councillor Holmes Office. St. Luke's Anglican Church was provided all materials and invited to all meetings as well. The October meeting was held to introduce the stakeholders to the project, confirm the study area and to indicate the nature and type of data to be collected. At the January 7th meeting, a presentation of the survey results was made and comments were received.



- **Public Open House (POH)** held on April 17, 2013 – The POH was held at the Dalhousie Community Centre from 4:00 p.m. to 8:00 p.m. The meeting notice was hand delivered to all residents and businesses within the study area. Invitations were also sent to the Councillor's Office and the BIA for distribution. The POH provided an opportunity for the public to review the survey data results and to provide their comments regarding parking issues observed in their neighbourhood. In total, there were 18 attendees that registered on the sign-in sheet and five that provided comment sheets. During the event, attendees were asked to place comments directly on a large map of the area, thus indicating the

location and nature of their concern. The POH Boards and copies of the submitted public comment sheets are provided in Appendix F.

Input from these events provided valuable information to the study team. The comments received at the POH are summarized in the Identification of Issues, Section 6, and Evaluation of Solutions, Section 7 of this report.

6.0 IDENTIFICATION OF ISSUES

6.1 Issues Identified by the Study Team

Based on field observations made during the data collection process and the analysis of existing parking data, a number of issues were identified, including:

Western Section – Preston Street to Booth Street

- There were individual street segments that experienced occupancy levels that exceeded the practical capacity at times; however there is adequate supply throughout the area to accommodate parking demand.
- On Weekdays on-street paid parking was underutilized (during paid parking hours).

Central Section – Booth Street to Bronson Avenue

- On weekdays on-street paid parking was underutilized until 11:30 a.m.
- On Sunday's on-street paid parking was over practical capacity from 10:00 a.m. until 2:00 p.m. when paid parking is not in effect.
- On weekdays, and weekends, on-street paid parking occupancy is over practical capacity from before 6:00 p.m. until after 7:00 p.m. when paid parking is free.
- Sunday on-street unpaid parking was over practical capacity from 10:00 a.m. until 2:00 p.m.
- The City managed Cambridge Street Parking Lot operated above practical capacity on Sunday between 10:30 a.m. and 12:00 p.m. and Saturday between 6:00 p.m. and 8:30 p.m.
- The Empress Street Parking Lot was underutilized (less than 50% occupied) across all times and days.
- The Empress Street parking lot visibility should be promoted to improve the use of the lot.
- In general, public parking lots had low utilization on weekends, likely due to parking pricing (free on-street, paid off-street). On Sunday during the peak on-street parking occupancy period, the four off-street public parking lots had a

residual capacity of 59 parking spaces out of a total capacity of 160 spaces. Combined, the four parking lots were approximately 63 percent occupied.

- On Saturday, the four off-street public parking lots were underutilized between 9:00 a.m. and 6:30 p.m. Peak parking occupancy occurred in the evening at a combined occupancy rate of approximately 58 percent.
- City of Ottawa operated off-street parking lots did not have a maximum parking fee, therefore long duration parkers avoided these lots. Recent modifications to parking pricing have addressed this issue.
- On Primrose Avenue, vehicles were observed parking in excess of the posted time restrictions and the parking occupancy was very high.
- If the future high infill development projection is reached, the area will have insufficient parking to serve future uses.

Eastern Section – Bronson Avenue to Bay Street

- On-street paid parking was underutilized until 11:30 a.m.; and,
- On-street paid parking occupancy exceeded practical capacity on Sunday and Saturday during the dinner hours, parking in these spaces is free on weekends.

6.2 Issues Identified through Public Consultation

A Public Open House was held at the Dalhousie Community Centre on April 17, 2013 to present the information collected and summarized during the study. Participants were provided with comment sheets (refer to Appendix G) and were asked to indicate which of the listed issues were of concern. Out of 18 participants, 5 comment sheets were filled out and submitted. The results are shown in **Table 19.**

Table 19: Summary of POH Comments

My concerns with parking in Chinatown include:	Number of Responses
Lack of Loading Zones	3
Lack of employee and volunteer parking	1
Potential future redevelopment of existing parking lots	1

The public was also given the opportunity to indicate any other comments or concerns they may have with Chinatown parking. A summary is provided in **Table 20** below, grouped by general topic area. It should be noted that some of the comments are contradicting, given the different perceptions of the people in the community.

Table 20: Other Comments or Concerns Noted by the Public

Issue	Comments
Loading Zones	• Businesses must be required to receive deliveries during non-rush-hour times • Stopping in No-Stopping or tow away zones should be ticketed right away without warning
Active Transportation	• Interested in seeing improvements to cycling safety, cycling infrastructure and overall cycling experience • Improve bicycle operations on Somerset Street
Concerns with Residential Streets	• Parking management strategy is focused on local businesses and tourism with no mention of improving life for residents • Impact of parking, illegal stopping and loading can be highly detrimental to residents • There are currently several wholesale businesses operating on Somerset Street when wholesale businesses should not be allowed in residential neighbourhoods • Current conditions at Upper Lorne Place and Somerset Street are very dangerous due to illegal parking • A focus on business and development seems to overlook those who pay residential taxes and cannot get out of their driveway because of parking (Upper Lorne Place)

Table 20: Other Comments or Concerns Noted by the Public	
Issue	**Comments**
	• Keep tour buses off residential streets • Implement an online visitor permitting system • Have the Saint-Vincent Hospital manage their parking demands and impacts on Primrose Avenue
Miscellaneous	• Surface parking lots are an 'eye sore' and loss of neighbourhood development opportunities • Interested in seeing parking lots developed – they are underused and could provide much better use to the neighbourhood • Provide more incentive for parking in off-street parking lots • Include public parking for the future development at 770 Somerset Street • Make use of empty CUSO lot on Sundays • Provide wayfinding signs to the off-street parking lots from the highway • How can the neighborhood be linked to the new Light Rail Transitway to maximize benefits? • Need green space more than parking • Do not permit summer parking on Basketball courts at the Plant Recreation Centre

6.3 Summary of Issues

Based on a synthesis of the issues presented above, the following summarizes the issues identified by the Chinatown Local Area Parking Study:

High On-Street Parking Occupancy Rates

- On Sundays, on-street paid parking was over practical capacity from 10:00 a.m. until 2:00 p.m. from Booth Street to Bronson Avenue.
- On weekends, on-street paid parking occupancy is over practical capacity from before 6:00 p.m. until after 7:00 p.m. from Booth Street to Bay Street.
- On weekdays, on-street paid parking occupancy is over practical capacity from before 6:00 p.m. until after 7:00 p.m. from Booth Street to Bronson Avenue.
- On Sundays, on-street unpaid parking was over practical capacity from 10:00 a.m. until 2:00 p.m. from Booth Street to Bronson Avenue.

Low On-Street Paid Parking Occupancy Rates:

- On Weekdays on-street paid parking continued to be underutilized from 9:00 a.m. to 5:30 p.m. from Preston Street to Booth Street.
- On Weekdays on-street paid parking was underutilized from 9:00 a.m. until 5:30 p.m. from Bronson Avenue to Bay Street.

Off-Street Public Parking Lots with High Occupancy Rates:

- The City managed Cambridge Street Parking Lot operated above practical capacity on Sunday between 10:30 a.m. and 12:00 p.m. and Saturday between 6:00 p.m. and 8:30 p.m.

Low utilization of Off-Street Parking Lots - Weekends and Evenings:

- The Empress Street Parking Lot was underutilized (less than 50% occupied) across all time period and on each survey day.
- In general, public off-street parking had low utilization on weekends when parking is free on-street, but paid off-street. On Sunday during the peak on-street parking occupancy period, the four off-street public parking lots had a residual capacity of 59 parking spaces out of a total capacity of 160 spaces. Combined, the four parking lots were approximately 63 percent occupied.
- On Saturday, the four off-street public parking lots were underutilized between 9:00 a.m. and 6:30 p.m. Peak parking occupancy occurred in the evening at a combined occupancy rate of approximately 58 percent.

Too much Overtime Parking resulting in a lack of short-term on-street parking:

- Weekend overtime parking on Primrose Avenue reduces the number of parking spaces available for short term parking
- Overtime parking on weekends occurs on many streets in the study area

Lack of Tour Bus Parking space:

- There is a desire by the BIA to provide an alternative location for Tour Bus parking
- Residents are against tour bus parking on local streets

Disruptive Delivery Truck Activity at Somerset Street and Upper Lorne Place

- Specifically related to commercial activity along Somerset Street near Upper Lorne Place.

Desire for more Bicycle Parking

- A number of comments were received requesting additional bicycle parking throughout the Somerset corridor.

Potential for Infill Development to Reduce Public Parking

- Proposed infill development of off-street public parking lots could result in a loss of well situated parking lots.
- If the high infill development scenario projection is reached, area will have insufficient parking to serve future uses.

7.0 PARKING TOOLBOX

7.1 Potential Parking Measures

There are a number of strategies that can be implemented to influence the availability of parking. This section provides an overview of these strategies and describes their potential applicability to the Chinatown area.

Table 21: The Parking Toolbox		
Tool	**Description / Rationale**	**Applicability to Chinatown**
1. Bicycle parking 	Bicycle parking represents a parking need in its own right. However improvements to bicycle parking can also encourage more people to cycle, which in turn reduces the demand for vehicular parking.	This measure is applicable to Chinatown. There are a number of single spaced Post and Ring bicycle parking spaces along Somerset Street. There are also bicycle racks at the Dalhousie Community Centre and in front of Laurier Optical. A Bixi bike station has been located at the intersection of Somerset Street and Arthur Street. Additional bicycle parking could be included within the City of Ottawa operated parking lots if required.
2. Transit service 	As more people use transit, the demand for parking is reduced. Options to encourage transit ridership include increasing the number/frequency of routes and promoting transit in the community.	This measure is applicable to Chinatown. However implementation would fall under the jurisdiction of OC Transpo. Any improvements to transit service could be expected to decrease parking demand.

Table 21: The Parking Toolbox		
Tool	**Description / Rationale**	**Applicability to Chinatown**
3. Car sharing  	Car sharing helps reduce the number of cars per household. Rather than buying a vehicle, residents have the option of using transit, and active modes to meet the majority of the travel needs, with the convenience of having access to a vehicle when necessary. Under such arrangements, overall parking demand is reduced since more trips are made by alternative modes and vehicles are shared among multiple people.	This measure is applicable to Chinatown. Car sharing is active in the Chinatown area. VRTUCAR provides a vehicle at the Cambridge Street Parking Lot which is accessible to members of the service.

Table 21: The Parking Toolbox		
Tool	**Description / Rationale**	**Applicability to Chinatown**
4. Travel Demand Management (TDM) 	Travel demand management programs targeted at employees can help reduce parking demand by promoting use of transit, carpooling, and telework. TDM has two important benefits from a parking perspective: • for employees, ride sharing, taking transit or working from home results in less employee parking demand • residential parking demand may also decline if the decision to take the bus or carpool to work allows households to forgo the purchase of an additional vehicle.	This measure is applicable to Chinatown. The effectiveness of this measure will depend to a certain extent on the type of employees working in the Chinatown area. For example, telework is not likely to be a viable option for people working within the retail or service sectors. Carpooling may also prove more challenging for workers of small retail establishments, whose hours of work may differ significantly from the traditional 9-to-5 workday. However, transit is a feasible option for both retail and office workers, and promotion of transit is therefore considered applicable to the Chinatown area.

Table 21: The Parking Toolbox		
Tool	**Description / Rationale**	**Applicability to Chinatown**
5. Promotion of off-street parking spaces 	In cases where the off-street parking supply is underutilized it may be appropriate to implement signage or other marketing measures, to increase the viability of the off-street parking space supply. Other measures to promote off-street parking spaces include parking pricing measures	This measure is applicable to Chinatown. The public off-street parking lots were found to be underutilized. The Empress Street Parking Lot does not have good visibility. The entrance is not obvious, and potential customers cannot see if there are available spaces until after they enter the lot.
6. Off-street public parking supply 	This measure involves the provision of publicly accessible, off-street parking spaces. Such spaces may be provided through the construction of new public parking facilities, the expansion of existing facilities, or from reconfiguring of existing lots to optimize the number spaces. In cases where parking is underutilized, this measure could also involve divesting of parking assets.	This measure is applicable to Chinatown. The Empress Street Parking Lot at 760 Somerset Street was found to be significantly underutilized. If reduced parking pricing and security improvements do not increase the utilization of the parking lot, the City could consider divesting of its interests in this parking facility. Further, 98 additional parking spaces will be required in the central portion of the study area by 2031 if the high demand projection is reached (this projection takes into account the potential loss of 20 spaces at the Empress Lot).

Table 21: The Parking Toolbox		
Tool	**Description / Rationale**	**Applicability to Chinatown**
7. Off-street private parking supply 	This measure involves working with private landowners with underutilized, off-street parking to increase the number and quality of parking spaces available for public use, including providing a variety of payment options.	This measure is applicable to Chinatown. The parking lot at Saint-Vincent's Hospital and the Dominican College could be used on Sundays when on-street parking demand is highest. Likewise the employee lot for CUSO is mostly empty on Sundays when the demand for parking generated by nearby places of worship is at its highest.
8. Curb-side parking supply 	The number of curbside parking spaces is influenced by a number of factors, including: location and number of accesses (driveways), location of transit stops, location of loading zones, and the type of parking provided (parallel or angle parking on one side or both sides of the street). By examining these factors on a street by street basis it may be possible to increase the number of on-street parking spaces.	This measure is applicable to Chinatown. There may be an opportunity to add parking on Cooper Street between Bronson Avenue and Percy Street, and on Cambridge Street between Somerset Street and Christie Street, and on Eccles Street where there is currently a No Stopping zone just west of Booth Street (the old grocery store lane), subject to community consultation.

Table 21: The Parking Toolbox

Tool	Description / Rationale	Applicability to Chinatown
9. Curb-side parking regulations 	Changes in parking regulations may address: - When parking time limits are in effect(hours / days of the week) - The maximum parking duration Parking regulations influence parking turnover, which in turn influences the availability of spaces. For example, by reducing the maximum parking time limit (from two hours to one hour), people tend to park for shorter periods of time providing space for shorter duration parking needs, thus freeing up space for commercial activity. However, such restrictions may represent a burden to residents, as their guests rely on on-street parking. Similar to parking pricing, the maximum parking duration can vary by location, day of week, or time of day to ensure an adequate level of parking availability.	This measure is applicable to Chinatown. For example, the City could consider increasing the maximum permitted parking durations on Somerset Street where utilization is consistently below practical capacity.

Table 21: The Parking Toolbox

Tool	Description / Rationale	Applicability to Chinatown
10. On-street parking permits 	Parking permits are used to exempt eligible permit holders from certain on-street parking regulations. For example, residential parking permit holders are allowed to park for longer than the maximum time stipulated for their street without being ticketed, subject to certain conditions and limitations.	This measure is applicable to Chinatown. There are four residential parking permit zones within the study area. Overall, the program is under subscribed. It should be noted that more use of the program may have a negative impact on availability of short-term parking space as permit holders are permitted to park over the posted time regulations.

Table 21: The Parking Toolbox

Tool	Description / Rationale	Applicability to Chinatown
11. Parking pricing 	This measure involves modifying existing parking rates to encourage an appropriate level of available parking spaces. It could also involve introducing paid parking on streets which are currently free, or adjusting the hours when fees are in effect. Parking pricing is generally used to ensure the availability of parking in retail areas and public off-street lots, and is not typically used in residential areas. Rate adjustments may be implemented on an area wide basis or limited to specific streets. Rates may also be fixed or variable. In a performance-based system, rates are set to achieve certain objectives, such as a target occupancy level. The goal is to maximize the use of on-street parking, yet still ensure an adequate number of vacant spaces. To achieve this goal, parking rates may vary by location, day of week, or time of day.	Parking pricing adjustments of on- and off-street parking is applicable to Chinatown. On-street paid parking could be introduced on Saturdays, Sundays, and evenings when and where parking is consistently operating above practical capacity to redistribute demand and ensure there is some available supply for new short-term parkers. In an effort to promote the use of their off-street lots, the City, based on the findings of this study, introduced maximum parking rates in March 2013. Following monitoring of the new rates, the City has decided to offer free evening parking at the Empress Street Parking Lot (7 days a week) and at the Cambridge Street Parking Lot (Sunday to Thursday).

Table 21: The Parking Toolbox		
Tool	**Description / Rationale**	**Applicability to Chinatown**
12. Parking enforcement	Enforcement ensures that parking rules are being followed, and is thus a key element of an equitable parking system. However, in commercial areas, aggressive enforcement may be counterproductive if it discourages people from visiting. As a result, enforcement is most appropriate for addressing safety issues and ensuring availability of spaces in residential areas.	Parking enforcement is present within the Chinatown area seven days per week. Proactive enforcement of on-street parking occurs Monday through Friday, and reactively on weekends. Overtime parking is not generally enforced on weekends. Since availability of parking spaces on weekends is commonly cited as a concern, enforcement continues to have a role to play in ensuring parking regulations are being followed, specifically overtime parking which tends to be greater on Sundays when demand is also highest.
13. Remote (satellite) parking	This measure is effective if underutilized parking is available near commercial districts which can be used to meet the parking demand. For parking lots beyond the acceptable walking distance, a shuttle service is required for shoppers between the parking lot and various retail destinations.	This measure is not appropriate for Chinatown. Existing off-street parking lots are underutilized. There are no parking facilities outside of the Chinatown area in close proximity that could function as a remote parking facility, nor do the types of uses lend themselves to such an approach.

Table 21: The Parking Toolbox

Tool	Description / Rationale	Applicability to Chinatown
14. Development agreements (i.e. developer provided public parking, cash-in-lieu of parking payment to fund municipal parking facilities	Where parking supply is scarce, there may be an opportunity to provide public parking as part of private developments. In contrast, an overabundance of parking may be addressed by reducing parking requirements for new developments. Cash-in-lieu of parking allows developers to pay certain sums of money in exchange for providing less parking than the minimum required under the Zoning By-law. Ideally, the money collected is used to fund municipal parking projects or initiatives to reduce travel demand. Another option is to encourage developers to "unbundle" parking. Under such an approach, tenants and homeowners pay for parking separately from other costs - a practice which can reduce parking demand by presenting households with the full cost of parking.	Developer agreements are generally applicable for this area. Opportunities to unbundle parking or provide public parking as part of private developments are considered to have particular merit. Cash-in-lieu of parking is appropriate provided the demand can or will be accommodated by the City's Parking Program. Should short-term public demand not be reasonably accommodated at City managed lots, it may be appropriate for a private developer to enter into an agreement with the City to operate a publicly accessible short-term parking lot.

Table 21: The Parking Toolbox

Tool	Description / Rationale	Applicability to Chinatown
15. Zoning provisions 	The Zoning By-law establishes the amount of parking to be provided on a given site, generally as a function of the development type and size. Minimum parking requirements have traditionally been set so that the majority of parking demand is accommodated on the site, minimizing impacts on adjacent streets. However, adjustments to minimum parking provisions (or the introduction of maximum limits) may be considered to meet other objectives, such as promoting transit near rapid transit stations. Some municipalities also allow a reduction in the minimum parking requirements if the developer implements a travel demand management program. Given the above, any adjustment to the parking provision in the Zoning By-law will have the potential to impact both on-street parking demand as well as transit usage. Another strategy is to allow for shared parking between more than one land use. Such an approach recognizes that where the peak parking demand for adjacent developments occurs at different times, there may be opportunity to share parking, making more efficient use of urban space.	This measure is applicable to Chinatown. The current Traditional Mainstreet Zone permits required parking for a use to be located on another lot as long as the other lot is located in the same city block, or on a lot on the opposite side of the public street on which the use requiring the parking is located. Prior to approving an application for variance or re-zoning in the Chinatown area, the associated parking implications should be carefully reviewed. This review should consider both the current parking situation (as observed in on-going monitoring), as well as any anticipated changes in parking supply and demand.

7.2 Stakeholder Acceptability

Participants of the POH were also provided with a list of tools that could be used to address parking concerns in the Chinatown neighbourhood along with extra space to leave comments or suggestions. A summary of the 5 comment sheet responses are provided in **Table 22** below.

Table 22: Public Open House Participant Comments

I would support these tools to address my concerns:	**Number of Responses**
Optimize existing supply – Re-purpose existing private lots to provide parking supply, reconfigure existing lots to maximize spaces, optimize curb-side parking supply	3
Increase municipal parking supply	0
Adjust parking regulations	1
Adjust pricing	3
Adjust enforcement	4
Use of on-street permit system	1
Policy based approaches – Adjust zoning provisions, use development agreements (i.e. cash-in-lieu, developer-provided public parking)	1
Encourage active modes – Improve bicycle parking, enhancing walking and cycling infrastructure	3
Increase transit service, promote carpooling/car sharing and teleworking	2
Other comments/suggestions • One individual specifically stated not to use cash-in-lieu approach • One individual specifically stated not to increase municipal parking supply • On-street parking usage between the hours of: 8:00 a.m. to 11:00 a.m., and 2:00 p.m. to 4:00 p.m. is low; parking pricing should be lower during these hours. This could dramatically improve businesses in the area.	

8.0 RECOMMENDATIONS

The summary of issues was identified in Section 6.3, while Section 7.1 provided an overview of the various measures in the "parking toolbox" that can be used to address parking concerns. This chapter brings together the various tools that can be applied to the identified issues to address Chinatown parking issues.

8.1 Recommendations to Address Parking Issues

To address issues raised in the Summary of Issues section 6.3; the following recommendations are put forward:

Parking Demand Management Initiatives in the Chinatown Area

- Explore the need for additional bicycle parking facilities along Somerset Street and install new bicycle parking as appropriate.
- Provide space for the Capital Bixi bicycle program on City property as appropriate;
- Continue to support car sharing services by providing spaces at City facilities.
- Continue to support the Transportation and Bicycle Master Plans in an effort to reduce automobile use.

On-Street Paid Parking Areas

- Consider improving the use of on-street parking in the study area by reducing parking fees and/or increasing permitted duration where and when occupancy levels are consistently at or below 50% throughout the day.
- Consider improving availability of parking, particularly in the centre portion of the study area, on weekends (midday and evenings), and on weekday evenings by introducing or reintroducing paid parking. It is noted that other adjacent commercial areas to the east and west do not charge for on-street parking on Saturdays, Sundays or in the evenings therefore, a broader policy review may be appropriate.

On-Street Unpaid Parking Areas

- Request owners of private parking lots that are underutilized at certain times of the week to permit use by neighbouring facilities that are very busy at those same times. Potential parking facilities include the CUSO lot at 44 Eccles Street, the Dominican University College on Empress Street, and the Ottawa Chinese Alliance Church at 22 Eccles Street.

- Provide the parking study survey results to Saint-Vincent Hospital, regarding employee and visitor parking on Primrose Avenue. The hospital may adjust parking rates at their own parking lot or find other off-street parking.

- Explore the potential of increasing on-street parking supply (through community consultation process) on:

    - Cooper Street between Bronson Avenue and Percy Street;
    - Eccles Street from Bell Street to Preston Street; and,
    - Cambridge Street from Somerset Street to Christie Street.

Off-Street Public Parking Lots

- Continue to monitor the parking occupancy of City managed off-street parking lots and adjust rates accordingly.

- Promote off-street parking lots by providing on-street signage.

- Advise the private lot operators that newer machines which accept a variety of payment methods would likely improve use of their lots.

Tour Bus Parking

- Review potential of relocating the tour bus parking space, or adjusting how the existing space is managed.

Loading Zone for Truck Deliveries on Somerset Street

- Work with various businesses in the vicinity of Somerset Street at Upper Lorne Place to reduce disruption caused by delivery vehicle activity.

Future Infill Development

- Consider the contents of this study, and the results of on-going monitoring, as well as any anticipated changes in parking supply and demand when determining the appropriateness of development applications to reduce parking.
- Promote “unbundling” of parking as part of the development in an effort to reduce parking demands at new residential buildings.
- Encourage the establishment of short-term public parking within new private sector developments to reduce the overall amount of parking in the area, and to ensure a supply and demand balance in the future.

APPENDIX A

Summary of Previous Parking Studies

Study Name		Somerset Street West Planning Study	Somerset Heights - Transportation and Parking Study	Somerset Heights Parking Turnover Study
Year		1988	1996	2006
Author		Haigis Macnabb Deleuw Ltd	J.P. Braaksma & Associates Ltd.	Giffels Associates Limited
Boundaries		Somerset Street, from Percy Street to Rochester Street, as well as areas considered to be an acceptable walking distance from Somerset (see map).	Area bounded by Bay Street on the east, Rochester Street on the west, Primrose/Lisgar on the north and Eccles/Christie/James on the south. (See Figure 1.1)	Somerset Street, the area between Preston Street and Bay Street. In total, area consisted of 215 spaces.
Overview		Seeks to determine if there is sufficient parking available to support the retail uses in the study area.	Study initiated to address parking issues such as illegal parking, under-utilized off-street lots and meeting the high parking demand along Somerset Street.	Giffels was retained by Traffic and Parking Operations Branch to carry out a parking turnover study in the Somerset Heights area.
Overall Conclusion		There are parking deficiencies related to the Somerset Street retail strip.	There are parking deficiencies in the study area. During peak periods parking on some streets is well over capacity and increased enforcement is needed.	Occupancy was highest during the dinner and lunch periods. Turnover seems satisfactory as most cars parked for less than an hour (max duration is 2 hours)
Count Interval		30 minutes	30 Minutes	30 Minutes
Somerset Street ONLY weekday	Study date	Thur, June 25, 1987	Thur, Nov 3, 1994	N/A
	Study time	12 p.m. - 8 p.m.	11:30 - 2:30 p.m. and 6:30 p.m. - 8:30 p.m.	
	Capacity of study area	71	90	
	Average occupancy rate	90%	71%	
	Peak occupancy rate	117%	106%	
	Average duration	0.98 hours	-	
	Turnover (over study period)	4.75	-	
On-street weekday	Study date	Thur, June 25, 1987	Thur, Nov 3, 1994	Fri, April 21, 2006
	Study time	12 p.m. - 8 p.m.	11:30 a.m. - 2:30 p.m.	10 a.m. - 8 p.m.
	Max capacity of study area	350	505	149
	Min capacity of study area	N/A	N/A	N/A
	Average occupancy rate	83%	58%	52%
	Peak occupancy rate	97%	71%	84%

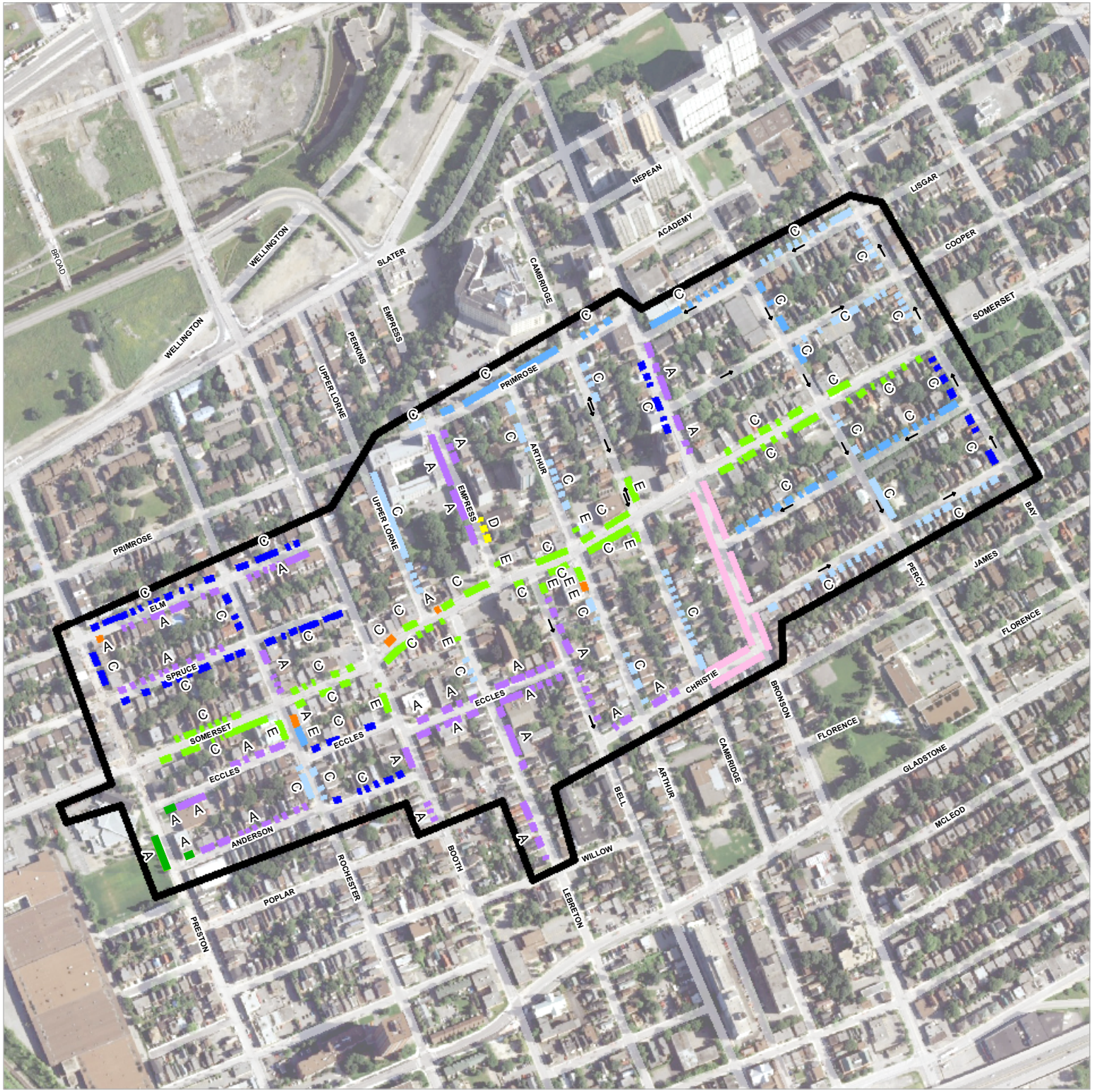
Study Name		Somerset Street West Planning Study	Somerset Heights - Transportation and Parking Study	Somerset Heights Parking Turnover Study
	Time of peak occupancy rate	12 p.m. - 1 p.m.	12:30 p.m. - 1 p.m.	6:30 p.m. - 7 p.m.
	Average duration	1.33 hours	-	0.88 hours
	Turnover (over study period)	3.51	-	6.36
On-street weekday evening	Study date	N/A	Thur, Nov 3, 1994	N/A
	Study time		6:30 p.m. - 8:30 p.m.	
	Total capacity		505	
	Average occupancy rate		71%	
	Peak occupancy rate		76%	
	Time of peak occupancy rate		7:30 p.m. - 8:00 p.m.	
	Average duration		-	
	Turnover (over study period)		-	
On-street weekend day	Study date	Sat., June 20, 1987	Sat, Nov. 5, 1994	Sat, April 29, 2006 and Sun, April 30, 2006
	Study time	10 a.m. - 6 p.m.	11:30 a.m. - 2:30 p.m.	10 a.m. - 8 p.m.
	Max capacity of study area	350	505	149
	Average occupancy rate	89%	80%	74%
	Peak occupancy rate	113%	85%	88%
	Time of peak occupancy rate	12 p.m. - 1 p.m.	1 p.m. - 1:30 p.m.	12 p.m. - 12:30 p.m. on Sun, April 30
	Average duration	1.24 hours	-	0.97 hours
	Turnover (over study period)	4.08	-	7.36
Off-street weekday	Study date	Thur, June 25, 1987	Thur, Nov 3, 1994	Fri, April 21, 2006
	Study time	12 p.m. - 8 p.m.	11:30 a.m. - 2:30 p.m.	10 a.m. - 8 p.m.
	Max capacity of study area	138	721	67 (these spots are from Municipal lots 11 &12)
	Average occupancy rate	59%	65%	25%
	Peak occupancy rate	81%	68%	78%
	Time of peak occupancy rate	1 p.m. - 2 p.m.	12:30 p.m. - 1 p.m.	12:30 p.m. - 1 p.m.

Study Name		Somerset Street West Planning Study	Somerset Heights - Transportation and Parking Study	Somerset Heights Parking Turnover Study
	Average duration	1.32 hours	N/A	1.02 hours
	Turnover (over study period)	2.63	N/A	2.70
Off-street weekday evening	Study date	N/A	Thur, Nov 3, 1994	N/A
	Study time		6:30 p.m. - 8:30 p.m.	
	Max capacity of study area		445	
	Average occupancy rate		53%	
	Peak occupancy rate		56%	
	Time of peak occupancy rate		7:30 p.m. - 8:00 p.m.	
	Average duration		-	
	Turnover (over study period)		-	
Off-street weekend day	Study date	Sat, June 20, 1987	Sat, Nov 5, 1994	Sat April 29, 2006 and Sun April 30, 2006
	Study time	10 a.m. - 6 p.m.	11:30 a.m. - 2:30 p.m.	10 a.m. - 8 p.m.
	Max capacity of study area	138	445	67 (these spots are from Municipal lots 11 &12)
	Average occupancy rate	36%	61%	37%
	Peak occupancy rate	49%	64%	81%
	Time of peak occupancy rate	12 p.m. - 1 p.m.	1:00 p.m. - 1:30 p.m.	12 p.m. - 12:30 p.m. on Sun April 30
	Average duration	1.57 hours	-	1.11 hours
	Turnover (over study period)	1.61	-	3.44
Conclusions		1. There are parking deficiencies related to the Somerset Street retail strip.	1. Parking related issues in Somerset Heights included: illegal parking, higher demand than supply along Somerset Street, a lack of enforcement and underutilized off-street lots.	1. The highest 1/2 hour occupancy rates for on-street spaces occurred at times when on-street parking was free of charge (parking is free after 5:30 p.m. in Somerset Heights).

Study Name	Somerset Street West Planning Study	Somerset Heights - Transportation and Parking Study	Somerset Heights Parking Turnover Study
	2. The weekday deficiencies during the peak demand periods (lunch and dinner period) were found to be between 50-70 spaces.	2. Parking surveys found that during the peak periods, parking on some streets was well over capacity while parking in off-street lots was under capacity.	2. Off-street parking was influenced by on-street rates. Off-street lots were well below capacity when on-street parking was free unless on-street parking was approaching capacity.
	3. The weekend deficiencies during the peak demand periods were between 50-80 spaces.	3. There is a shortage of about 50-100 commercial parking spaces within the study area during peak periods.	3. Occupancy peaks generally coincided with lunch and dinner periods.
		4. Tour buses parking on residential streets was confirmed as a common (and illegal) phenomenon.	4. Duration of occupancy for on-street spaces was not a concern as the average duration was typically less than an hour (2 hours is the posted maximum).
Recommendations	1. Install parking meters along the commercial section of Somerset Street and on adjacent side streets.	1. Consider shortening permitted parking times on residential streets to make Somerset Street relatively attractive for parkers.	1. Turnover rates are important to economic health of the Somerset area and should be monitored to ensure that they are not significantly changed.
	2. Residential parking permit program should be introduced to allow longer time periods of parking for the residents and their visitors.	2. Request that the RMOC permit parking on both sides of Somerset Street and provide on-street angled parking where possible near the commercial portion of Somerset Street to increase supply of parking.	2. Should average duration increase and approach the two hour max or significantly reduce the turnover rate, consideration should be given to changing the posted maximum to 1 hour.
	3. Parking time limits should be introduced and enforced for residential streets to provide short-stay visitor parking and eliminate long-stay (employee) parking.	3. Install parking meters on side-streets within the commercial portion of Somerset Street. Consider reviewing on-street parking rates to reduce commercial parking in residential streets and promoting use of off-street lots.	3. Parking capacity was sufficient to meet observed demand. On Sun mornings, however, the occupancy exceeded practical capacity. An option to be considered is to extend time restrictions to include Sun as a means of increasing turnover on Sun mornings.
	4. Off-street parking must be developed. Off-street parking should be in the form of several smaller parking facilities (30-40 spaces) located near areas with existing parking "deficiencies."	4. Increase enforcement at critical times including: Sat, Sun, holidays, and evenings. Change parking times to be consistent (i.e. 7:00 a.m. – 7:00 p.m. throughout study area).	

APPENDIX B

Time-of-Day Parking Restrictions



CHINATOWN

LOCAL AREA PARKING STUDY

MAXIMUM PARKING DURATION AND TIME-OF-DAY PARKING RESTRICTIONS

SATURDAY, NOV 3, 2012

LEGEND

Maximum Parking Duration Restrictions

- Loading Zone
- Unmetered, 1 hour signed
- Unmetered, 2 hours signed
- Unmetered, 3 hours signed
- Unmetered, 3 hours unsigned (By-Law Limit)
- Metered, 2 hours signed, Payment Required 8:00am-5:30pm, Monday-Friday
- Metered, 3 hours unsigned, Free Parking on Saturday and Sunday
- No Parking (during Time-of-day Restrictions)
- Construction (no data)

Time-of-Day On-Street Parking Restrictions

A	No Signed Time-of-Day Restrictions
B	7:00am - 5:30pm
C	7:00am - 7:00pm
D	8:00am - 5:00pm
E	8:00am - 5:30pm
F	9:00am - 5:00pm
G	7:00am - 5:00pm

Study Area

- Perimeter of Study Area

MAP DRAWING INFORMATION:
ORTHO PHOTOS FROM CITY OF OTTAWA, 2010

MAP CREATED BY: ES
MAP CHECKED BY: LDG
MAP PROJECTION: NAD 1983 UTM Zone 18N

Scale: 1:6,313
1 cm = 63 meters
1 in = 526 feet
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DILLON CONSULTING

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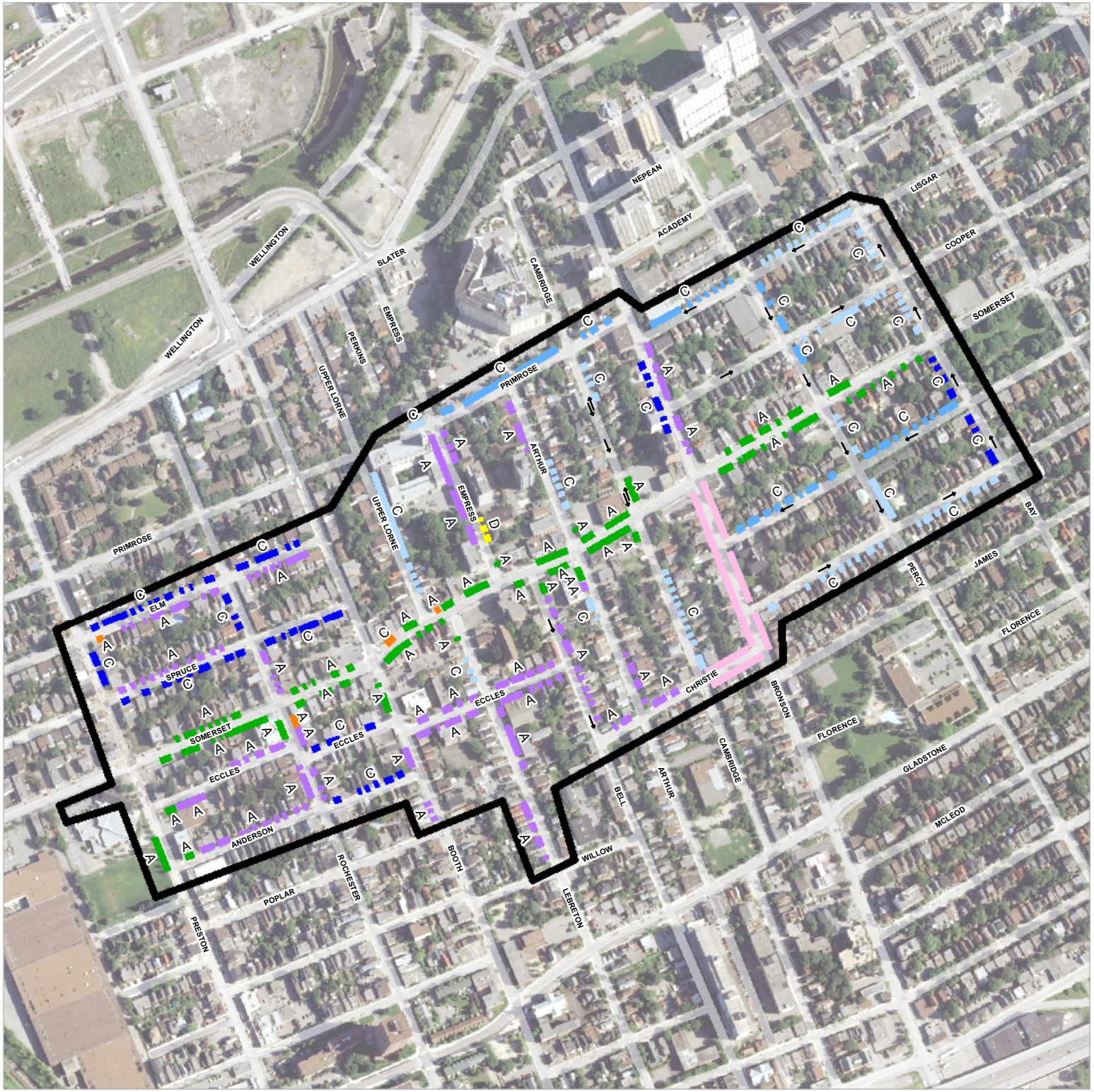
DATE: 21 June 2013



CHINATOWN

LOCAL AREA PARKING STUDY

MAXIMUM PARKING DURATION AND TIME-OF-DAY PARKING RESTRICTIONS

SUNDAY, NOV 4, 2012

LEGEND

Maximum Parking Duration Restrictions

- Loading Zone
- Unmetered, 1 hour signed
- Unmetered, 2 hours signed
- Unmetered, 3 hours signed
- Unmetered, 3 hours unsigned (By-Law Limit)
- Metered, 2 hours signed, Payment Required 8:00am-5:30pm, Monday-Friday
- Metered, 3 hours unsigned, Free Parking on Saturday and Sunday
- No Parking (during Time-of-day Restrictions)
- Construction (no data)

Time-of-Day On-Street Parking Restrictions

A	No Signed Time-of-Day Restrictions
B	7:00am - 5:30pm
C	7:00am - 7:00pm
D	8:00am - 5:00pm
E	8:00am - 5:30pm
F	9:00am - 5:00pm
G	7:00am - 5:00pm

Study Area

- Perimeter of Study Area

MAP DRAWING INFORMATION:
ORTHO PHOTOS FROM CITY OF OTTAWA, 2010

MAP CREATED BY: ES
MAP CHECKED BY: LDG
MAP PROJECTION: NAD 1983 UTM Zone 18N

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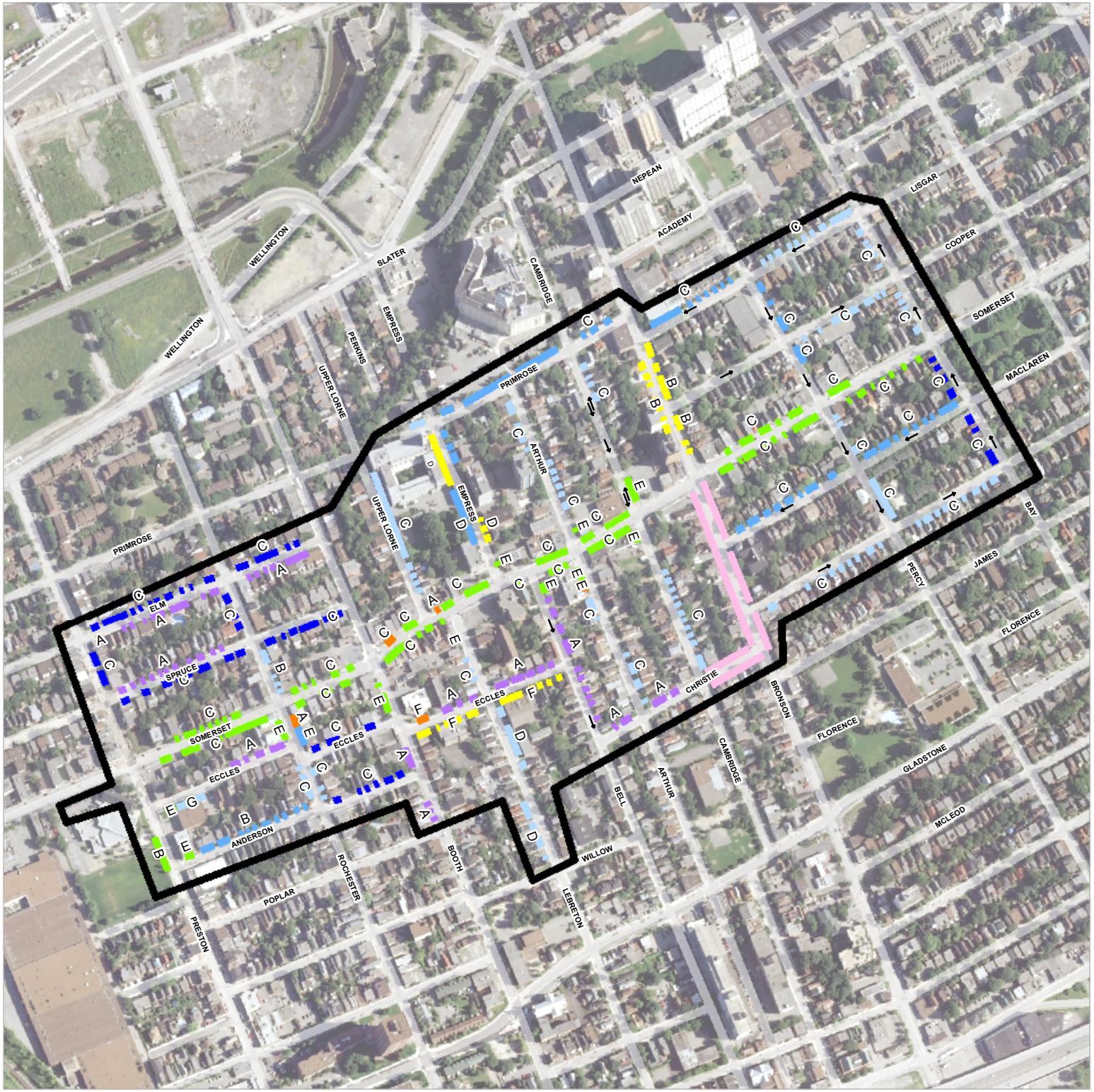

CHINATOWN

LOCAL AREA PARKING STUDY

MAXIMUM PARKING DURATION AND TIME-OF-DAY PARKING RESTRICTIONS

THURSDAY, NOV 8, 2012

LEGEND

Maximum Parking Duration Restrictions

- Loading Zone
- Unmetered, 1 hour signed
- Unmetered, 2 hours signed
- Unmetered, 3 hours signed
- Unmetered, 3 hours unsigned (By-Law Limit)
- Metered, 2 hours signed, Payment Required 8:00am-5:30pm, Monday-Friday
- Metered, 3 hours unsigned, Free Parking on Saturday and Sunday
- No Parking (during Time-of-day Restrictions)
- Construction (no data)

Time-of-Day On-Street Parking Restrictions

A	No Signed Time-of-Day Restrictions
B	7:00am - 5:30pm
C	7:00am - 7:00pm
D	8:00am - 5:00pm
E	8:00am - 5:30pm
F	9:00am - 5:00pm
G	7:00am - 5:00pm

Study Area

- Perimeter of Study Area

MAP DRAWING INFORMATION:
ORTHO PHOTOS FROM CITY OF OTTAWA, 2010

MAP CREATED BY: ES
MAP CHECKED BY: LDG
MAP PROJECTION: NAD 1983 UTM Zone 18N

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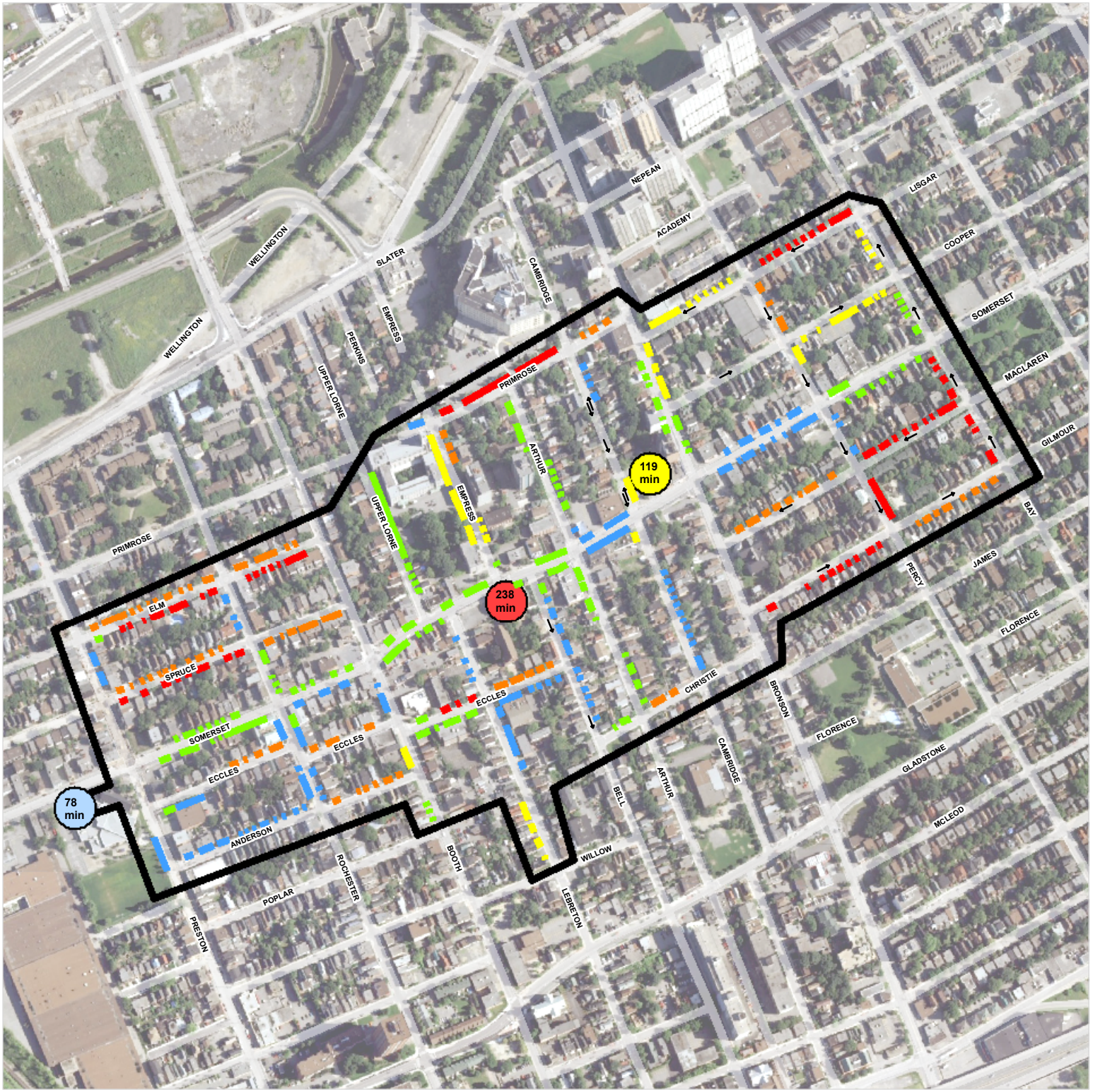
PROJECT: 12-6952
STATUS:
DATE: 21 June 2013

APPENDIX C

Average Parking Duration



CHINATOWN

LOCAL AREA PARKING STUDY

AVERAGE PARKING DURATION FOR THURSDAY, NOV 8, 2012

LEGEND

Average Consecutive Minutes Parked for On-Street Parking

- 0 - 60 minutes
- 60 - 90 minutes
- 90 - 120 minutes
- 120 - 180 minutes
- 180+ minutes

Average Consecutive Minutes Parked for Off-Street Parking

- 0 - 60 minutes
- 60 - 90 minutes
- 90 - 120 minutes
- 120 - 180 minutes
- 180+ minutes
- xxx min — xxx minutes

Study Area

- Perimeter of Study Area

MAP DRAWING INFORMATION:
ORTHO PHOTOS FROM CITY OF OTTAWA, 2010

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MAP CHECKED BY: LDG
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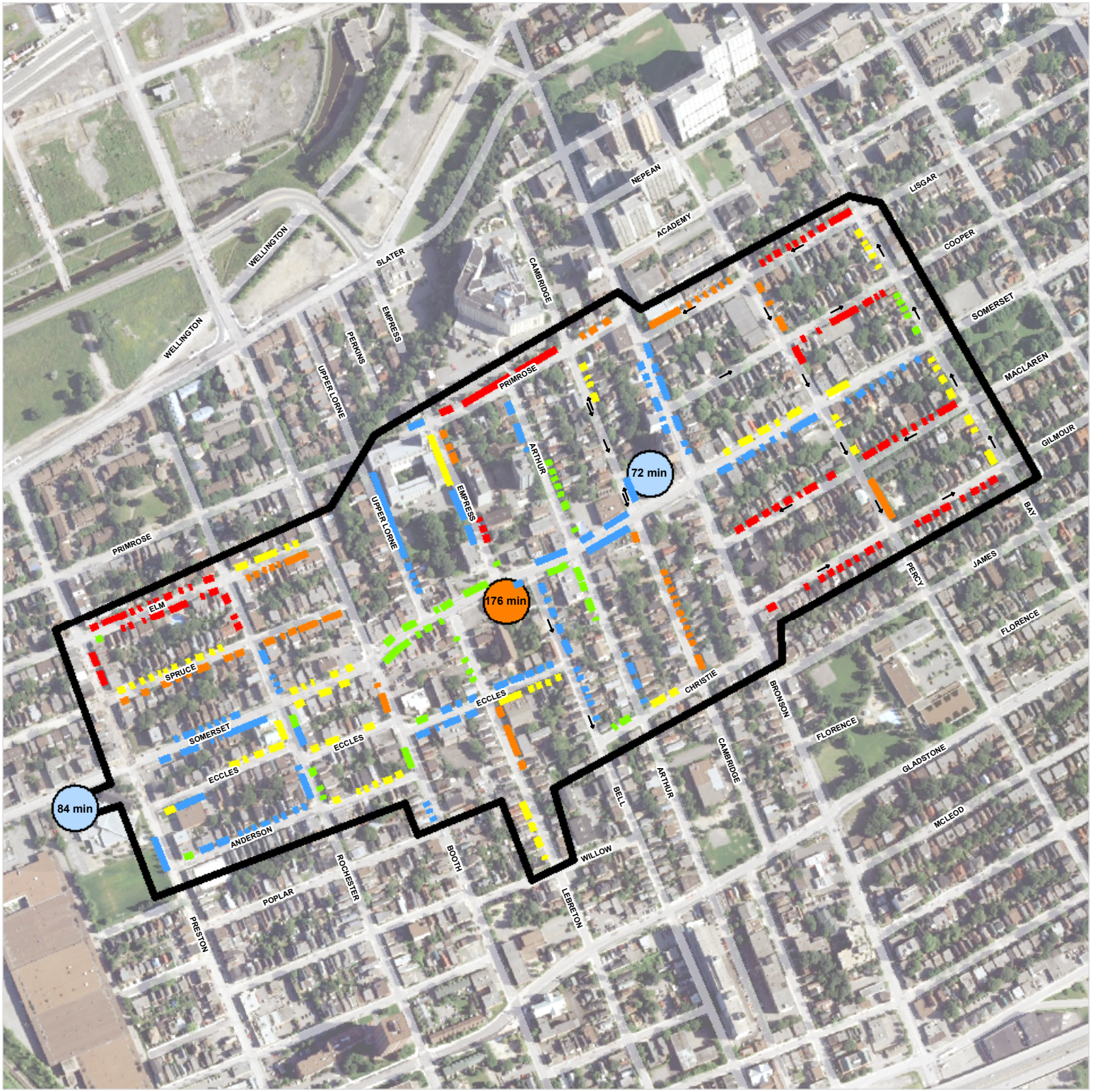

CHINATOWN

LOCAL AREA PARKING STUDY

AVERAGE PARKING DURATION FOR SATURDAY, NOV 3, 2012

LEGEND

Average Consecutive Minutes Parked for On-Street Parking

- 0 - 60 minutes
- 60 - 90 minutes
- 90 - 120 minutes
- 120 - 180 minutes
- 180+ minutes

Average Consecutive Minutes Parked for Off-Street Parking

- 0 - 60 minutes
- 60 - 90 minutes
- 90 - 120 minutes
- 120 - 180 minutes
- 180+ minutes
- xxx min — xxx minutes

Study Area

- Perimeter of Study Area

MAP DRAWING INFORMATION:
ORTHO PHOTOS FROM CITY OF OTTAWA, 2010

MAP CREATED BY: ES
MAP CHECKED BY: LDG
MAP PROJECTION: NAD 1983 UTM Zone 18N

Scale: 1:6,313
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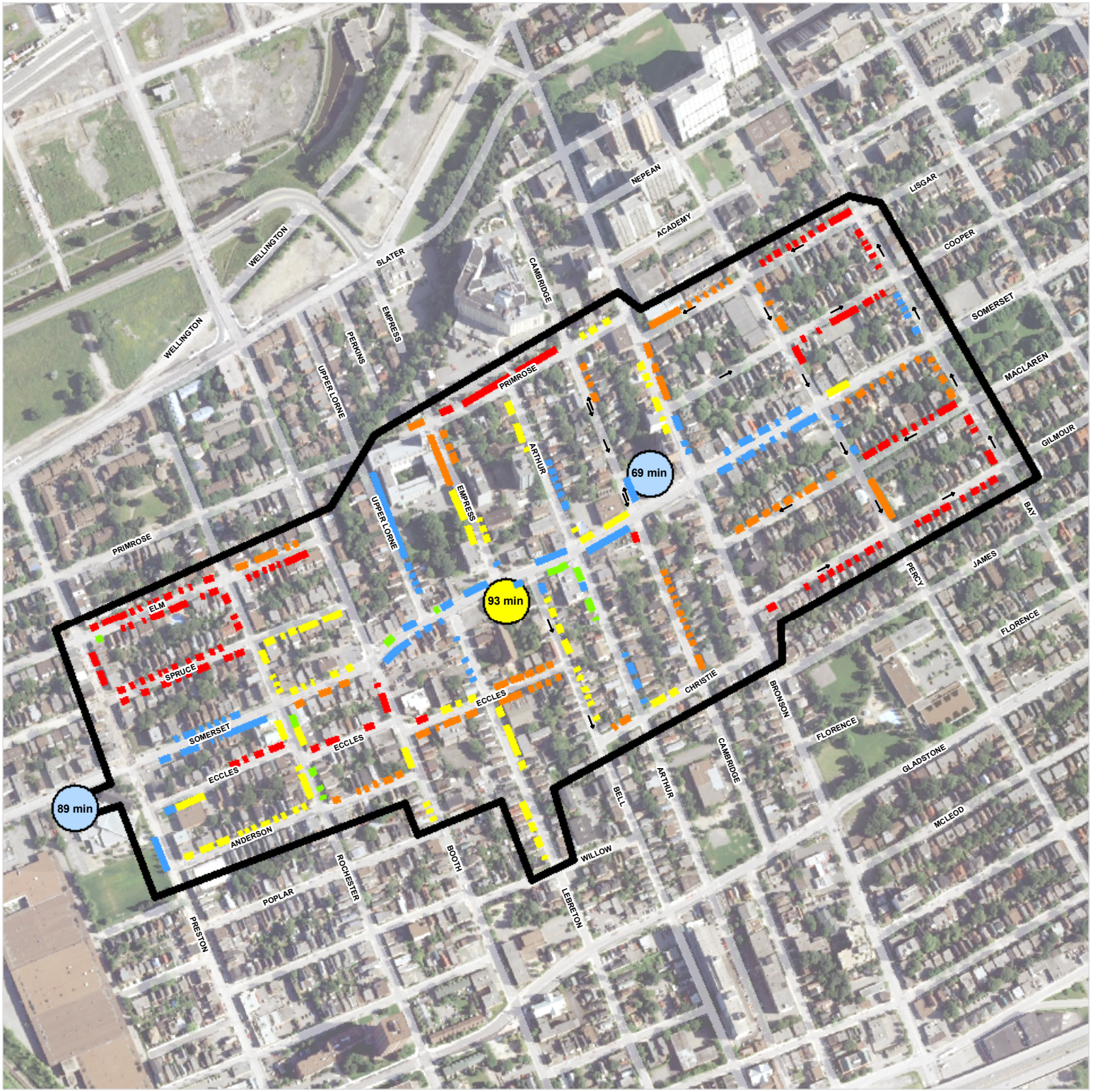

CHINATOWN

LOCAL AREA PARKING STUDY

AVERAGE PARKING DURATION FOR SUNDAY, NOV 4, 2012

LEGEND

Average Consecutive Minutes Parked for On-Street Parking

- 0 - 60 minutes
- 60 - 90 minutes
- 90 - 120 minutes
- 120 - 180 minutes
- 180+ minutes

Average Consecutive Minutes Parked for Off-Street Parking

- 0 - 60 minutes
- 60 - 90 minutes
- 90 - 120 minutes
- 120 - 180 minutes
- 180+ minutes
- xxx min — xxx minutes

Study Area

- Perimeter of Study Area

MAP DRAWING INFORMATION:
ORTHO PHOTOS FROM CITY OF OTTAWA, 2010

MAP CREATED BY: ES
MAP CHECKED BY: LDG
MAP PROJECTION: NAD 1983 UTM Zone 18N

Scale: 1:6,313
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on 8.5"x11" paper only

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DILLON CONSULTING

PROJECT: 12-6952
STATUS:
DATE: 30 May 2013

APPENDIX D

Parking Enforcement Data

The “other” type of violation referred to in the preceding tables is typically violations that deal with parking in no parking areas, loading zones, close to fire hydrants or blocking a laneway. This type of violation is quite noticeable in the central study area and along other high parking occupancy rate roadways such as Somerset Street and Percy Street. This suggests that when parking exceeds practical capacity, people will take a risk by parking their vehicles in areas where parking is prohibited.

Chinatown Enforcement Data - 2010							
Location	**Between**	**And**	**Parking Regulations (Signed / Unsigned)**	**Paid / Unpaid**	**No. of Parking Spaces**	**No. of Violations**	**Description**
Somerset Street (West)	Preston	Booth	2 hours (Signed)	Paid	41	459	343 - Park at time expired meter 51- Fail to place receipt on vehicle 10 - Excess of time shown on receipt 55 - Other
Somerset Street (Central)	Booth	Bronson	2 hours (Signed)	Paid	52	1265	744 - Park at time expired meter 215 - Unauthorized Parking on Private Property 108 - Fail to place receipt on vehicle 37 - Excess of time shown on receipt 161 - Other
Somerset Street (East)	Bronson	Bay	2 hours (Signed)	Paid	35	177	115 - Park at time expired meter 16 - Fail to place receipt on vehicle

Chinatown Enforcement Data - 2010							
Location	**Between**	**And**	**Parking Regulations (Signed / Unsigned)**	**Paid / Unpaid**	**No. of Parking Spaces**	**No. of Violations**	**Description**
							8 - Park in excess of time shown on receipt 38 - Other
Lot #11, 687 Somerset Street	At Cambridge		Off-Street Parking Lot	Paid	47	572	377 - Unauthorized parking on private property 90 - Fail to place receipt on vehicle 87 - Park in excess of time on receipt 18 - Other
Lot #12, 762A Somerset Street	At Empress		Off-Street Parking Lot	Paid	20	69	60 - Unauthorized parking on private property 7 - Park at time expired meter 2 - Other
Primrose Avenue (Central)	Dead End	Bronson	2 hours (Signed)	Unpaid	32	670	487 - Park in excess of posted limits 39 - Park within 300m of previous parking spot 144 - Other
Eccles Street (Central)	Booth	Bell	3 hours (Unsigned)	Unpaid	36	107	84 - Park in excess of three hours 23 - Other
Arthur Street (Central)	Somerset	Primrose	1 hour (Signed)	Paid & Unpaid	1 Paid 7 Unpaid	214	147 - Park in excess of posted limits 11 - Park at time expired

Chinatown Enforcement Data - 2010							
Location	**Between**	**And**	**Parking Regulations (Signed / Unsigned)**	**Paid / Unpaid**	**No. of Parking Spaces**	**No. of Violations**	**Description**
							meter 3 - Fail to place receipt on vehicle 53 - Other
Cambridge Street (Central)	Christie	Somerset	1 hour (Signed)	Paid & Unpaid	2 Paid 13 Unpaid	153	75 - Park in excess of posted time limit 8 - Fail to place receipt on vehicle 2 - Park in excess of time shown on receipt 68 - Other
Gilmour Street (East)	Bronson	Bay	1 hour (Signed)	Unpaid	25	82	69 - Park in excess of posted limit 13 - Other
Bay Street (East)	Gilmour	Somerset	3 hours (Signed)	Unpaid	11	122	73 - Park in excess of posted limits 49 - Other
Percy Street (East)	Somerset	Lisgar	2 hours (Signed)	Unpaid	10	211	104 - Park in excess of posted limits 107 - Other
Elm Street, North Side (West)	Preston	Booth	3 hours (Signed)	Unpaid	27	80	66 - Park in excess of posted limit 14 - Other
Elm Street, South Side (West)	Preston	Booth	3 hours (Unsigned)	Unpaid	25	32	29 - Park in excess of three hours

Chinatown Enforcement Data - 2010							
Location	**Between**	**And**	**Parking Regulations (Signed / Unsigned)**	**Paid / Unpaid**	**No. of Parking Spaces**	**No. of Violations**	**Description**
							3 - Other
Anderson Street (West)	Preston	Rochester	2 hours (Signed)	Paid & Unpaid	2 Paid 15 Unpaid	46	30 - Park in excess of posted limits 16 - Other

Chinatown Enforcement Data 2011							
Location	**Between**	**And**	**Parking Regulations (Signed / Unsigned)**	**Paid / Unpaid**	**No. of Parking Spaces**	**No. of Violations**	**Description**
Somerset Street (West)	Preston	Booth	2 hours (Signed)	Paid	41	115	49- Fail to place receipt on vehicle 12 - Excess of time shown on receipt 54 - Other
Somerset Street (Central)	Booth	Bronson	2 hours (Signed)	Paid	52	702	337 - Fail to place receipt on vehicle 110 - Excess of time shown on receipt 255 - Other
Somerset Street (East)	Bronson	Bay	2 hours (Signed)	Paid	35	174	97 - Fail to place receipt on vehicle 24 - Park in excess of time shown on receipt 1 - Park in excess of

Chinatown Enforcement Data 2011							
Location	**Between**	**And**	**Parking Regulations (Signed / Unsigned)**	**Paid / Unpaid**	**No. of Parking Spaces**	**No. of Violations**	**Description**
							posted limits 51 - Other
Lot #11, 687 Somerset Street	At Cambridge		Off-Street Parking Lot	Paid	47	580	102 - Unauthorized parking on private property 110 - Park in excess of time on receipt 102 - Fail to place receipt on vehicle 2 - Other
Lot #12, 762A Somerset Street	At Empress		Off-Street Parking Lot	Paid	20	30	20 - Unauthorized parking on private property 8 - Fail to place receipt on vehicle 1 - Park in excess of time on receipt 1 - Other
Primrose Avenue (Central)	Dead End	Bronson	2 hours (Signed)	Unpaid	32	422	318 - Park in excess of posted limits 19 - Park within 300m of previous parking spot 95 - Other
Eccles Street (Central)	Booth	Bell	3 hours (Unsigned)	Unpaid	36	97	48 - Park in excess of three hours 49 - Other
Arthur Street	Somerset	Primrose	1 hour	Paid &	1 Paid	157	90 - Park in excess of

Chinatown Enforcement Data 2011							
Location	**Between**	**And**	**Parking Regulations (Signed / Unsigned)**	**Paid / Unpaid**	**No. of Parking Spaces**	**No. of Violations**	**Description**
(Central)			(Signed)	Unpaid	7 Unpaid		posted limits 18 - Fail to place receipt on vehicle 1 - Park in excess of time shown on receipt 48 - Other
Cambridge Street (Central)	Christie	Somerset	1 hour (Signed)	Paid & Unpaid	2 Paid 13 Unpaid	104	22 - Fail to place receipt on vehicle 19 - Park in excess of posted limit 4 - Park in excess of time shown on receipt 59 - Other
Gilmour Street (East)	Bronson	Bay	1 hour (Signed)	Unpaid	25	68	53 - Park in excess of posted limit 15 - Other
Bay Street (East)	Gilmour	Somerset	3 hours (Signed)	Unpaid	11	68	42 - Park in excess of posted limits 26 - Other
Percy Street (East)	Somerset	Lisgar	2 hours (Signed)	Unpaid	10	169	74 - Park in excess of posted limits 95 - Other
Elm Street, North Side (West)	Preston	Booth	3 hours (Signed)	Unpaid	27	47	37 - Park in excess of posted limit 10 - Other
Elm Street,	Preston	Booth	3 hours	Unpaid	25	38	34 - Park in excess of

Chinatown Enforcement Data 2011							
Location	**Between**	**And**	**Parking Regulations (Signed / Unsigned)**	**Paid / Unpaid**	**No. of Parking Spaces**	**No. of Violations**	**Description**
South Side (West)			(Unsigned)				three hours 4 - Other
Anderson Street (West)	Preston	Rochester	2 hours (Signed)	Paid & Unpaid	2 Paid 15 Unpaid	41	14 - Park in excess of posted limits 11 - Fail to place receipt on vehicle 16 - Other

APPENDIX E

Future Parking Demand Calculations

Intensification Opportunities

- The development opportunities within the Chinatown area are limited, as the area is generally built-out. Existing vacant plots of land and off-street parking lots provide an opportunity for infill development. New infill development will influence both the supply and demand for parking. As existing off-street parking lots are repurposed, current parking supply is likely to diminish.
- Given the uncertainty in how future development will unfold, two intensification scenarios were developed. A "Partial Buildout" Scenario 1 considers the most likely development scenario to occur in the foreseeable future. This scenario considers 7 potential developments. The "Full Buildout", Scenario 2 assumes that all surface parking lots and vacant lands will be redeveloped (11 locations in total). In scenario 2 adds the following developments to scenario 1:
    - City Cambridge Street Parking Lot - 687 Somerset Street;
    - Capital Parking lot at 705 Somerset Street (located between Somerset and Arthur Street);
    - City Empress Street Parking Lot – 760 Somerset Street; and,
    - 881 Somerset Street, currently utilized by Frisby Tire as an overflow parking lot.
- The lot area of each parcel was calculated and it was assumed that 75percent of the lot area would be developable with the remaining 25 percent utilized for parking and green space. This analysis has assumed that each parcel of land will develop to its highest and best use as defined by the zoning by-law.
- It was assumed that the mix of infill development in Chinatown would be similar to the existing mix of shops and businesses. The existing mix of businesses was roughly determined by examining the membership in the Chinatown BIA, as posted on the BIA's website in May 2012.
- For each type of business, a corresponding land use category was selected from the City of Ottawa Zoning By-Law (to establish parking supply requirements).

  Note: The critical time period for each land use does not necessarily correspond to the critical time period in Chinatown (i.e. Sunday at noon). As a result, the calculated parking demand should be considered a conservative estimate.

Estimated Parking Demand due to Potential Intensification in Chinatown

	Scenario	Scenario 1 - Partial Buildout							Scenario 2 - Full Buildout			
Location	Address	288 Booth	288 Booth	770 Somerset	105 Preston	160, 164, 168 Cambridge	848, 850, 852 Somerset	816 Somerset	881 Somerset	760 Somerset	705 Somerset	687 Somerset
	Notes	Large Vacant Lot (formerly a Parking Lot)	Large Vacant Lot (formerly a Parking Lot)	Capital Park South Parking Lot Redevelopment	Vacant Lot (Museum development)	Large Vacant Lot (Behind Yangtze)	Medium Vacant Lot	Small Vacant Lot	Small Vacant Lot (currently for Frisbee Tire)	City of Ottawa Empress Parking Lot Redevelopment	Capital Park North Parking Lot Redevelopment	City of Ottawa Cambridge Parking Lot Redevelopment
Assumed breakdown by development type	Lot area (m^2, from GIS)	600	200	1039	692.6	966	316	428.5	304	620	1145	1300
	Building base area as 75% of lot area (m^2)	338	113	584	390	543	178	241	171	349	644	731
	Zoning	TM[112] H(16)	R4H	TM[112] H(16)	TM[78] H(15)	R4H [915]	TM[78] H(15)	TM[112] H(16)	TM[78] H(15)	TM[112] H(16)	TM[112] H(16)	TM[112] H(16)
	Assumed building height (m)	16	11	16	15	11	15	16	15	16	16	16
	Dwelling Unit, No. floors	3	4	2	0	4	1	2	3	1	2	4
	Dwelling Unit, No. of (based on 70sqm/dwelling)	14	6	17	0	31	3	7	7	5	18	42
	Museum, No. floors	0	0	0	2	0	0	0	0	0	0	0
	Commercial, Overall No. floors	2	0	2	0	0	1	2	1	0	2	0
	Commercial, Medical use, Percentage	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
	Commercial, Medical use, GFA (m^2)	81	0	140	0	0	21	58	21	0	155	0
	Commercial, Office use, Percentage	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
	Commercial, Office use, GFA (m^2)	108	0	187	0	0	28	77	27	0	206	0
	Commercial, Restaurant use, Percentage	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%
	Commercial, Restaurant use, GFA (m^2)	182	0	316	0	0	48	130	46	0	348	0
	Commercial, Retail use, Percentage	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
	Commercial, Retail use, GFA (m^2)	304	0	526	0	0	80	217	77	0	580	0
By-Law Parking Supply Requirement	Dwelling Unit, Parking supply rate (spaces per dwelling unit)	0.5 spaces per dwelling unit + 0.2 visitor spaces per dwelling units above 12										
	Museum, Parking supply rate (spaces per 100m^2 of GFA)	2 spaces per 100m^2 of GFA										
	Commercial, Medical use, Parking supply rate (based on GFA)	4 spaces per 100m^2 of GFA										
	Commercial, Office use, Parking supply rate (based on GFA)	2 spaces per 100m^2 of GFA										
	Commercial, Restaurant use, Parking supply rate (based on GFA)	0 spaces for 0-150m^2, 3 spaces for 150-200m^2, 10 spaces per 100m^2 of GFA above 200m^2										
	Commercial, Retail use, Parking supply rate (based on GFA)	0 spaces for 0-150m^2, 2.5 spaces per 100 m^2 of GFA over 150m^2										
	Total Parking Supply Required by By-Law	14	3	30	16	19	3	7	5	2	36	27
	Parking Provided On-Site Parking (Assume 70% of required By-Law)	10	3	22	11	14	2	6	4	2	25	19
Estimated Parking Demand	Total Parking Supply Required by By-Law	14	3	30	16	19	3	7	5	2	36	27
	Parking Provided On-Site Parking (Assume 70% of required By-Law)	10	3	22	11	14	2	6	4	2	25	19
	Parking Provided Off-Site Parking (Assume30% of required By-Law)	4	0	8	5	5	1	1	1	0	11	8
	Displaced Parking Spaces due to development of existing Parking Lots	0	0	37	0	0	0	0	10	20	56	0
	Zoning By-Law Required off-site parking (Displaced plusdevelopment spaces not accomoda	**4**	**0**	**45**	**5**	**5**	**1**	**1**	**11**	**20**	**67**	**8**
	Sub-Total - Zoning By-Law Off-Stie Parking Requirement	**61**							**167**			

APPENDIX F

Public Open House

Display Boards and Comment Sheets

WELCOME

The City of Ottawa welcomes you to the Public Open House for the Chinatown Local Area Parking Study.

The purpose of this Public Open House is to:

- Provide an opportunity to introduce the project, its objectives, and scope;
- Present and seek input on the parking issues identified thus far;
- Present and seek input on the potential opportunities for parking in the future.

Your comments are very important to this study. Please fill out and return a comment form.

BIENVENUE

La Ville d'Ottawa vous souhaite la bienvenue à l'occasion de la journée portes ouvertes de l'étude sur le stationnement local dans le quartier chinois.

Les objectifs de cette journée portes ouvertes sont les suivants :

- donner au public la possibilité de connaître le projet, ses objectifs et sa portée;
- présenter les problèmes relatifs au stationnement relevés à ce jour et solliciter l'avis du public à ce sujet;
- présenter les solutions possibles aux problèmes de stationnement qui pourraient être adoptées et solliciter l'avis du public à ce sujet.

Vos commentaires sont très importants pour nous. C'est pourquoi nous vous prions de nous les faire parvenir sur l'une des fiches prévues à cette fin.

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PARKING MANAGEMENT STRATEGY

The objectives of the City of Ottawa parking management strategy are:

- Provide and maintain an appropriate supply of affordable, secure, accessible, convenient, and appealing public parking.
- Provide and promote affordable short-term parking services, and fair and consistent enforcement services, that support local businesses, institutions, and tourism.
- 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.
- 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.
- 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.

STRATÉGIE DE GESTION DU STATIONNEMENT

Les objectifs de la stratégie de gestion du stationnement de la Ville d'Ottawa sont les suivants.

- Offrir et maintenir un nombre suffisant de places de stationnement publiques abordables, sécuritaires, accessibles, pratiques et attrayantes.
- Offrir et promouvoir des services de stationnement à court terme abordables et des services d'application des règlements équitables et cohérents qui soutiennent les commerces locaux, les institutions et le tourisme.
- Promouvoir, mettre en place et maintenir des programmes et des installations qui favorisent l'utilisation de modes de transport écologiques, comme le transport en commun, le covoiturage, les taxis, les services d'autopartage et les déplacements à vélo ou à pied.
- Appuyer la densification résidentielle et résoudre les problèmes de stationnement dans les zones résidentielles engendrés par les grands générateurs de trafic ou par l'utilisation conflictuelle des routes, y compris par la mise en place de programmes de permis de stationnement sur rue visant à soustraire les résidants du secteur et leurs visiteurs de l'application des règlements sur le stationnement qui ciblent les non-résidents.
- Veiller à ce que les revenus générés par le Programme municipal de stationnement suffisent à couvrir toutes les dépenses de fonctionnement et d'entretien connexes durant le cycle de vie des installations; contribuer à un fonds de réserve pour financer le développement, le fonctionnement et la promotion à venir du système de stationnement; enfin, aider à financer des projets connexes de promotion des modes de transport écologiques.

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STUDY AREA

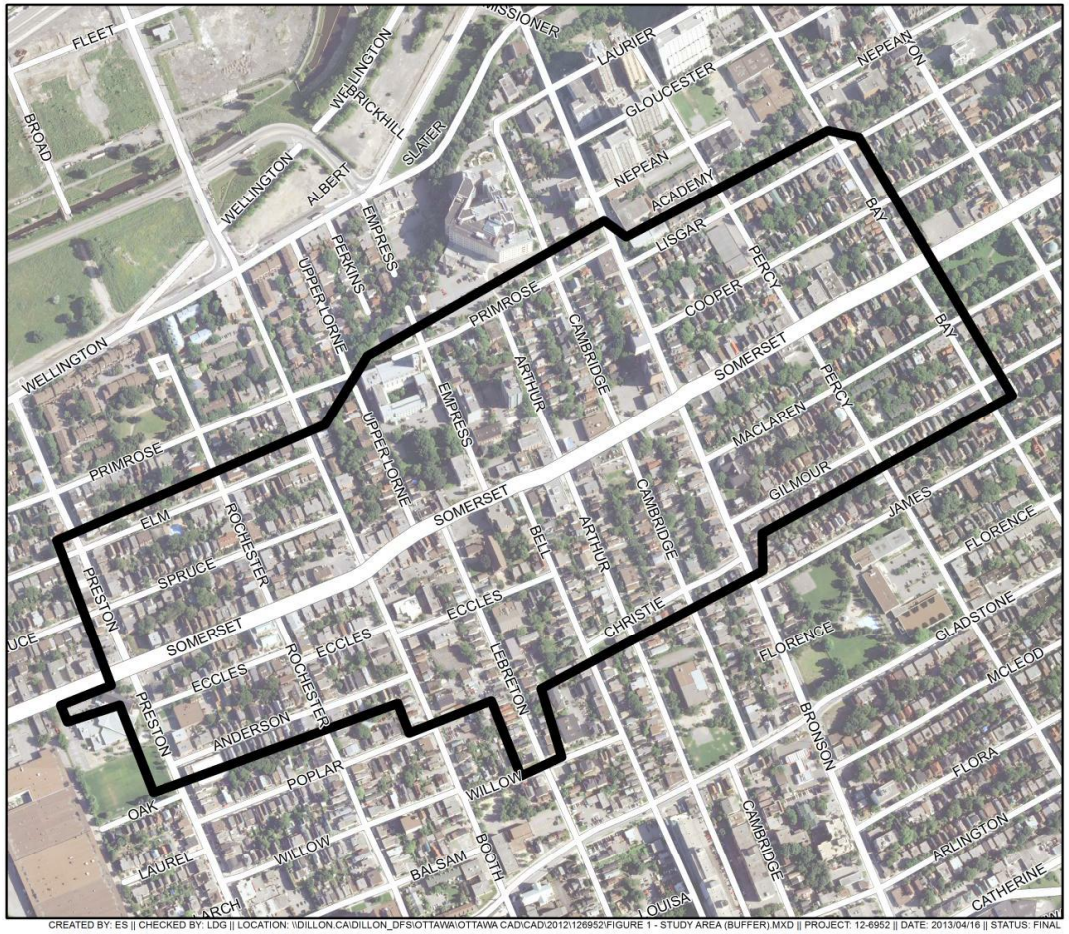
The study area was developed based on:

- Geographic boundaries of the Chinatown BIA area;
- Location of commercial activity;
- Research on the acceptable walking distance between parking and commercial land uses.

SECTEUR À L'ÉTUDE

Le secteur à l'étude a été délimité en fonction des critères suivants :

- limites géographiques de la Zone d'amélioration commerciale (ZAC) du quartier chinois;
- emplacement des lieux d'activité commerciale;
- étude de la distance de marche acceptable entre le parc de stationnement et les lieux d'utilisation commerciale.



CREATED BY: ES || CHECKED BY: LDG || LOCATION: \\DILLON.CA\DILLON_DFS\OTTAWA\OTTAWA CAD\CAD\2012\126952\FIGURE 1 - STUDY AREA (BUFFER).MXD || PROJECT: 12-6952 || DATE: 2013/04/16 || STATUS: FINAL

Legend

Study Area Boundary

Limite de la zone d'étude

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BACKGROUND & STUDY PROCESS

This study was initiated to examine parking requirements for the Chinatown commercial area which is centred around Somerset Street, between Preston Street and Bay Street, and includes the adjacent residential streets.

The City maintains two parking facilities, one parking lot is located at 687 Somerset Street (47 spaces on the corner of Cambridge Street) and 760 Somerset Street (20 spaces opposite Empress Street).

There are two private paid public parking facilities operated by Capital Parking, located at 705 Somerset Street (56 spaces at Arthur Street) and at 770 Somerset Street (37 spaces at Lebreton Street).

The objectives of this study are to:

- Evaluate the current supply and demand for parking in the Chinatown area, and identify existing issues;
- Assess future parking requirements; and,
- Identify strategies to address current and future parking needs;

The study process for the Chinatown Local Area Parking Study is shown below:

CONTEXTE ET PROCESSUS D'ANALYSE

L'étude visait à examiner les besoins en matière de stationnement dans la zone commerciale du quartier chinois, qui est centrée sur la rue Somerset, entre les rues Preston et Bay, et qui comprend les rues résidentielles adjacentes.

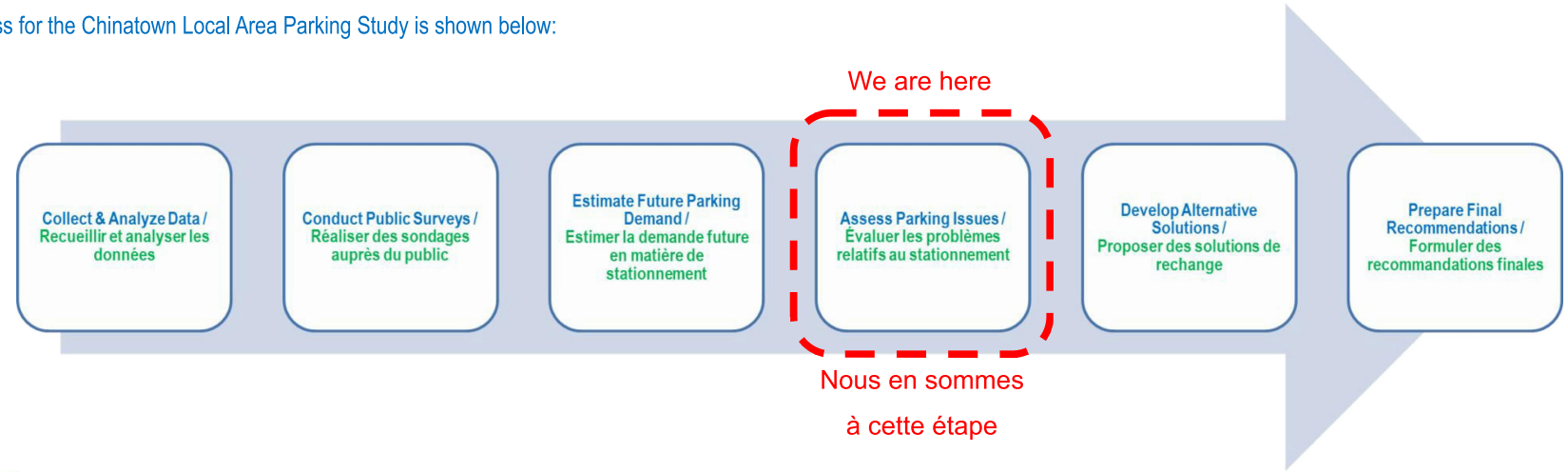
La Ville tient deux installations de stationnement, au 687 de la rue Somerset (47 places au coin de la rue Cambridge) et au 760 de la rue Somerset (20 places en face de la rue Empress).

Il y a deux parcs de stationnement privés, exploités par Capital Parking, au 705 de la rue Somerset (56 places sur la rue Arthur) et au 770 de la rue Somerset (37 places sur la rue Lebreton).

Les objectifs de cette étude sont les suivants :

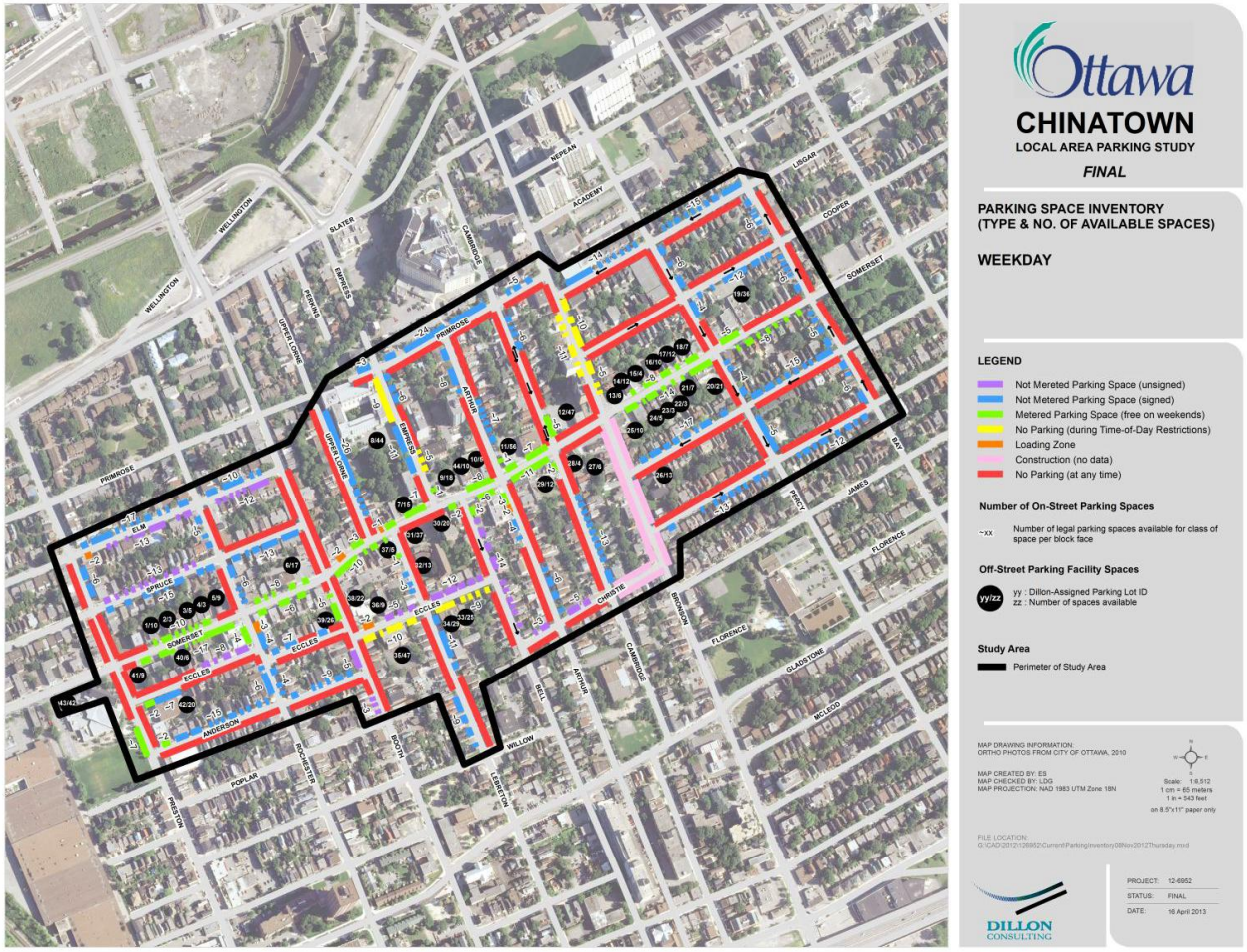
- évaluer l'offre et la demande actuelles en matière de stationnement dans le secteur du quartier chinois et cerner les problèmes qui touchent actuellement la question du stationnement;
- évaluer les besoins futurs en matière de stationnement; proposer des stratégies pour répondre aux besoins actuels et futurs en matière de stationnement.

Le processus d'analyse adopté pour la réalisation de l'étude sur le stationnement local dans le quartier chinois est le suivant :



PARKING SPACE INVENTORY

INVENTAIRE DES PLACES DE STATIONNEMENT



The Parking Space Inventory within the study area includes both metred and non-metred on-street and off-street parking areas.

The amount of parking available fluctuates by time-of-day, day of the week and seasonally.

L'inventaire des places de stationnement dans le secteur à l'étude comprend des aires de stationnement sur rue et hors rue, avec et sans compteurs.

Le nombre de places disponibles varie selon l'heure, le jour de la semaine et la saison.

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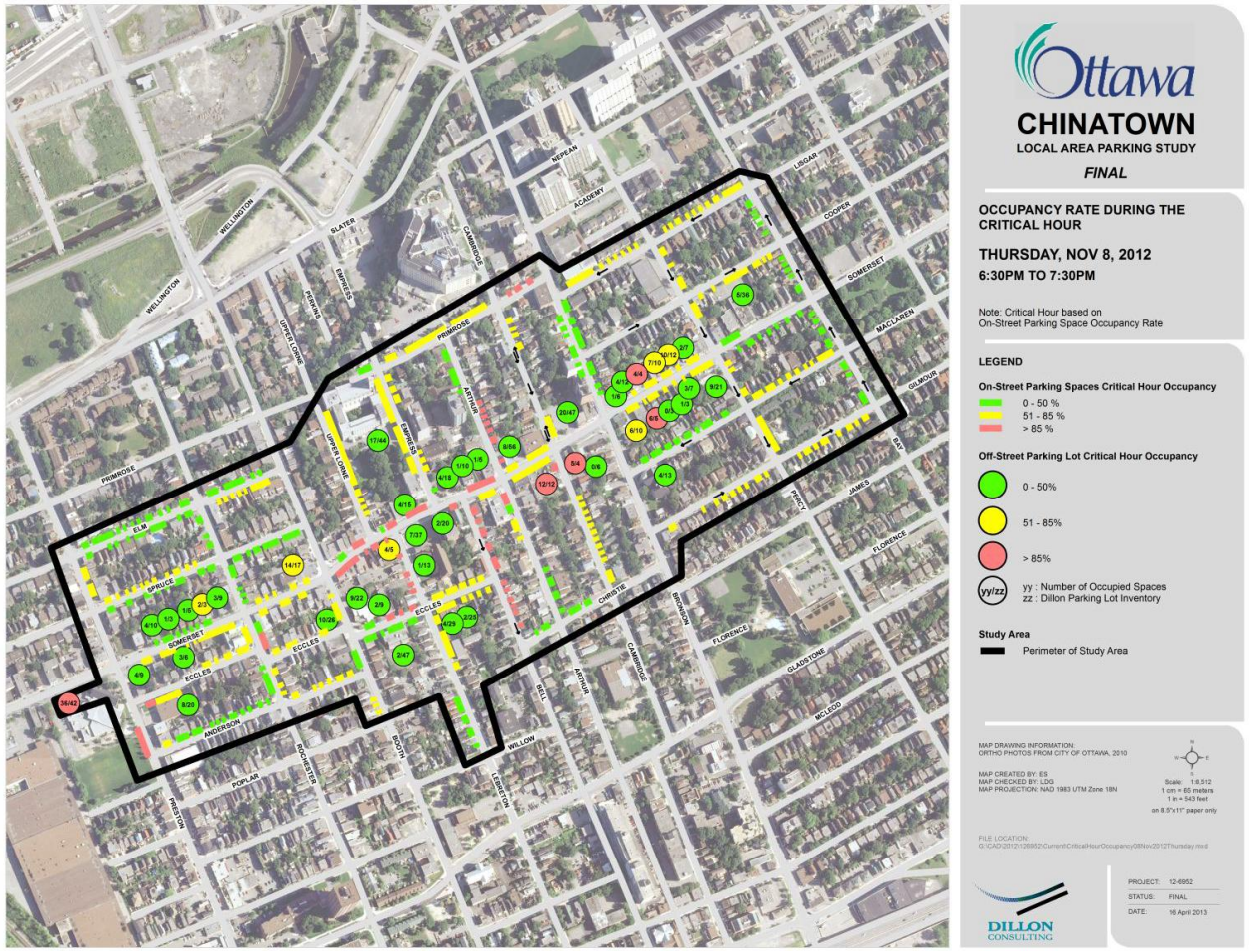
PARKING OCCUPANCY — THURSDAY NOVEMBER 8, 2012

OCCUPATION DES PLACES DE STATIONNEMENT – JEUDI 8 NOVEMBRE 2012



This figure illustrates the parking space occupancy rate status during the hour with the highest amount of parked vehicles as surveyed on Thursday November 8, 2012, occurring between 6:30 PM and 7:30 PM.

Notes:

1) Occupancy Rate = Number of parked vehicles divided by the number of available parking spaces.
2) Occupancy Rates exceeding 85% are considered by users as near full.

La figure présentée illustre le taux d'occupation des places de stationnement durant l'heure au cours de laquelle on enregistre le plus grand nombre de véhicules stationnés, d'après le relevé mené le jeudi 8 novembre 2012, entre 18 h 30 et 19 h 30.

Remarques :

1. Taux d'occupation = nombre de véhicules stationnés divisé par le nombre de places de stationnement disponibles.
2. Les parcs de stationnement affichant un taux d'occupation supérieur à 85 % sont considérés par les usagers comme étant presque pleins.

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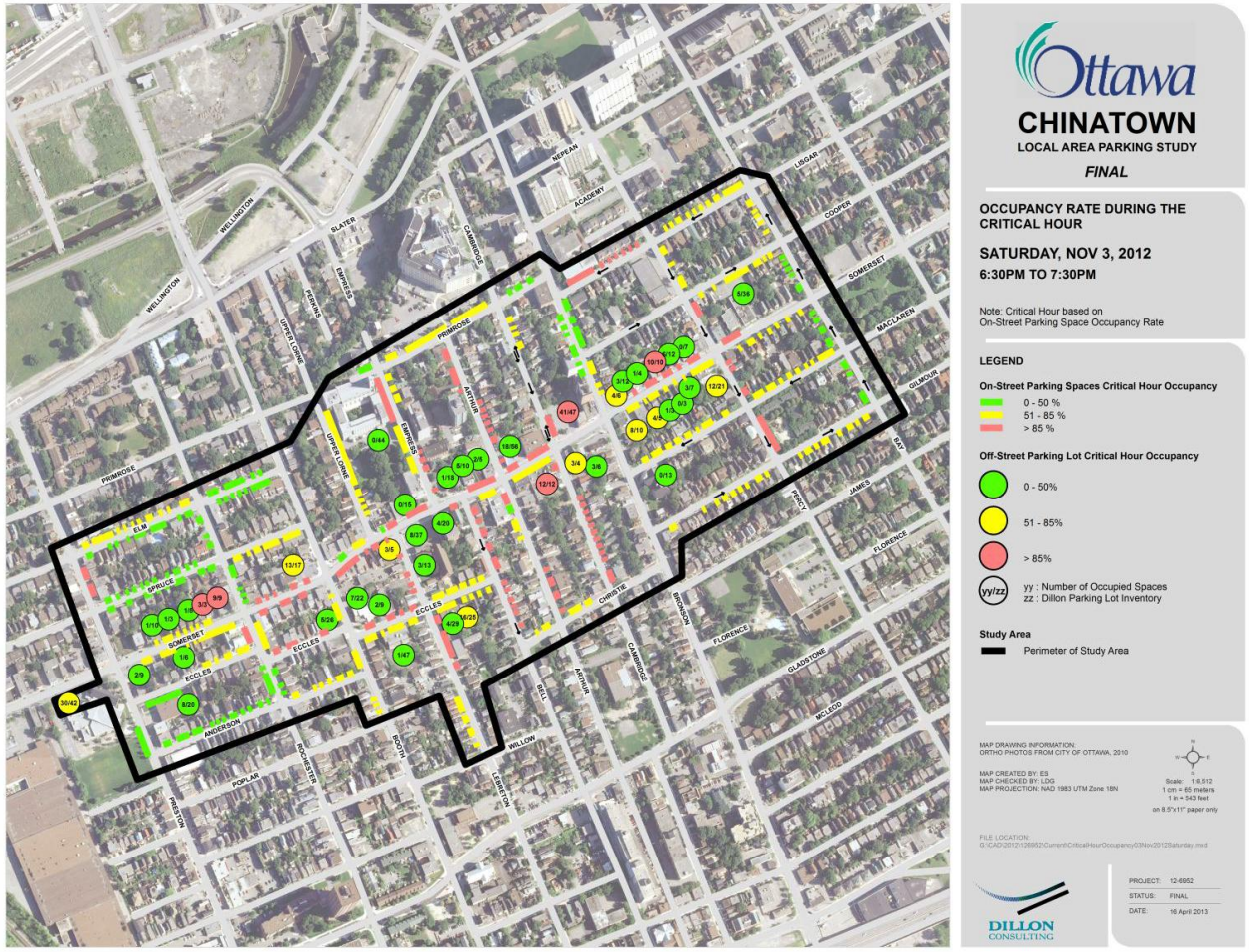
PARKING OCCUPANCY — SATURDAY NOVEMBER 3, 2012

OCCUPATION DES PLACES DE STATIONNEMENT – SAMEDI 3 NOVEMBRE 2012



This figure illustrates the parking space occupancy rate status during the hour with the highest amount of parked vehicles as surveyed on Saturday November 3, 2012, occurring between 6:30 PM and 7:30 PM.

Notes:

1. Occupancy Rate = Number of parked vehicles divided by the number of available parking spaces.
2. Occupancy Rates exceeding 85% are considered by users as near full.

La figure présentée illustre le taux d'occupation des places de stationnement durant l'heure au cours de laquelle on enregistre le plus grand nombre de véhicules stationnés, d'après le relevé mené le samedi 3 novembre 2012, entre 18 h 30 et 19 h 30.

Remarques :

1. Taux d'occupation = nombre de véhicules stationnés divisé par le nombre de places de stationnement disponibles.
2. Les parcs de stationnement affichant un taux d'occupation supérieur à 85 % sont considérés par les usagers comme étant presque pleins.

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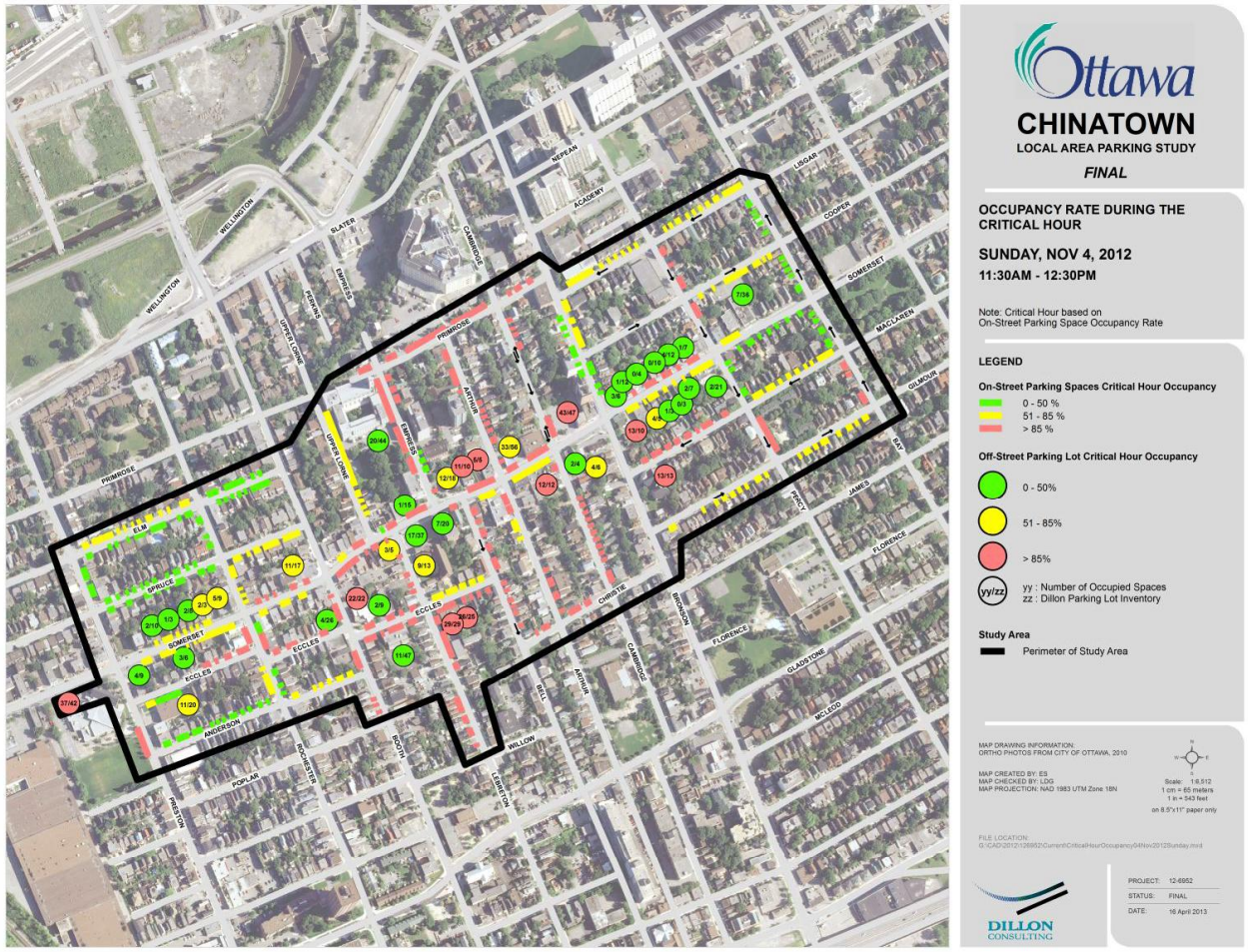
PARKING OCCUPANCY — SUNDAY NOVEMBER 4, 2012

OCCUPATION DES PLACES DE STATIONNEMENT – DIMANCHE 4 NOVEMBRE 2012



This figure illustrates the parking space occupancy rate status during the hour with the highest amount of parked vehicles as surveyed on Sunday November 4, 2012, occurring between 11:30 AM and 12:30 PM.

Notes:

1. Occupancy Rate = Number of parked vehicles divided by the number of available parking spaces.
2. Occupancy Rates exceeding 85% are considered by users as near full.

La figure présentée illustre le taux d'occupation des places de stationnement durant l'heure au cours de laquelle on enregistre le plus grand nombre de véhicules stationnés, d'après le relevé mené le dimanche 4 novembre 2012, entre 11 h 30 et 12 h 30.

Remarques :

1. Taux d'occupation = nombre de véhicules stationnés divisé par le nombre de places de stationnement disponibles.
2. Les parcs de stationnement affichant un taux d'occupation supérieur à 85 % sont considérés par les usagers comme étant presque pleins.

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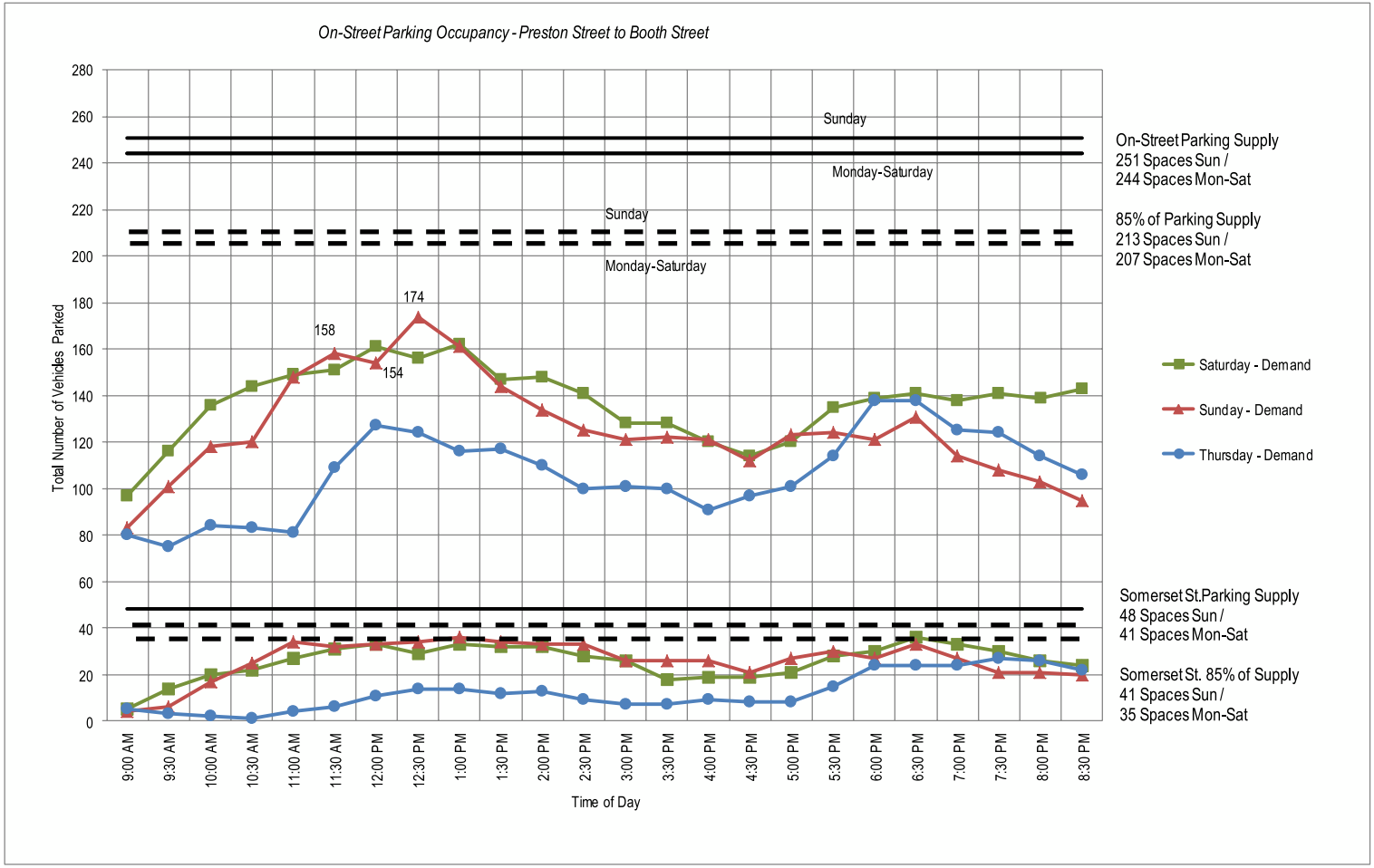
ON-STREET PARKING OCCUPANCY — PRESTON STREET TO BOOTH STREET

OCCUPATION DES PLACES DE STATIONNEMENT SUR RUE – DE LA RUE PRESTON À LA RUE BOOTH



This figure illustrates the number of on-street parking spaces occupied per half hour throughout the survey day.

Notes:

1. Occupancy Rate = Number of parked vehicles divided by the number of available parking spaces.
2. Occupancy Rates exceeding 85% are considered by users as near full.

La figure présentée illustre le nombre de places de stationnement occupées par période d'une demi-heure pendant toute la journée du relevé.

Remarques :

1. Taux d'occupation = nombre de véhicules stationnés divisé par le nombre de places de stationnement disponibles.
2. Les parcs de stationnement affichant un taux d'occupation supérieur à 85 % sont considérés par les usagers comme étant presque pleins.

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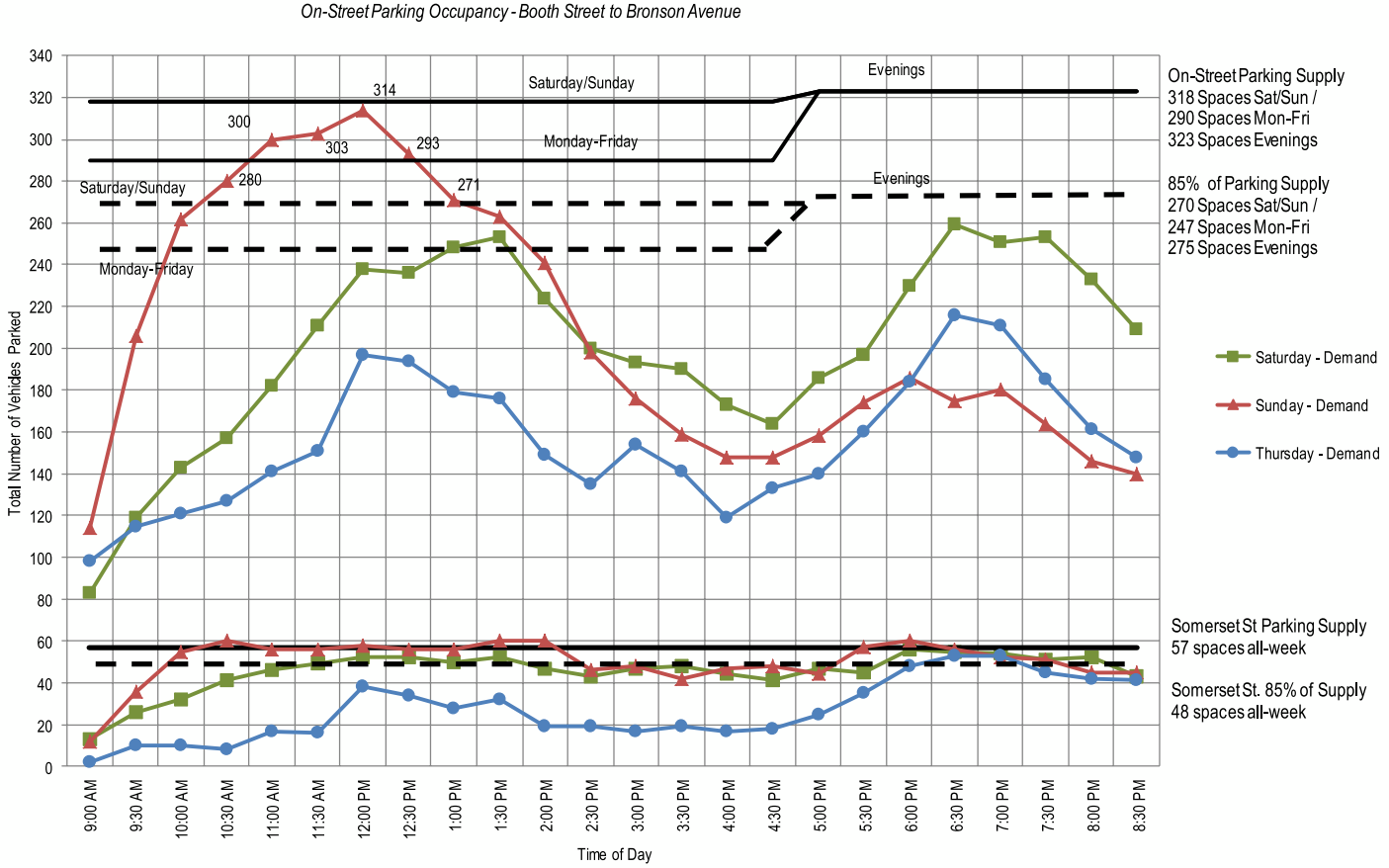
ON-STREET PARKING OCCUPANCY — BOOTH STREET TO BRONSON AVENUE

OCCUPATION DES PLACES DE STATIONNEMENT SUR RUE – DE LA RUE BOOTH À L'AVENUE BRONSON



This figure illustrates the number of on-street parking spaces occupied per half hour throughout the survey day.

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La figure illustre le nombre de places de stationnement occupées par période d'une demi-heure pendant toute la journée du relevé.

Remarques :

1. Taux d'occupation = nombre de véhicules stationnés divisé par le nombre de places de stationnement disponibles.
2. Les parcs de stationnement affichant un taux d'occupation supérieur à 85 % sont considérés par les usagers comme étant presque pleins.

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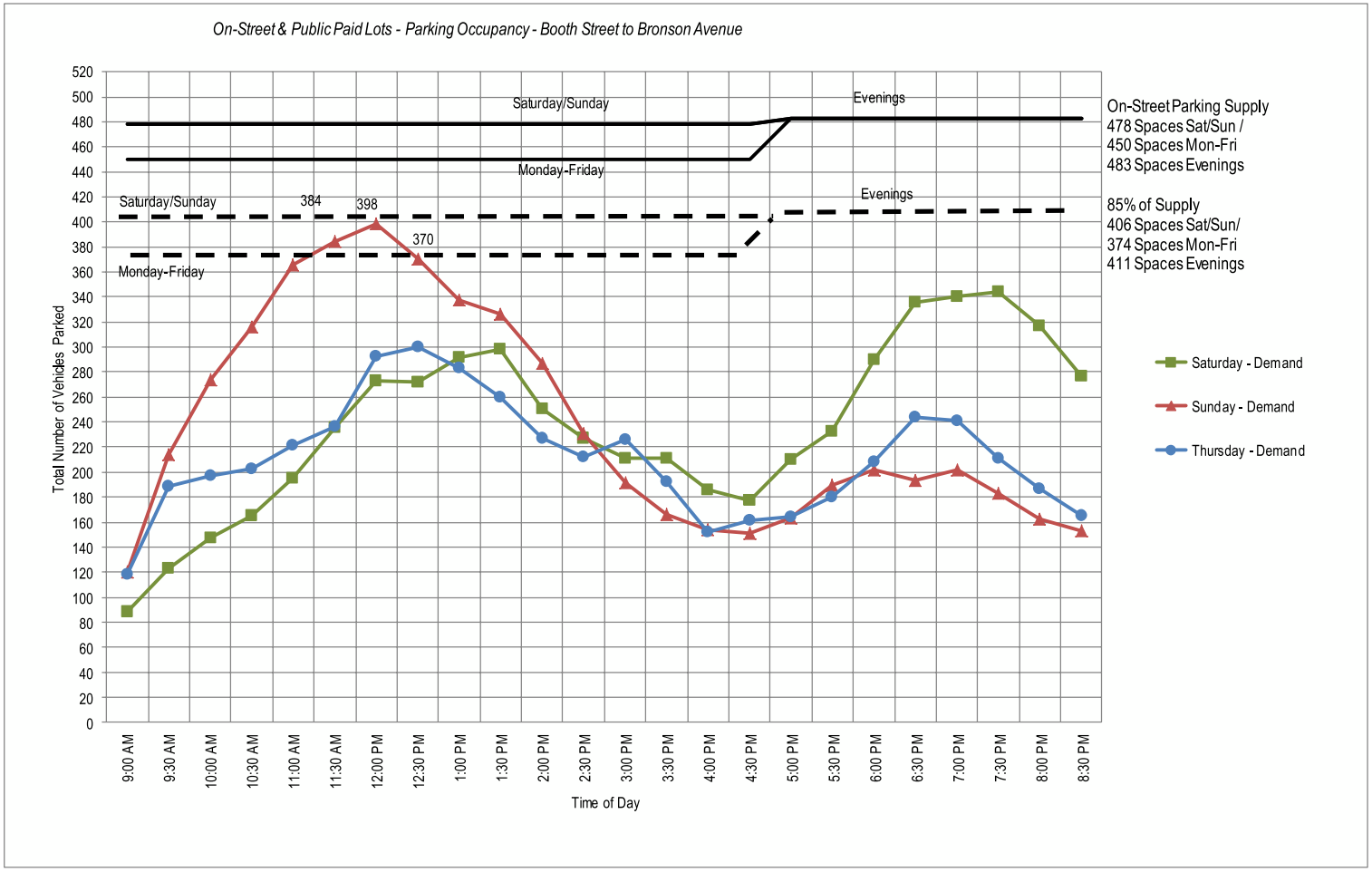
ON-STREET & PUBLIC PAID LOTS PARKING OCCUPANCY — BOOTH STREET TO BRONSON AVENUE

OCCUPATION DES PLACES DE STATIONNEMENT SUR RUE – DE LA RUE BOOTH À L'AVENUE BRONSON



This figure illustrates the number of on-street and off-street parking spaces occupied per half hour throughout the survey day.

Notes:

1. Occupancy Rate = Number of parked vehicles divided by the number of available parking spaces.
2. Occupancy Rates exceeding 85% are considered by users as near full

La figure illustre le nombre de places de stationnement occupées par période d'une demi-heure pendant toute la journée du relevé.

Remarques :

1. Taux d'occupation = nombre de véhicules stationnés divisé par le nombre de places de stationnement disponibles.
2. Les parcs de stationnement affichant un taux d'occupation supérieur à 85 % sont considérés par les usagers comme étant presque pleins.

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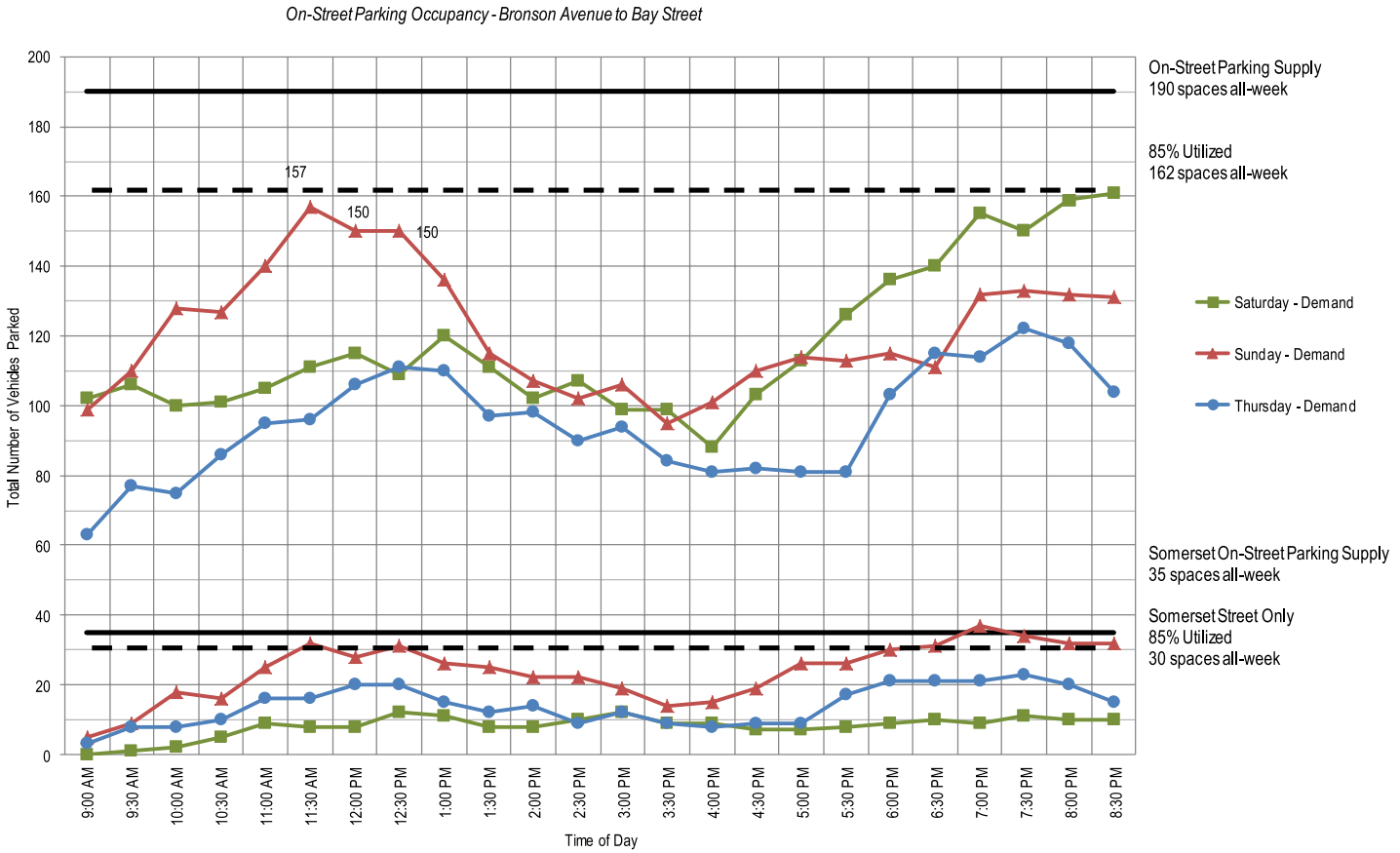
ON-STREET PARKING OCCUPANCY — BRONSON AVENUE TO BAY STREET

OCCUPATION DES PLACES DE STATIONNEMENT SUR RUE – DE L'AVENUE BRONSON À LA RUE BAY



This figure illustrates the number of on-street parking spaces occupied per half hour throughout the survey day.

Notes:

1. Occupancy Rate = Number of parked vehicles divided by the number of available parking spaces.
2. Occupancy Rates exceeding 85% are considered by users as near full.

La figure illustre le nombre de places de stationnement occupées par période d'une demi-heure pendant toute la journée du relevé.

Remarques :

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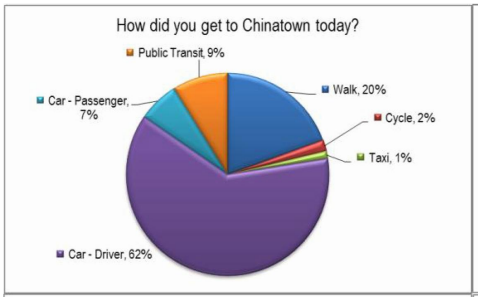
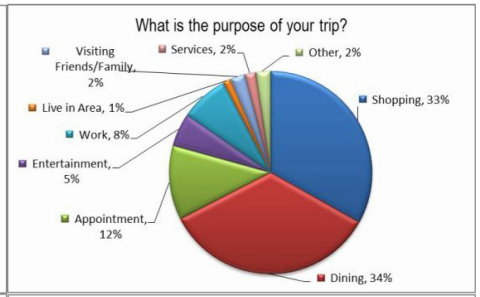
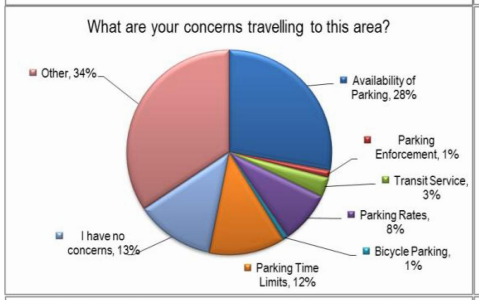
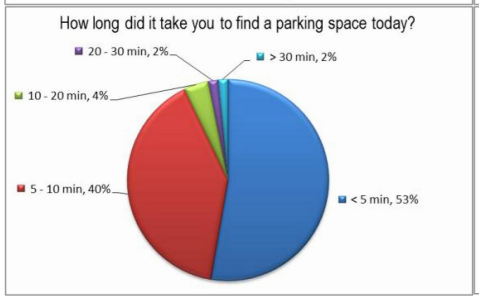
FACE TO FACE SURVEY RESULTS

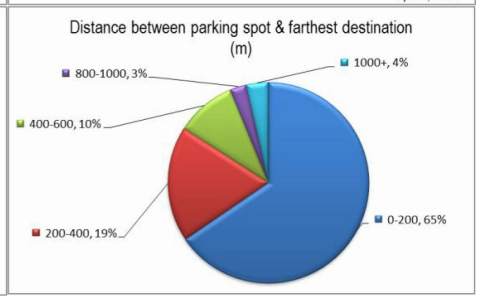
Face to face surveys were conducted on November 3,4, and 8, 2012 along Somerset Street between Bronson Avenue and Booth Street to gain a better understanding of general perceptions about parking in the Chinatown area.





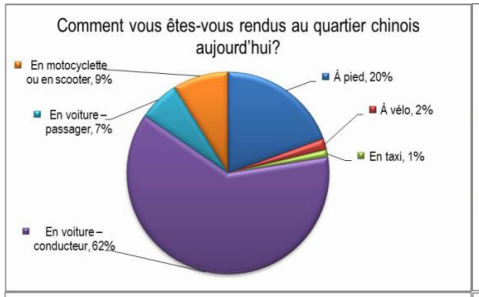


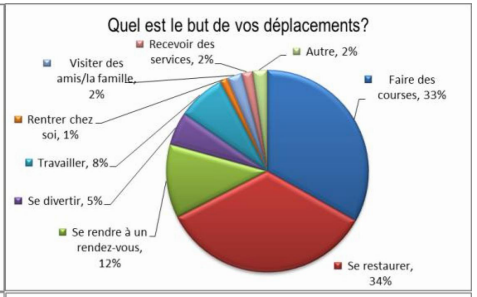


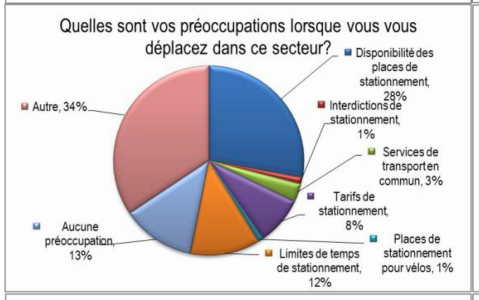


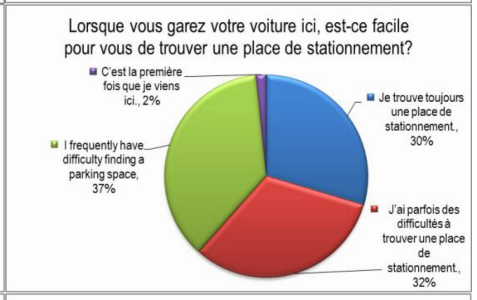
RÉSULTATS DES ENQUÊTES SUR LE TERRAIN

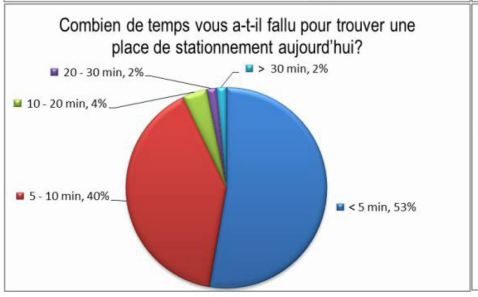
Des enquêtes sur place ont été réalisées les 3, 4 et 8 novembre 2012 le long de la rue Somerset, entre l'avenue Bronson et la rue Booth, pour mieux comprendre les perceptions générales eu égard au stationnement dans le quartier chinois.

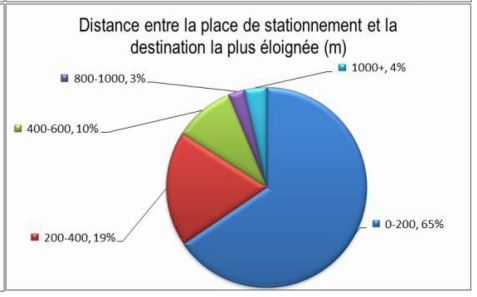








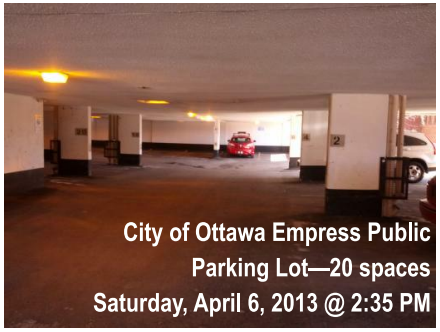




ISSUES IDENTIFIED TO DATE

- During the Thursday survey, parking demand did not exceed on-street and off-street parking supply, even during peak demand periods.
- Parking demand was greatest on Sunday between 9:30 AM and 1:30 PM, with demand near 85% of parking supply across the entire study area. On-street parking exceeded supply however the off-street parking lots were underutilized. On Saturday, peak demand occurred between 6:30 PM and 7:30 PM however did not exceed 85% of supply.
- The Empress Street Parking Lot – 687 Somerset Street is underutilized, possibly due to parking rates, restricted view to the street and possible user safety concerns.
- Parking Pricing:
  - No daily maximum parking rate for the two City off-street parking lots (action has been taken by the City to limit parking fees to $6 at the Cambridge Street Lot and $5 at the Empress Street Lot, furthermore, free parking is to be provided during evenings)
  - The two private parking lots operated by Capital Parking Inc. (Arthur Street and at Lebreton Street) only accept coins, limiting customer payment methods.
- No dedicated area for tour bus parking.
- Saint-Vincent Hospital staff park on Primrose Street each day. There is limited enforcement during weekends, therefore staff remain parked on-street for their entire shift. Generally, parking along Primrose Street is not available for other users.
- There is no loading zone for the Lunch Kitchen located at 60A Lebreton Street.
- The Plant Recreation Centre parking lot occupancy rate is typically greater than 85% throughout most days. Vehicle turnover is generally good, however, demand approaches supply
- Amount of Parking Inventory Available during Sunday peak period:

Somerset Street, Booth—Upper Lorne
Saturday, April 6, 2013 @ 2:40 PM


City of Ottawa Empress Public Parking Lot—20 spaces
Saturday, April 6, 2013 @ 2:35 PM


City of Ottawa Cambridge Public Parking Lot—47 spaces
Saturday, April 6, 2013 @ 2:30 PM

ENJEUX RECENSÉS À CE JOUR

- Lors de l'enquête réalisée le jeudi, la demande de stationnement n'excédait pas le nombre de places de stationnement offertes hors rue et sur rue, même durant les périodes de demande importante.
- La demande de stationnement a été la plus intense le dimanche de 9 h 30 à 13 h 30, atteignant 85 p. cent de l'offre de stationnement dans toute la zone d'étude. Le stationnement sur rue excédait l'offre, tandis que les parcs de stationnement hors rue étaient sous-utilisés. Le samedi, la demande la plus importante est survenue de 18 h 30 à 19 h 30, mais elle n'a toutefois pas dépassé 85 p. cent de l'offre.
- Le parc de stationnement de la rue Empress au 687, rue Somerset est sous-utilisé, probablement à cause des tarifs, de la vue limitée sur la rue et des inquiétudes possibles des usagers liées à la sécurité.
- Prix du stationnement :
  - ◊ Il n'y a pas de tarif quotidien maximum pour les deux parcs de stationnement municipaux hors rue (des mesures ont été prises par la Ville pour limiter le tarif à 6 dollars dans le stationnement de la rue Cambridge et à 5 dollars dans celui de la rue Empress; de plus, il est prévu d'offrir du stationnement gratuit en soirée.
  - ◊ Les deux parcs de stationnement privés exploités par Capital Parking inc. [rue Arthur et rue Lebreton] acceptent uniquement de la monnaie, limitant ainsi les méthodes de paiement des usagers.
- Il n'y a pas d'endroits désignés pour le stationnement d'autocars d'excursion.
- Le personnel de l'Hôpital Saint-Vincent stationne tous les jours sur la rue Primrose. Le règlement est peu appliqué les weekends de sorte que le personnel de l'hôpital demeure stationné sur la rue pendant tout leur quart de travail. Il n'y a habituellement pas de places pour stationner le long de la rue Primrose pour d'autres utilisateurs.
- Il n'y a pas de zone de chargement pour le Lunch Kitchen situé au 60A, rue Lebreton.
- Le parc de stationnement du centre récréatif Plant est généralement occupé à plus 85 p. cent la majeure partie de la journée. Même si le taux de roulement des véhicules est assez rapide, la demande atteint presque l'offre.
- Inventaire des places de stationnement disponibles durant la période de pointe le dimanche :

	Preston to/à Booth	Booth to/à Bronson	Bronson to/à Bay	Total
No. of available on-street & off-street parking spaces available/ Quantité de places de stationnement disponibles hors rue et sur rue	97	80	40	217

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YOUR AREAS OF CONCERN

LES ASPECTS DU STATIONNEMENT QUI VOUS PRÉOCCUPENT

PARKING TOOLBOX

There are a number of strategies which can be implemented to influence parking availability for residents and businesses. Note that some of these strategies may not be applicable or appropriate for Chinatown.

Some examples of parking solutions include:

- Promote underutilized off-street spaces (i.e. way finding, marketing)
- Re-purpose existing private parking supply
- Optimize curb-side parking supply
- Adjust parking pricing
- Promote car sharing / carpooling
- Promote measures to reduce employee parking demand (i.e. telework)
- Promote use of on-street parking permits
- Adjust municipal parking supply
- Adjust enforcement levels
- Adjust curb-side parking regulations (i.e. time of day, day of week, max legal duration)
- Adjust zoning provisions for parking requirements
- Promote adequate on-site parking space provisions through development agreements (i.e. developer-provided public parking, or cash-in-lieu of parking payment)
- Improve public transit service levels
- Increase bicycle usage by improving bicycle parking

BOÎTE À OUTILS POUR LA GESTION DU STATIONNEMENT

Un certain nombre de stratégies peuvent être mises en œuvre pour améliorer la disponibilité des places de stationnement pour les résidents et les entreprises. Il convient de noter que certaines de ces stratégies peuvent ne pas être applicables ou appropriées dans le quartier chinois.

Voici quelques exemples de solutions aux problèmes de stationnement :

- promouvoir les places de stationnement hors rue qui sont sous-utilisées (c.-à-d. ajouter des panneaux de signalisation et faire connaître ces places);
- donner une nouvelle vocation à l'offre actuelle de places de stationnement privées;
- optimiser l'utilisation des places de stationnement situées le long des trottoirs;
- augmenter les tarifs de stationnement;
- promouvoir les services d'autopartage et le covoiturage;
- promouvoir les mesures qui permettent de réduire la demande de stationnement chez les employés (p. ex., télétravail);
- promouvoir l'utilisation des permis de stationnement sur rue;
- augmenter l'offre de places de stationnement municipales;
- accroître les activités d'application de la réglementation;
- adapter les règlements applicables aux places de stationnement situées le long des trottoirs (heure du jour, jour de la semaine, durée maximale de stationnement permise, etc.);
- adapter les dispositions concernant le zonage pour répondre aux besoins en matière de stationnement.
- promouvoir l'inclusion de dispositions adéquates relatives aux places de stationnement sur les sites dans les ententes d'aménagement (p. ex., parc de stationnement public fourni par le promoteur ou règlement financier des exigences de stationnement);
- améliorer les services de transport en commun;
- accroître le cyclisme en offrant plus de places de stationnement pour vélos;

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FUTURE PARKING DEMAND

Parking demand may be influenced by many factors, including:

- Changes in land use due to redevelopment
- Retail vacancy rates / economic climate
- Changes in travel behavior / transit use
- Popularity of the Chinatown area

In assessing future parking demand, it is important to note the following:

- There are limited opportunities for intensification within the study area
- Over the period from 2005 to 2031, population is expected to grow by 25% and employment by 10%.
- Transit usage within the Chinatown is expected to increase over time as service improvements are implemented.

Overall, on-street and off-street parking demand in the Chinatown area is expected to increase by 60 to 170 vehicles by 2031, depending upon future developments. Additional parking supply may be required to accommodate future parking demand depending on future developments.

DEMANDE FUTURE EN MATIÈRE DE STATIONNEMENT

La demande en matière de stationnement peut être tributaire de nombreux facteurs, y compris :

- les changements d'utilisation du territoire imputable au réaménagement;
- les taux d'inoccupation des locaux destinés au commerce de détail/climat économique;
- les changements touchant les habitudes de déplacement et les modes de transport utilisés;
- la popularité du secteur du quartier chinois.

Au moment d'évaluer la demande future en matière de stationnement, il importe de noter ce qui suit :

- le quartier est bien établi, et les possibilités de densification sont limitées;
- entre 2011 et 2031, la population devrait croître de 25 % et l'emploi devrait enregistrer une hausse de 10 %;
- l'utilisation des transports en commun devrait s'accroître avec le temps, à mesure que les services seront améliorés.

Dans l'ensemble, on s'attend à ce que la demande de stationnement hors rue dans le quartier chinois augmente de 60 à 170 véhicules d'ici 2031, dépendamment des aménagements futurs. Il faudra peut-être offrir du stationnement additionnel pour répondre à une demande éventuelle de stationnement en fonction des aménagements futurs.

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WHERE DO WE GO FROM HERE?

Thank you for your participation!

The next stage in the study will involve the development of recommendations. These recommendations will draw on the technical work undertaken to date as well as feedback from consultation events, including this open house. The recommendations are scheduled to be brought forward to Transportation Committee October 2nd, 2013.

Please fill in a comment sheet provided and place it in the box on the table or fax / e-mail your comments by April 20, 2013 date to:

Mary Gracie, MCIP RPP
Program Manager, Parking Studies
City of Ottawa
185 Slidell Street,
Ottawa, Ontario K1Y 3B5
E-mail: mary.gracie@ottawa.ca
Tel: 613-580-2424 x29002

Doug Green, P. Eng, PTOE
Project Manager
Dillon Consulting Limited
177 Colonnade Road, Suite 101
Ottawa, Ontario, K2E 7J4
E-mail: dgreen@dillon.ca
Tel: 613-745-6338 x3018

QUELLE EST LA PROCHAINE ÉTAPE?

Je vous remercie de votre participation!

La prochaine étape de l'étude portera sur la formulation de recommandations. Ces recommandations reposeront sur les travaux techniques entrepris jusqu'à maintenant ainsi que sur la rétroaction reçue pendant les activités de consultation, y compris au cours de la présente journée portes ouvertes. Les recommandations seront présentées au Comité des transports le 2 octobre 2013.

Nous vous prions de bien vouloir remplir les fiches de commentaires qui sont mises à votre disposition et de les déposer dans la boîte qui se trouve sur la table ou de nous transmettre vos commentaires par télécopieur ou par courriel d'ici le 20 avril 2013 aux coordonnées indiquées ci-après.

Mary Gracie, MCIP RPP
Gestionnaire de programme, Études sur le stationnement
Ville d'Ottawa
185, rue Slidell
Ottawa (Ontario) K1Y 3B5
Courriel : mary.gracie@ottawa.ca
Tél. : 613 580-2424, poste 29002

Doug Green, P. Eng., PTOE
Gestionnaire de projet
Dillon Consulting Limited
177, chemin Colonnade, local 101
Ottawa (Ontario) K2E 7J4
Courriel : dgreen@dillon.ca
Tél. : 613 745-6338, poste 3018

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Chinatown Local Area Parking Study Public Open House
Wednesday, April 17, 2013
Comment Sheet

Your comments are appreciated. All comments will be maintained on file for use during the study and may be included in study documentation. With the exception of personal information, all comments will become part of the public record. Thank you for your participation.

Please tell us about yourself:

- ☐ I am a resident of Chinatown
- ☐ I am a business owner in Chinatown
- ☐ I attend school in Chinatown
- ☐ I work in Chinatown
- ☑ Other (please specify): Property Owner.

My concerns with parking in Chinatown include: (select all that apply)

- ☐ I don't have any concerns
- ☐ Lack of available parking on Somerset Street
- ☐ Lack of available parking on side streets
- ☐ Lack of available parking on Primrose Avenue
- ☐ Lack of Loading Zones
- ☐ Lack of employee and volunteer parking
- ☑ Potential future redevelopment of existing parking lots
- ☐ Other issues (please be as specific as possible!)

Interested in seeing the surface parking lots get developed as they are, an eyesore + lost of neighbourhood development opportunities.

I would support these tools to address my concerns: (select all that apply)

- ☑ Optimize existing supply – Re-purpose existing private lots to provide parking supply, reconfigure existing lots to maximize spaces, optimize curb-side parking supply
- ☐ Increase municipal parking supply No
- ☑ Adjust parking regulations
- ☑ Adjust pricing
- ☑ Adjust enforcement
- ☑ Use of on-street permit system
- ☑ Policy based approaches – Adjust zoning provisions, use development agreements (i.e. cash-in-lieu, developer-provided public parking)
- ☑ Encourage active modes – Improve Bicycle parking, enhance walking and cycling infrastructure
- ☑ Increase transit service, promote carpooling/carsharing and teleworking
- ☐ Other

Please include any additional comments on the study below:

Lose the surface parking lots + put them in new developments (indoors)

Please drop this comment sheet in the box provided, or send it by Wednesday, April 24th, 2013 to:

Mary Gracie, MCIP RPP
Program Manager, Parking Studies
City of Ottawa
185 Slidell Street, Ottawa, ON K1Y 3B5
E-mail: mary.gracie@ottawa.ca
Tel: 613-580-2424 x 29002

Douglas Green, P. Eng.
Project Manager, Dillon Consulting Limited
177 Colonnade Road, Suite 101
Ottawa, ON K1H 1E1
E-mail: dgreen@dillon.ca
Tel: 613-745-2213; Fax: 613-745-3491

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Please tell us about yourself:

- ☒ I am a resident of Chinatown
- ☐ I am a business owner in Chinatown
- ☐ I attend school in Chinatown
- ☐ I work in Chinatown
- ☐ Other (please specify):

My concerns with parking in Chinatown include: (select all that apply)

- ☐ I don't have any concerns
- ☐ Lack of available parking on Somerset Street
- ☐ Lack of available parking on side streets
- ☐ Lack of available parking on Primrose Avenue
- ☐ Lack of Loading Zones
- ☐ Lack of employee and volunteer parking
- ☐ Potential future redevelopment of existing parking lots
- ☐ Other issues (please be as specific as possible!)

Interested in seeing PKg lots developed - they are underused & could provide much better use to the neighbourhood.
Also very interested in improving cycling - safety, infrastructure, experience

I would support these tools to address my concerns: (select all that apply)

- ☐ Optimize existing supply – Re-purpose existing private lots to provide parking supply, reconfigure existing lots to maximize spaces, optimize curb-side parking supply
- ☐ Increase municipal parking supply
- ☐ Adjust parking regulations
- ☐ Adjust pricing
- ☐ Adjust enforcement
- ☐ Use of on-street permit system
- ☐ Policy based approaches – Adjust zoning provisions, use development agreements (i.e. cash-in-lieu, developer-provided public parking)
- ☑ Encourage active modes – Improve Bicycle parking, enhance walking and cycling infrastructure
- ☐ Increase transit service, promote carpooling/carsharing and teleworking
- ☐ Other

Please include any additional comments on the study below:

If a dim sum place closed, there would be 20 parking period that exceed supply. Have you factored that in to future changes?

Please drop this comment sheet in the box provided, or send it by Wednesday, April 24th, 2013 to:

Mary Gracie, MCIP RPP
Program Manager, Parking Studies
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Please tell us about yourself:

- ☐ I am a resident of Chinatown
- ☐ I am a business owner in Chinatown
- ☐ I attend school in Chinatown
- ☑ I work in Chinatown
- ☐ Other (please specify):

My concerns with parking in Chinatown include: (select all that apply)

- ☐ I don't have any concerns
- ☐ Lack of available parking on Somerset Street
- ☐ Lack of available parking on side streets
- ☐ Lack of available parking on Primrose Avenue
- ☑ Lack of Loading Zones
- ☑ Lack of employee and volunteer parking
- ☐ Potential future redevelopment of existing parking lots
- ☐ Other issues (please be as specific as possible!)

I would support these tools to address my concerns: (select all that apply)

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- ☐ Increase municipal parking supply
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- ☐ Encourage active modes – Improve Bicycle parking, enhance walking and cycling infrastructure
- ☐ Increase transit service, promote carpooling/carsharing and teleworking
- ☐ Other

Please include any additional comments on the study below:

In the morning before 11 am and in the afternoon between 2 - 4pm on Street + off Street parking usage is low. If the price can be adjusted during this time, (lower the price), it will would help our business

Please drop this comment sheet in the box provided, or send it by Wednesday, April 24th, 2013 to: Electronically.

Mary Gracie, MCIP RPP
Program Manager, Parking Studies
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Please tell us about yourself:

- ☒ I am a resident of "Chinatown" (6)
- ☐ I am a business owner in Chinatown
- ☐ I attend school in Chinatown
- ☐ Other (please specify):
- ☐ I work in Chinatown (7)

My concerns with parking in Chinatown include: (select all that apply)

- ☐ I don't have any concerns
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- ☐ Lack of available parking on Primrose Avenue
- ☒ Lack of Loading Zones
- ☐ Lack of employee and volunteer parking
- ☐ Potential future redevelopment of existing parking lots
- ☒ Other issues (please be as specific as possible!)

Your "parking mgmt. strategy" is focussed on local businesses, institutions + tourism - NO MENTION OF IMPROVING LIFE FOR RESIDENTS! Impact of parking, illegal stopping + loading can be highly detrimental to our enjoyment of our community. We have several wholesale businesses on Somerset - " " should not be in residential areas, but "Chinatown" gets a pass... Businesses must be required to receiving deliveries at particular, not-rush-hour-in-Chinatown-hours; stopping in no-stopping/tow-away zones = a ticket, no warnings. Someone will be killed at Upper Lorne P/ + Somerset someday given current conditions.

I would support these tools to address my concerns: (select all that apply)

- ☒ Optimize existing supply – Re-purpose existing private lots to provide parking supply, reconfigure existing lots to maximize spaces, optimize curb-side parking supply
- ☐ Increase municipal parking supply
- ☐ Adjust parking regulations
- ☒ Adjust pricing
- ☒ Adjust enforcement – ENFORCE "NO STOPPING - tow-away zones"
- ☐ Use of on-street permit system
- ☐ Policy based approaches – Adjust zoning provisions, use development agreements (i.e. cash-in-lieu, developer-provided public parking) We need green space MORE than parking!!
- ☒ Encourage active modes – Improve Bicycle parking, enhance walking and cycling infrastructure
- ☒ Increase transit service, promote carpooling/carsharing and teleworking
- ☐ Other

Please include any additional comments on the study below:

Please drop this comment sheet in the box provided, or send it by Wednesday, April 24th, 2013 to:

Mary Gracie, MCIP RPP
Program Manager, Parking Studies
City of Ottawa
185 Slidell Street, Ottawa, ON K1Y 3B5
E-mail: mary.gracie@ottawa.ca
Tel: 613-580-2424 x 29002

Douglas Green, P. Eng.
Project Manager, Dillon Consulting Limited
177 Colonnade Road, Suite 101
Ottawa, ON K1H 1E1
E-mail: dgreen@dillon.ca
Tel: 613-745-2213; Fax: 613-745-3491

Chinatown Local Area Parking Study Public Open House
Wednesday, April 17, 2013
Comment Sheet

Your comments are appreciated. All comments will be maintained on file for use during the study and may be included in study documentation. With the exception of personal information, all comments will become part of the public record. Thank you for your participation.

Please tell us about yourself:

- ☑ I am a resident of Chinatown
- ☐ I am a business owner in Chinatown
- ☐ I attend school in Chinatown
- ☐ I work in Chinatown
- ☐ Other (please specify):

My concerns with parking in Chinatown include: (select all that apply)

- ☐ I don't have any concerns
- ☐ Lack of available parking on Somerset Street
- ☐ Lack of available parking on side streets
- ☐ Lack of available parking on Primrose Avenue
- ☑ Lack of Loading Zones
- ☐ Lack of employee and volunteer parking
- ☐ Potential future redevelopment of existing parking lots
- ☐ Other issues (please be as specific as possible!)

a focus on businesses + development/developers seems to overlook the people who pay residential taxes & cannot move because of parking

UPPER LORNE PLACE

I would support these tools to address my concerns: (select all that apply)

- ☑ Optimize existing supply – Re-purpose existing private lots to provide parking supply, reconfigure existing lots to maximize spaces, optimize curb-side parking supply
- ☐ Increase municipal parking supply
- ☐ Adjust parking regulations
- ☐ Adjust pricing
- ☑ Adjust enforcement = increase
- ☐ Use of on-street permit system
- ☐ Policy based approaches – Adjust zoning provisions, use development agreements (i.e. ~~cash-in-lieu~~, developer-provided public parking) → DO NOT USE
- ☐ Encourage active modes – Improve Bicycle parking, enhance walking and cycling infrastructure
- ☐ Increase transit service, promote carpooling/carsharing and teleworking
- ☐ Other

Please include any additional comments on the study below:

I believe your predictions for parking are low. With planned intensification all thru centretown / Dows Lake it is going to increase dramatically

Please drop this comment sheet in the box provided, or send it by Wednesday, April 24th, 2013 to:

Mary Gracie, MCIP RPP
Program Manager, Parking Studies
City of Ottawa
185 Slidell Street, Ottawa, ON K1Y 3B5
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Douglas Green, P. Eng.
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177 Colonnade Road, Suite 101
Ottawa, ON K1H 1E1
E-mail: dgreen@dillon.ca
Tel: 613-745-2213; Fax: 613-745-3491

APPENDIX G

Public and Private Parking

Accumulation Figures

Chinatown Local Area Parking Study 2012
City of Ottawa Cambridge Street Parking Lot Occupancy and Duration
687 Somerset Street

OCCUPANCY									
Time	Saturday, Nov 3, 2012			Sunday, Nov 4, 2012			Thursday, Nov 8, 2012		
	Permit	Paid	Total	Permit	Paid	Total	Permit	Paid	Total
9:00 AM	1	0	1	1	0	1	11	2	13
9:30 AM	1	0	1	0	0	0	11	3	14
10:00 AM	1	0	1	0	4	4	11	4	15
10:30 AM	1	2	3	0	23	23	11	4	15
11:00 AM	1	7	8	2	42	44	12	6	18
11:30 AM	1	14	15	2	43	45	12	12	24
12:00 PM	0	25	25	2	39	41	14	18	32
12:30 PM	0	26	26	0	36	36	10	28	38
1:00 PM	0	22	22	0	38	38	11	28	39
1:30 PM	0	20	20	0	35	35	10	11	21
2:00 PM	0	14	14	0	28	28	9	5	14
2:30 PM	0	14	14	0	21	21	9	6	15
3:00 PM	0	4	4	0	9	9	9	6	15
3:30 PM	0	9	9	0	0	0	8	3	11
4:00 PM	0	6	6	0	0	0	8	3	11
4:30 PM	0	4	4	0	0	0	5	3	8
5:00 PM	0	12	12	0	0	0	4	5	9
5:30 PM	0	13	13	0	4	4	3	7	10
6:00 PM	0	35	35	0	6	6	3	12	15
6:30 PM	1	45	46	0	11	11	2	17	19
7:00 PM	1	45	46	1	12	13	0	20	20
7:30 PM	1	43	44	1	9	10	0	16	16
8:00 PM	3	42	45	1	8	9	0	16	16
8:30 PM	3	33	36	2	5	7	0	10	10

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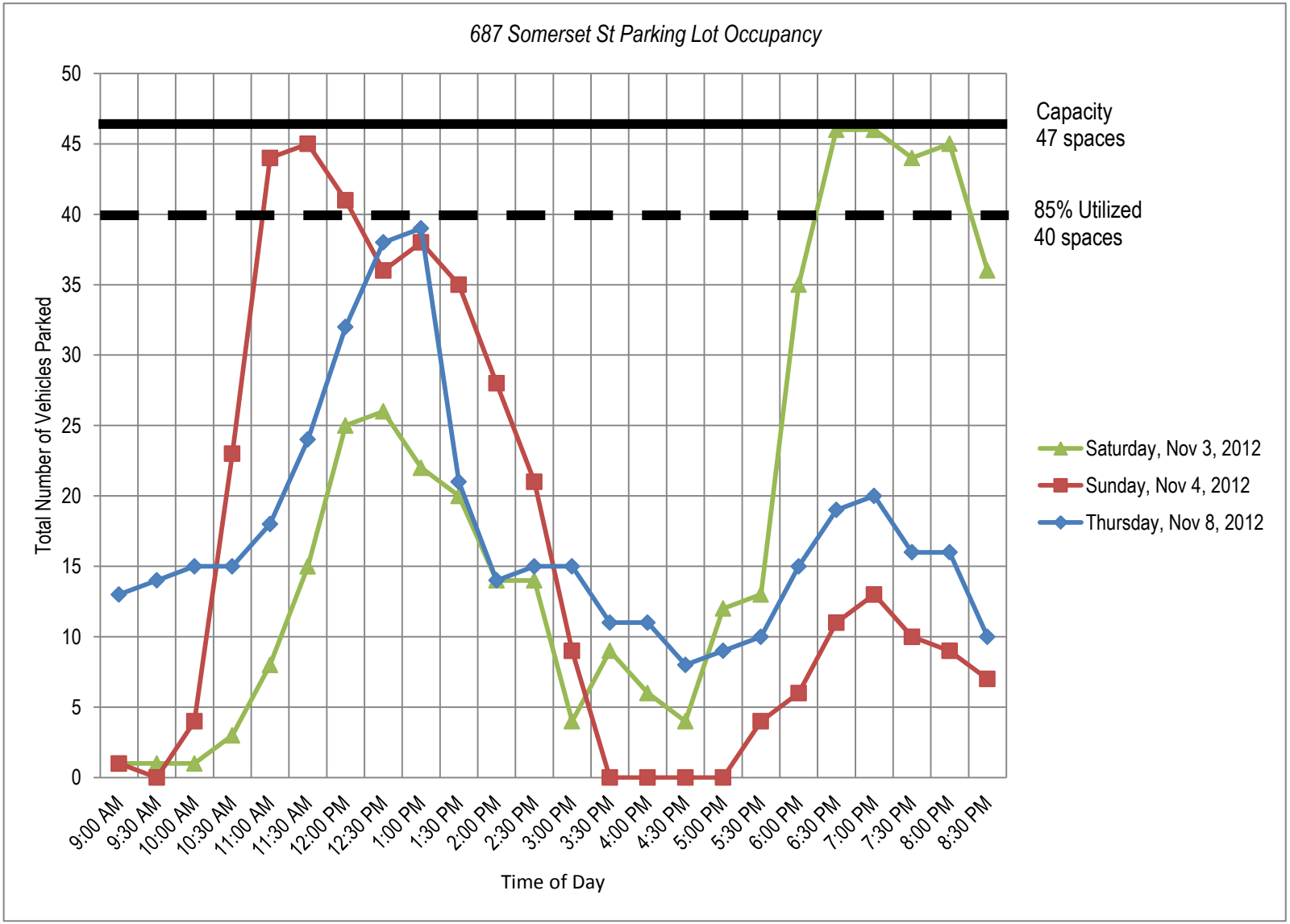
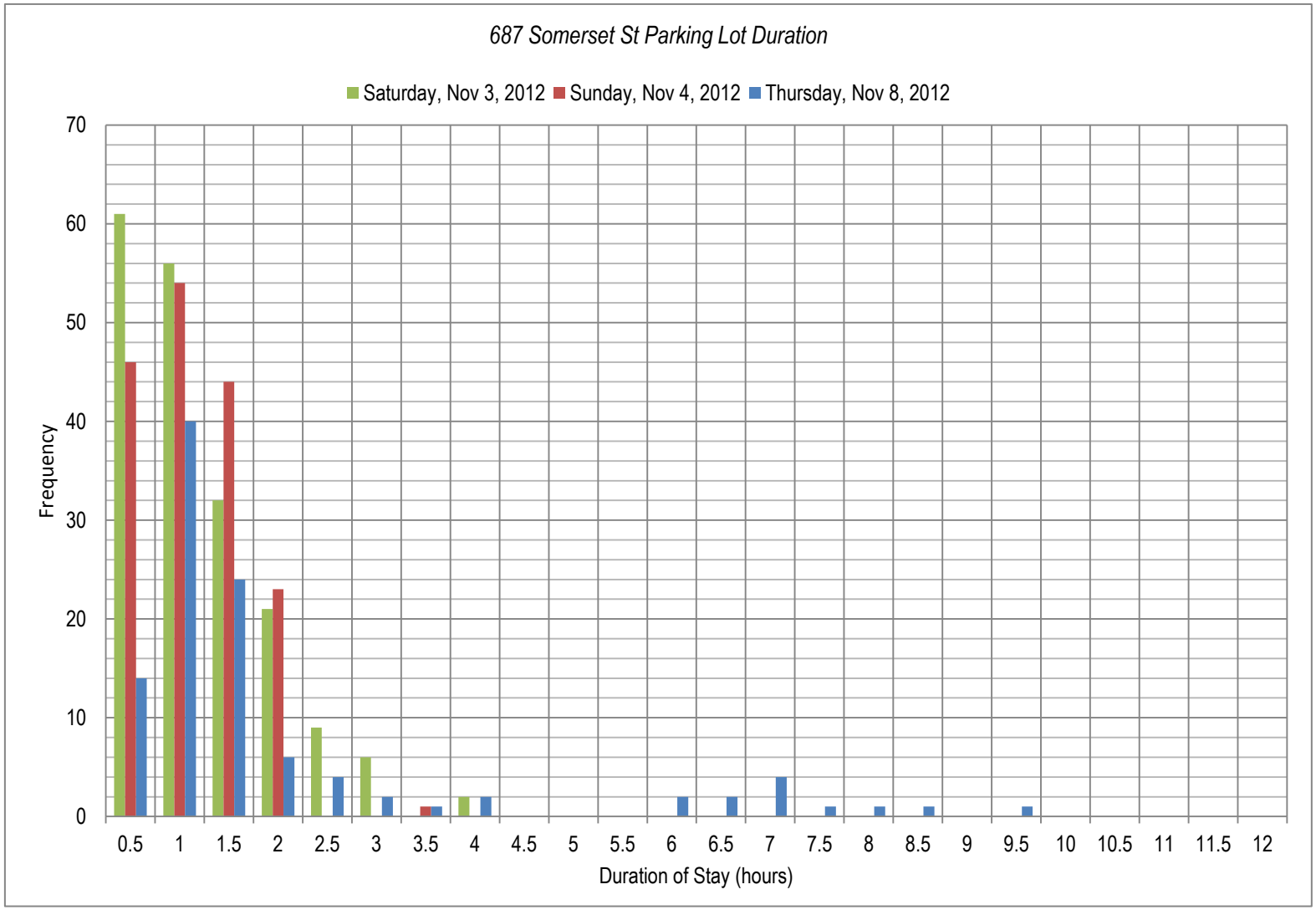
Chinatown Local Area Parking Study 2012
City of Ottawa Cambridge Street Parking Lot Occupancy and Duration
687 Somerset Street



Chinatown Local Area Parking Study 2012
City of Ottawa Cambridge Street Parking Lot Occupancy and Duration
687 Somerset Street

DURATION									
Duration (hours)	Saturday, Nov 3, 2012			Sunday, Nov 4, 2012			Thursday, Nov 8, 2012		
	Permit	Paid	Total	Permit	Paid	Total	Permit	Paid	Total
0.5	2	59	61	2	44	46	0	14	14
1	0	56	56	0	54	54	2	38	40
1.5	0	32	32	2	42	44	1	23	24
2	0	21	21	1	22	23	0	6	6
2.5	1	8	9	0	0	0	0	4	4
3	0	6	6	0	0	0	1	1	2
3.5	0	0	0	0	1	1	1	0	1
4	1	1	2	0	0	0	1	1	2
4.5	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
5.5	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	2	0	2
6.5	0	0	0	0	0	0	1	1	2
7	0	0	0	0	0	0	4	0	4
7.5	0	0	0	0	0	0	0	1	1
8	0	0	0	0	0	0	1	0	1
8.5	0	0	0	0	0	0	1	0	1
9	0	0	0	0	0	0	0	0	0
9.5	0	0	0	0	0	0	1	0	1
10	0	0	0	0	0	0	0	0	0
10.5	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
11.5	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0

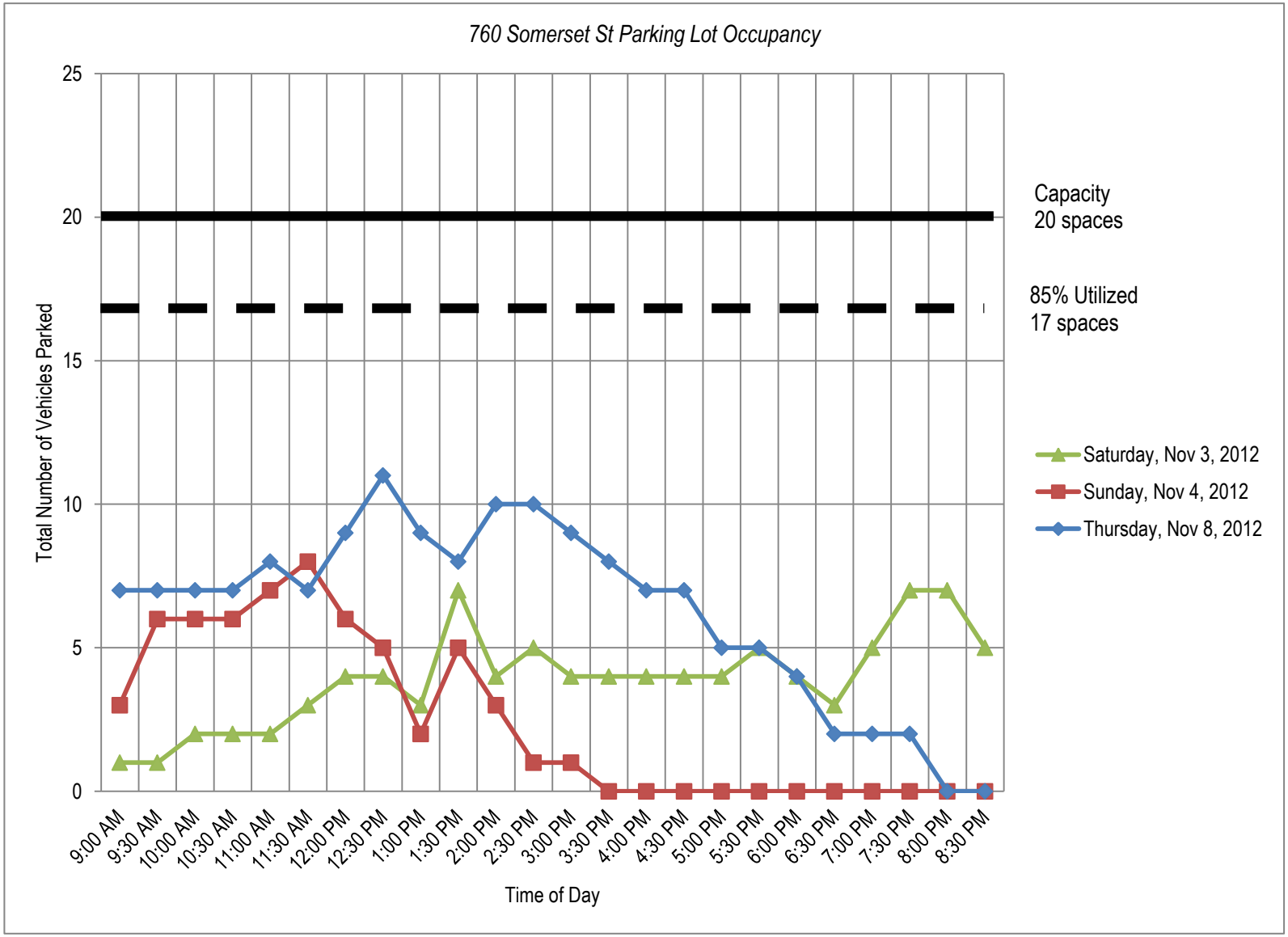
Chinatown Local Area Parking Study 2012
City of Ottawa Cambridge Street Parking Lot Occupancy and Duration
687 Somerset Street



Chinatown Local Area Parking Study 2012
City of Ottawa Empress Street Parking Lot Occupancy and Duration
760 Somerset Street

OCCUPANCY									
Time	Saturday, Nov 3, 2012			Sunday, Nov 4, 2012			Thursday, Nov 8, 2012		
	Permit	Paid	Total	Permit	Paid	Total	Permit	Paid	Total
9:00 AM	1	0	1	1	2	3	6	1	7
9:30 AM	1	0	1	2	4	6	6	1	7
10:00 AM	2	0	2	2	4	6	7	0	7
10:30 AM	2	0	2	2	4	6	7	0	7
11:00 AM	2	0	2	2	5	7	7	1	8
11:30 AM	2	1	3	1	7	8	7	0	7
12:00 PM	3	1	4	0	6	6	8	1	9
12:30 PM	3	1	4	0	5	5	7	4	11
1:00 PM	3	0	3	0	2	2	7	2	9
1:30 PM	3	4	7	0	5	5	7	1	8
2:00 PM	3	1	4	0	3	3	7	3	10
2:30 PM	3	2	5	0	1	1	7	3	10
3:00 PM	3	1	4	0	1	1	7	2	9
3:30 PM	3	1	4	0	0	0	7	1	8
4:00 PM	3	1	4	0	0	0	6	1	7
4:30 PM	3	1	4	0	0	0	6	1	7
5:00 PM	3	1	4	0	0	0	5	0	5
5:30 PM	2	3	5	0	0	0	5	0	5
6:00 PM	2	2	4	0	0	0	4	0	4
6:30 PM	1	2	3	0	0	0	2	0	2
7:00 PM	1	4	5	0	0	0	1	1	2
7:30 PM	1	6	7	0	0	0	1	1	2
8:00 PM	1	6	7	0	0	0	0	0	0
8:30 PM	1	4	5	0	0	0	0	0	0

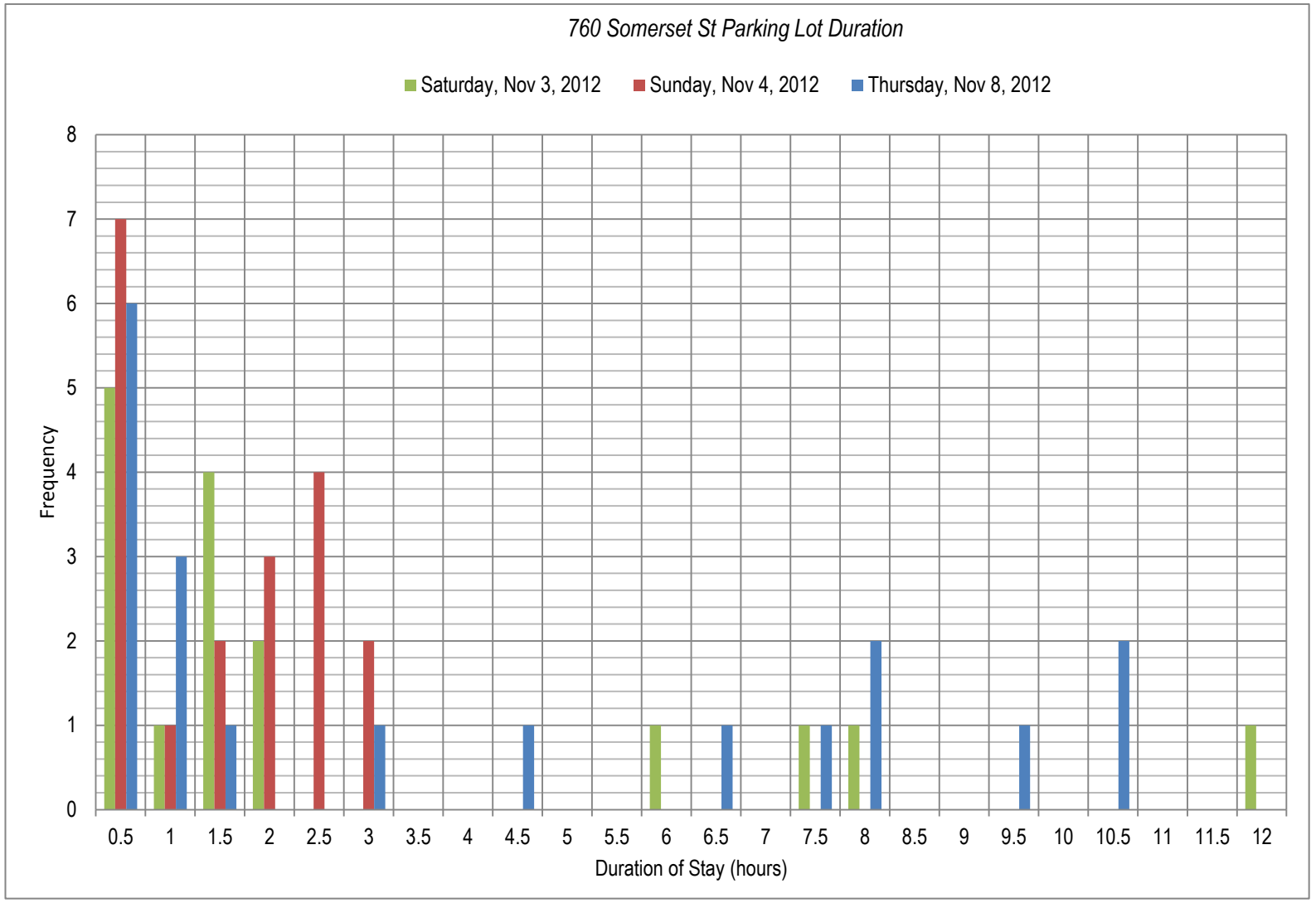
Chinatown Local Area Parking Study 2012
City of Ottawa Empress Street Parking Lot Occupancy and Duration
760 Somerset Street



Chinatown Local Area Parking Study 2012
City of Ottawa Empress Street Parking Lot Occupancy and Duration
760 Somerset Street

DURATION									
Duration (hours)	Saturday, Nov 3, 2012			Sunday, Nov 4, 2012			Thursday, Nov 8, 2012		
	Permit	Paid	Total	Permit	Paid	Total	Permit	Paid	Total
0.5	0	5	5	0	7	7	0	6	6
1	0	1	1	0	1	1	0	3	3
1.5	0	4	4	0	2	2	0	1	1
2	0	2	2	0	3	3	0	0	0
2.5	0	0	0	2	2	4	0	0	0
3	0	0	0	0	2	2	1	0	1
3.5	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
4.5	0	0	0	0	0	0	0	1	1
5	0	0	0	0	0	0	0	0	0
5.5	0	0	0	0	0	0	0	0	0
6	1	0	1	0	0	0	0	0	0
6.5	0	0	0	0	0	0	1	0	1
7	0	0	0	0	0	0	0	0	0
7.5	0	1	1	0	0	0	1	0	1
8	1	0	1	0	0	0	2	0	2
8.5	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
9.5	0	0	0	0	0	0	1	0	1
10	0	0	0	0	0	0	0	0	0
10.5	0	0	0	0	0	0	2	0	2
11	0	0	0	0	0	0	0	0	0
11.5	0	0	0	0	0	0	0	0	0
12	1	0	1	0	0	0	0	0	0

Chinatown Local Area Parking Study 2012
City of Ottawa Empress Street Parking Lot Occupancy and Duration
760 Somerset Street

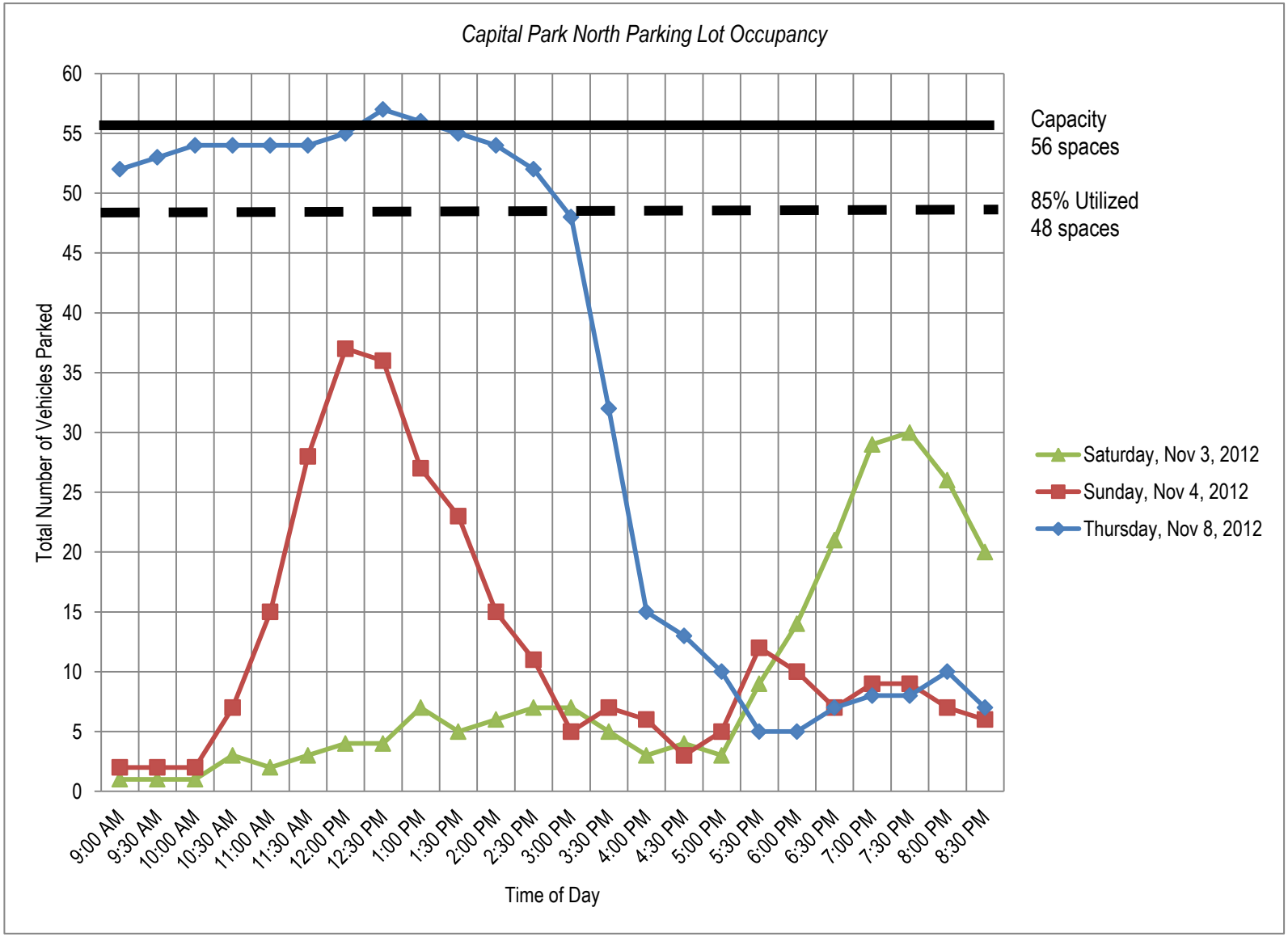


DILLON CONSULTING

Chinatown Local Area Parking Study 2012
Capital Park North Parking Lot Occupancy

OCCUPANCY									
Time	Saturday, Nov 3, 2012			Sunday, Nov 4, 2012			Thursday, Nov 8, 2012		
	Permit	Paid	Total	Permit	Paid	Total	Permit	Paid	Total
9:00 AM			1			2			52
9:30 AM			1			2			53
10:00 AM			1			2			54
10:30 AM			3			7			54
11:00 AM			2			15			54
11:30 AM			3			28			54
12:00 PM			4			37			55
12:30 PM			4			36			57
1:00 PM			7			27			56
1:30 PM			5			23			55
2:00 PM			6			15			54
2:30 PM			7			11			52
3:00 PM			7			5			48
3:30 PM			5			7			32
4:00 PM			3			6			15
4:30 PM			4			3			13
5:00 PM			3			5			10
5:30 PM			9			12			5
6:00 PM			14			10			5
6:30 PM			21			7			7
7:00 PM			29			9			8
7:30 PM			30			9			8
8:00 PM			26			7			10
8:30 PM			20			6			7

Chinatown Local Area Parking Study 2012
Capital Park North Parking Lot Occupancy

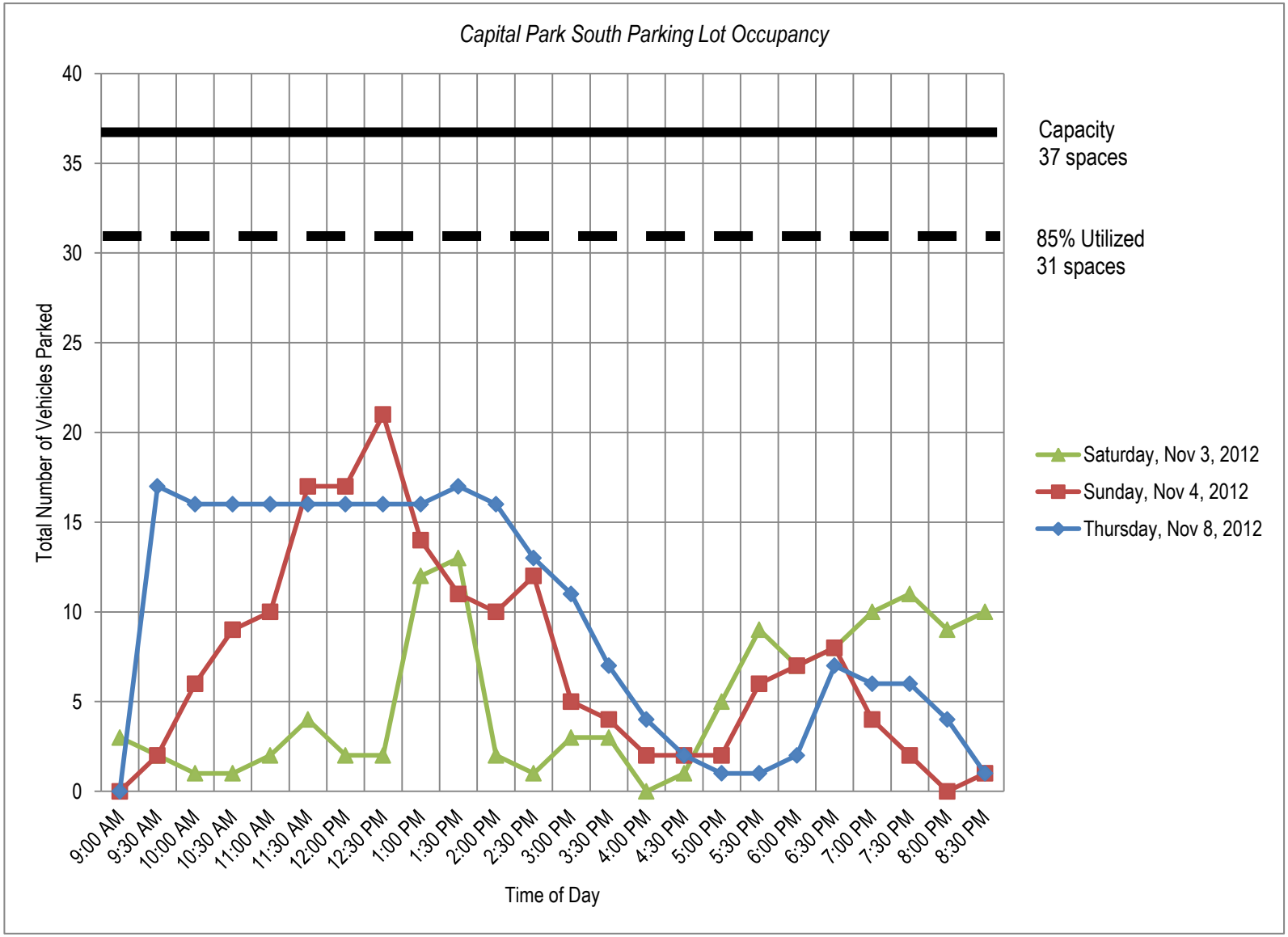


Chinatown Local Area Parking Study 2012
Capital Park South Parking Lot Occupancy

OCCUPANCY									
Time	Saturday, Nov 3, 2012			Sunday, Nov 4, 2012			Thursday, Nov 8, 2012		
	Permit	Paid	Total	Permit	Paid	Total	Permit	Paid	Total
9:00 AM			3			0			0
9:30 AM			2			2			17
10:00 AM			1			6			16
10:30 AM			1			9			16
11:00 AM			2			10			16
11:30 AM			4			17			16
12:00 PM			2			17			16
12:30 PM			2			21			16
1:00 PM			12			14			16
1:30 PM			13			11			17
2:00 PM			2			10			16
2:30 PM			1			12			13
3:00 PM			3			5			11
3:30 PM			3			4			7
4:00 PM			0			2			4
4:30 PM			1			2			2
5:00 PM			5			2			1
5:30 PM			9			6			1
6:00 PM			7			7			2
6:30 PM			8			8			7
7:00 PM			10			4			6
7:30 PM			11			2			6
8:00 PM			9			0			4
8:30 PM			10			1			1

DILLON CONSULTING

Chinatown Local Area Parking Study 2012
Capital Park South Parking Lot Occupancy

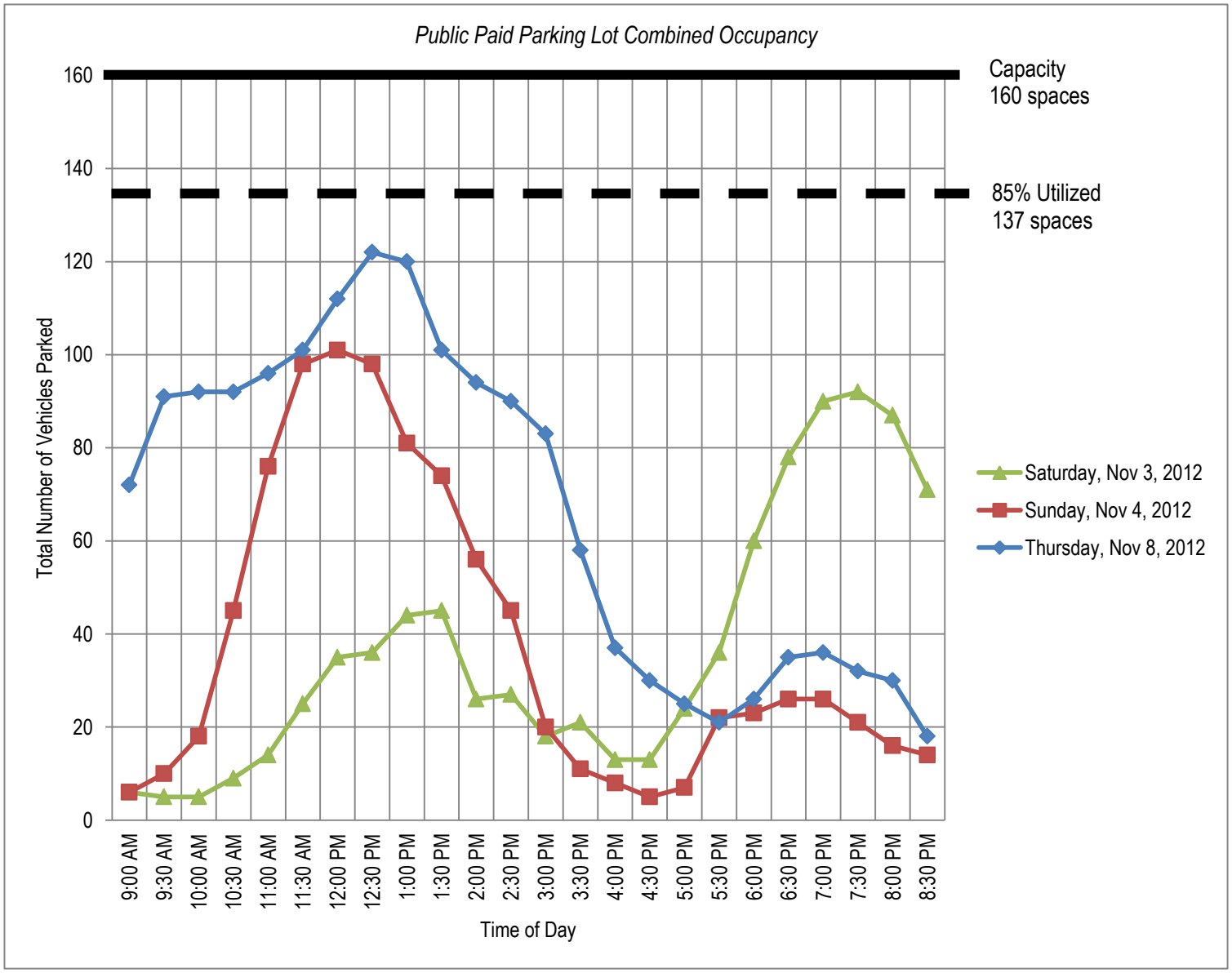


Chinatown Local Area Parking Study 2012
Pubic Paid Parking Lot Occupancy Combined

OCCUPANCY															
Time	Saturday, Nov 3, 2012					Sunday, Nov 4, 2012					Thursday, Nov 8, 2012				
	City N	City S	Cap N	Cap S	Total	City N	City S	Cap N	Cap S	Total	City N	City S	Cap N	Cap S	Total
9:00 AM	1	1	1	3	6	1	3	2	0	6	13	7	52	0	72
9:30 AM	1	1	1	2	5	0	6	2	2	10	14	7	53	17	91
10:00 AM	1	2	1	1	5	4	6	2	6	18	15	7	54	16	92
10:30 AM	3	2	3	1	9	23	6	7	9	45	15	7	54	16	92
11:00 AM	8	2	2	2	14	44	7	15	10	76	18	8	54	16	96
11:30 AM	15	3	3	4	25	45	8	28	17	98	24	7	54	16	101
12:00 PM	25	4	4	2	35	41	6	37	17	101	32	9	55	16	112
12:30 PM	26	4	4	2	36	36	5	36	21	98	38	11	57	16	122
1:00 PM	22	3	7	12	44	38	2	27	14	81	39	9	56	16	120
1:30 PM	20	7	5	13	45	35	5	23	11	74	21	8	55	17	101
2:00 PM	14	4	6	2	26	28	3	15	10	56	14	10	54	16	94
2:30 PM	14	5	7	1	27	21	1	11	12	45	15	10	52	13	90
3:00 PM	4	4	7	3	18	9	1	5	5	20	15	9	48	11	83
3:30 PM	9	4	5	3	21	0	0	7	4	11	11	8	32	7	58
4:00 PM	6	4	3	0	13	0	0	6	2	8	11	7	15	4	37
4:30 PM	4	4	4	1	13	0	0	3	2	5	8	7	13	2	30
5:00 PM	12	4	3	5	24	0	0	5	2	7	9	5	10	1	25
5:30 PM	13	5	9	9	36	4	0	12	6	22	10	5	5	1	21
6:00 PM	35	4	14	7	60	6	0	10	7	23	15	4	5	2	26
6:30 PM	46	3	21	8	78	11	0	7	8	26	19	2	7	7	35
7:00 PM	46	5	29	10	90	13	0	9	4	26	20	2	8	6	36
7:30 PM	44	7	30	11	92	10	0	9	2	21	16	2	8	6	32
8:00 PM	45	7	26	9	87	9	0	7	0	16	16	0	10	4	30
8:30 PM	36	5	20	10	71	7	0	6	1	14	10	0	7	1	18

DILLON CONSULTING

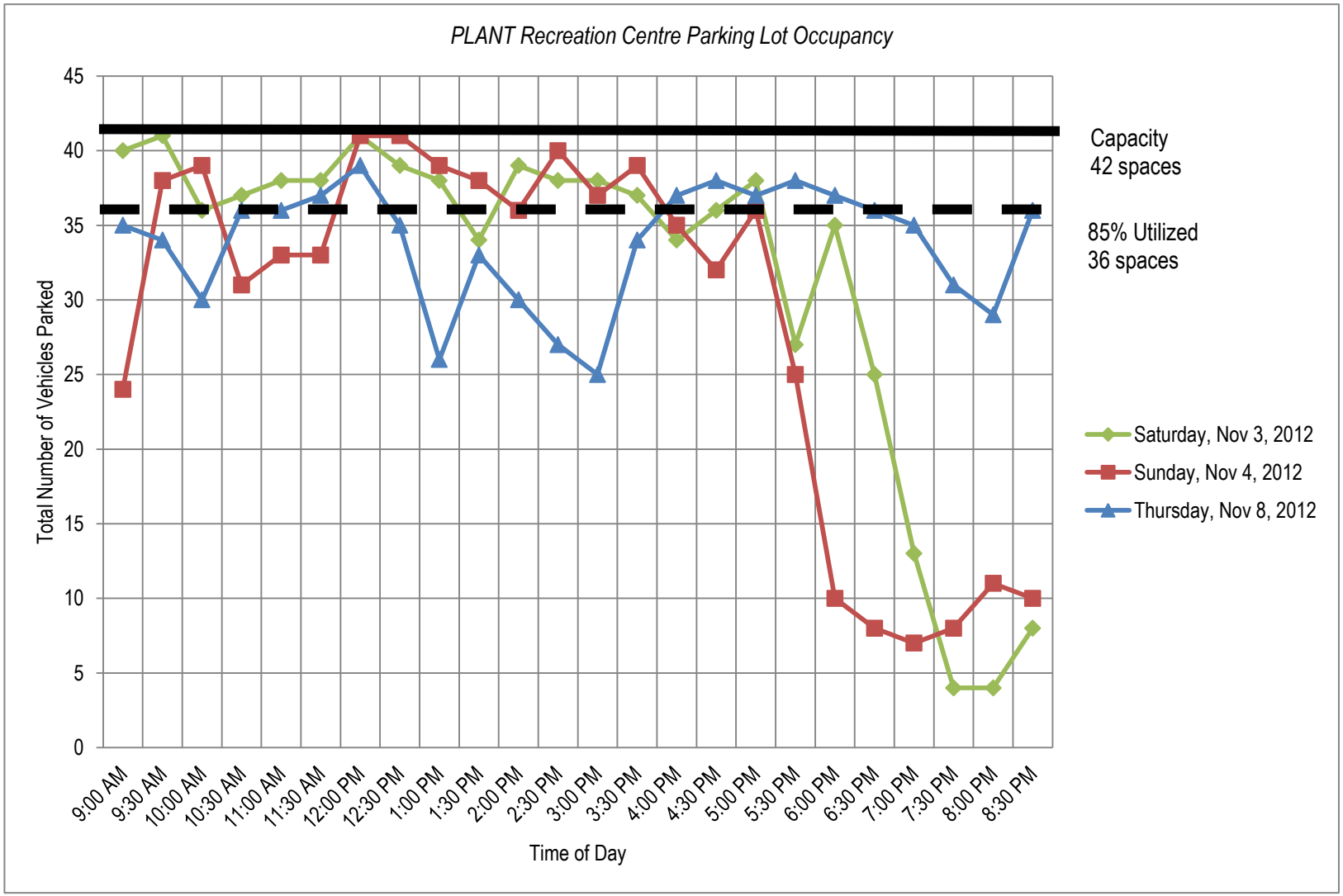
Chinatown Local Area Parking Study 2012
Pubic Paid Parking Lot Occupancy Combined



Chinatown Local Area Parking Study 2012
PLANT Recreation Centre Parking Lot Occupancy and Duration

OCCUPANCY						
Time	Saturday, Nov 3, 2012		Sunday, Nov 4, 2012		Thursday, Nov 8, 2012	
	Total	New	Total	New	Total	New
9:00 AM	40	40	24	24	35	35
9:30 AM	41	11	38	25	34	5
10:00 AM	36	10	39	8	30	7
10:30 AM	37	12	31	13	36	17
11:00 AM	38	12	33	13	36	8
11:30 AM	38	18	33	14	37	15
12:00 PM	41	16	41	16	39	18
12:30 PM	39	13	41	16	35	9
1:00 PM	38	9	39	14	26	5
1:30 PM	34	10	38	6	33	21
2:00 PM	39	15	36	14	30	8
2:30 PM	38	11	40	11	27	15
3:00 PM	38	6	37	11	25	15
3:30 PM	37	4	39	11	34	15
4:00 PM	34	12	35	6	37	9
4:30 PM	36	20	32	10	38	12
5:00 PM	38	10	36	11	37	18
5:30 PM	27	8	25	2	38	11
6:00 PM	35	20	10	1	37	15
6:30 PM	25	2	8	1	36	20
7:00 PM	13	6	7	0	35	9
7:30 PM	4	1	8	1	31	6
8:00 PM	4	0	11	4	29	2
8:30 PM	8	4	10	1	36	15

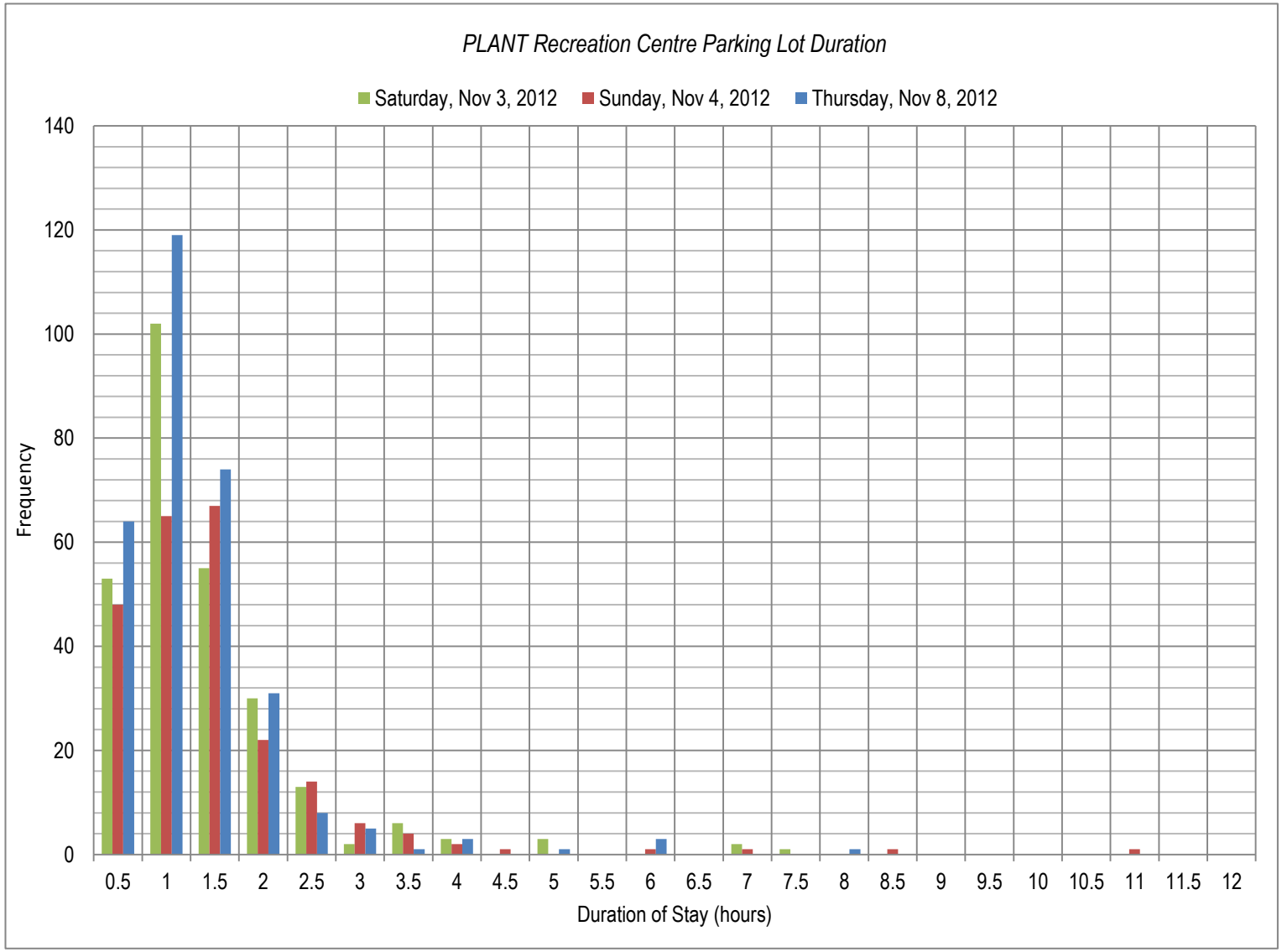
Chinatown Local Area Parking Study 2012
PLANT Recreation Centre Parking Lot Occupancy and Duration



Chinatown Local Area Parking Study 2012
PLANT Recreation Centre Parking Lot Occupancy and Duration

DURATION			
Duration (hours)	Saturday, Nov 3, 2012	Sunday, Nov 4, 2012	Thursday, Nov 8, 2012
0.5	53	48	64
1	102	65	119
1.5	55	67	74
2	30	22	31
2.5	13	14	8
3	2	6	5
3.5	6	4	1
4	3	2	3
4.5	0	1	0
5	3	0	1
5.5	0	0	0
6	0	1	3
6.5	0	0	0
7	2	1	0
7.5	1	0	0
8	0	0	1
8.5	0	1	0
9	0	0	0
9.5	0	0	0
10	0	0	0
10.5	0	0	0
11	0	1	0
11.5	0	0	0
12	0	0	0

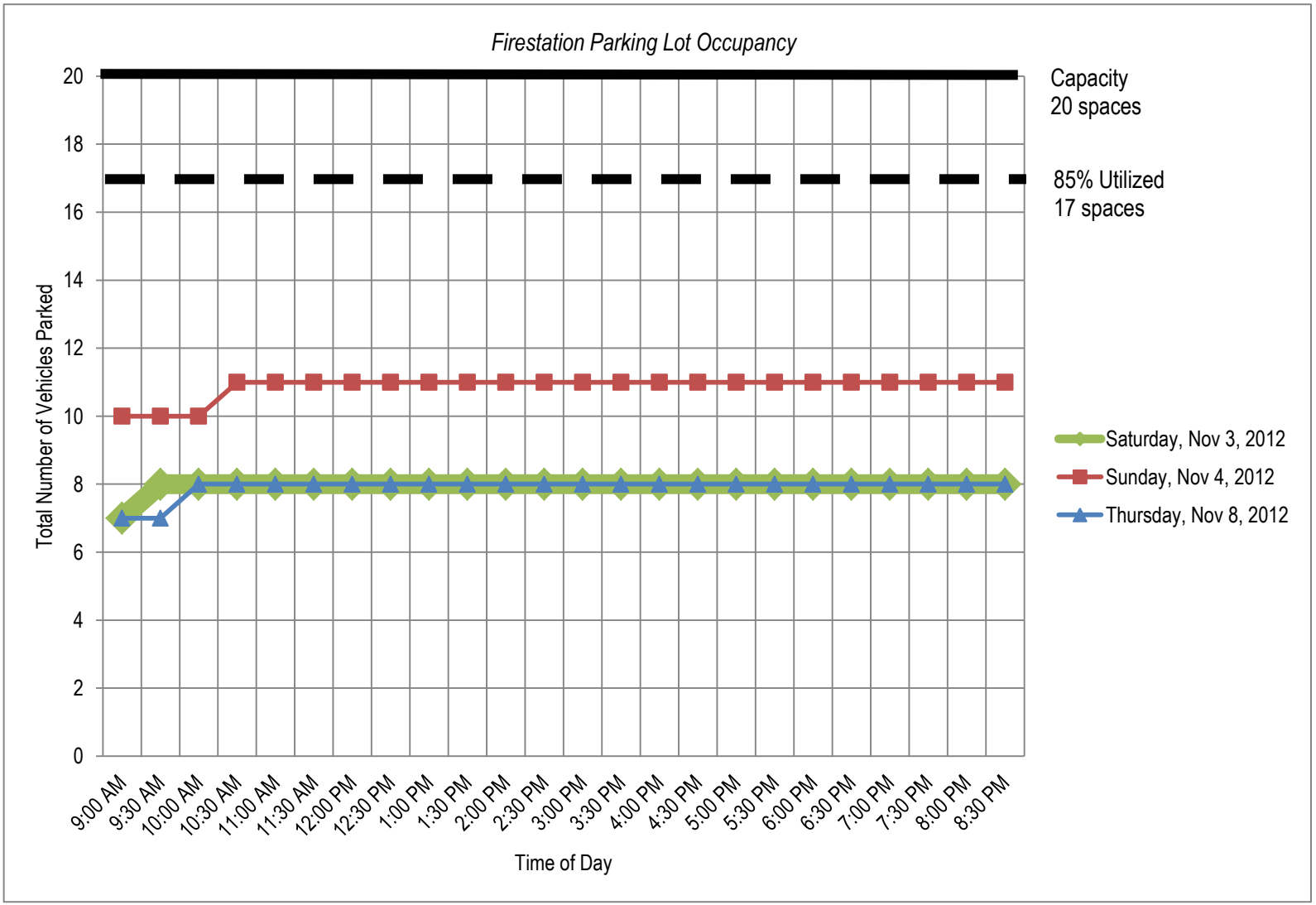
Chinatown Local Area Parking Study 2012
PLANT Recreation Centre Parking Lot Occupancy and Duration



Chinatown Local Area Parking Study 2012
Firestation Parking Lot Occupancy

OCCUPANCY			
Time	Saturday, Nov 3, 2012	Sunday, Nov 4, 2012	Thursday, Nov 8, 2012
	Count	Count	Count
9:00 AM	7	10	7
9:30 AM	8	10	7
10:00 AM	8	10	8
10:30 AM	8	11	8
11:00 AM	8	11	8
11:30 AM	8	11	8
12:00 PM	8	11	8
12:30 PM	8	11	8
1:00 PM	8	11	8
1:30 PM	8	11	8
2:00 PM	8	11	8
2:30 PM	8	11	8
3:00 PM	8	11	8
3:30 PM	8	11	8
4:00 PM	8	11	8
4:30 PM	8	11	8
5:00 PM	8	11	8
5:30 PM	8	11	8
6:00 PM	8	11	8
6:30 PM	8	11	8
7:00 PM	8	11	8
7:30 PM	8	11	8
8:00 PM	8	11	8
8:30 PM	8	11	8

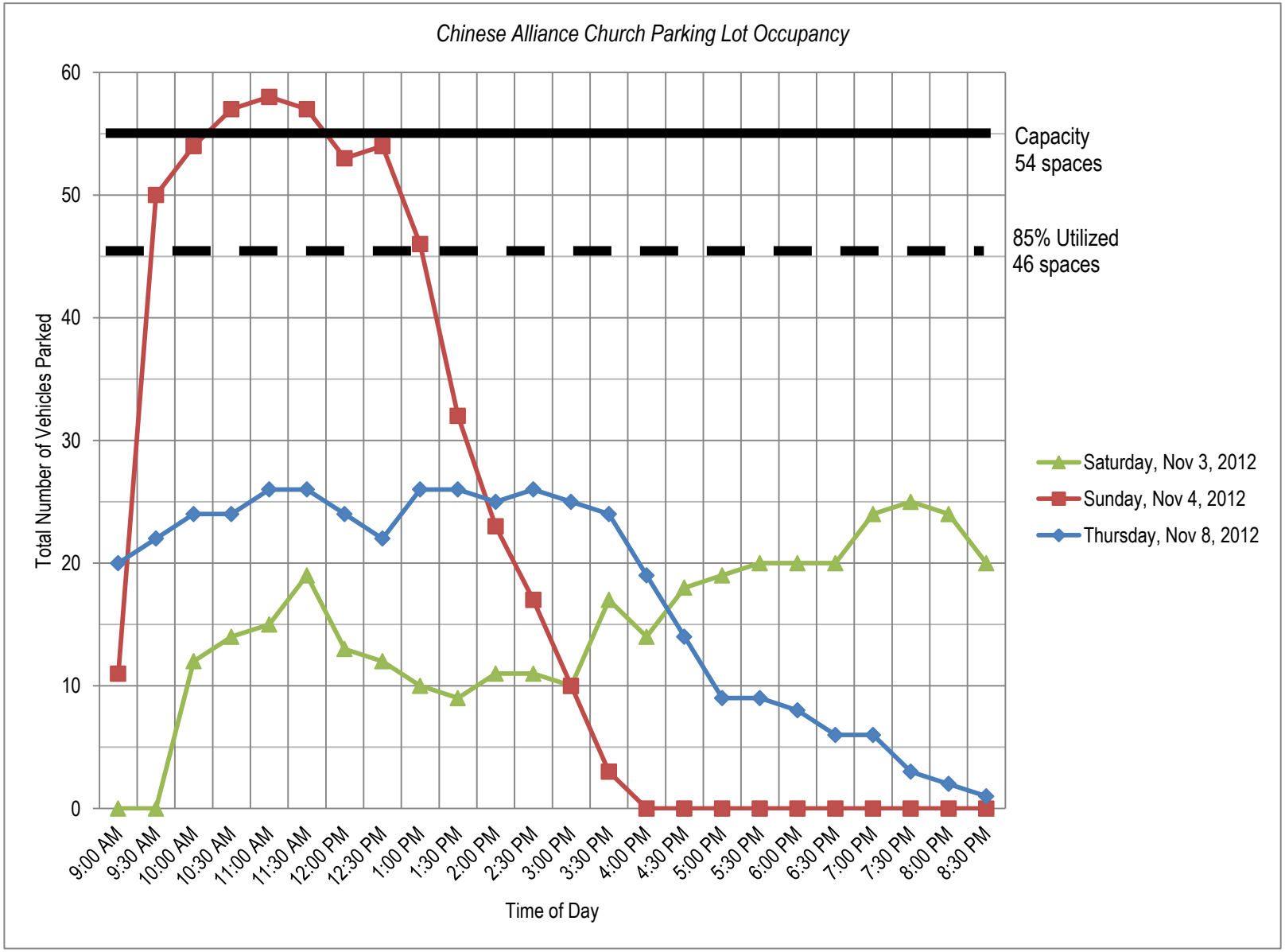
Chinatown Local Area Parking Study 2012
Firestation Parking Lot Occupancy



Chinatown Local Area Parking Study 2012
Chinese Alliance Church Parking Lot Occupancy

OCCUPANCY									
Time	Saturday, Nov 3, 2012			Sunday, Nov 4, 2012			Thursday, Nov 8, 2012		
	Below Ground	Above Ground	Total	Below Ground	Above Ground	Total	Below Ground	Above Ground	Total
9:00 AM	0	0	0	5	6	11	16	4	20
9:30 AM	0	0	0	24	26	50	17	5	22
10:00 AM	4	8	12	28	26	54	17	7	24
10:30 AM	4	10	14	31	26	57	17	7	24
11:00 AM	4	11	15	31	27	58	19	7	26
11:30 AM	4	15	19	30	27	57	19	7	26
12:00 PM	3	10	13	28	25	53	17	7	24
12:30 PM	2	10	12	28	26	54	16	6	22
1:00 PM	2	8	10	25	21	46	17	9	26
1:30 PM	2	7	9	18	14	32	17	9	26
2:00 PM	2	9	11	14	9	23	16	9	25
2:30 PM	2	9	11	11	6	17	18	8	26
3:00 PM	2	8	10	5	5	10	17	8	25
3:30 PM	3	14	17	1	2	3	16	8	24
4:00 PM	4	10	14	0	0	0	12	7	19
4:30 PM	4	14	18	0	0	0	9	5	14
5:00 PM	5	14	19	0	0	0	5	4	9
5:30 PM	4	16	20	0	0	0	4	5	9
6:00 PM	4	16	20	0	0	0	4	4	8
6:30 PM	4	16	20	0	0	0	4	2	6
7:00 PM	4	20	24	0	0	0	4	2	6
7:30 PM	4	21	25	0	0	0	3	0	3
8:00 PM	4	20	24	0	0	0	2	0	2
8:30 PM	4	16	20	0	0	0	1	0	1

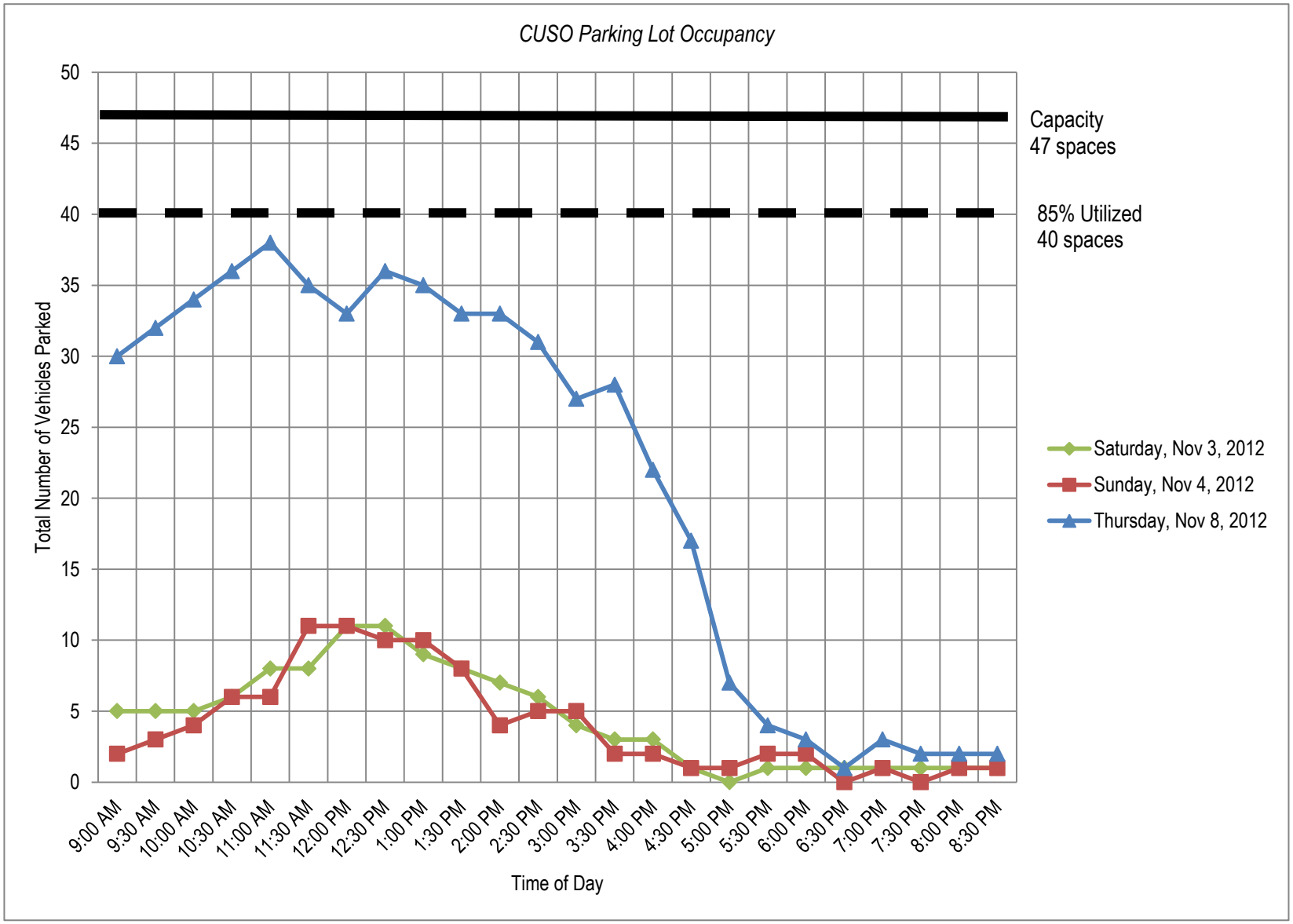
Chinatown Local Area Parking Study 2012
Chinese Alliance Church Parking Lot Occupancy



Chinatown Local Area Parking Study 2012
CUSO Parking Lot Occupancy

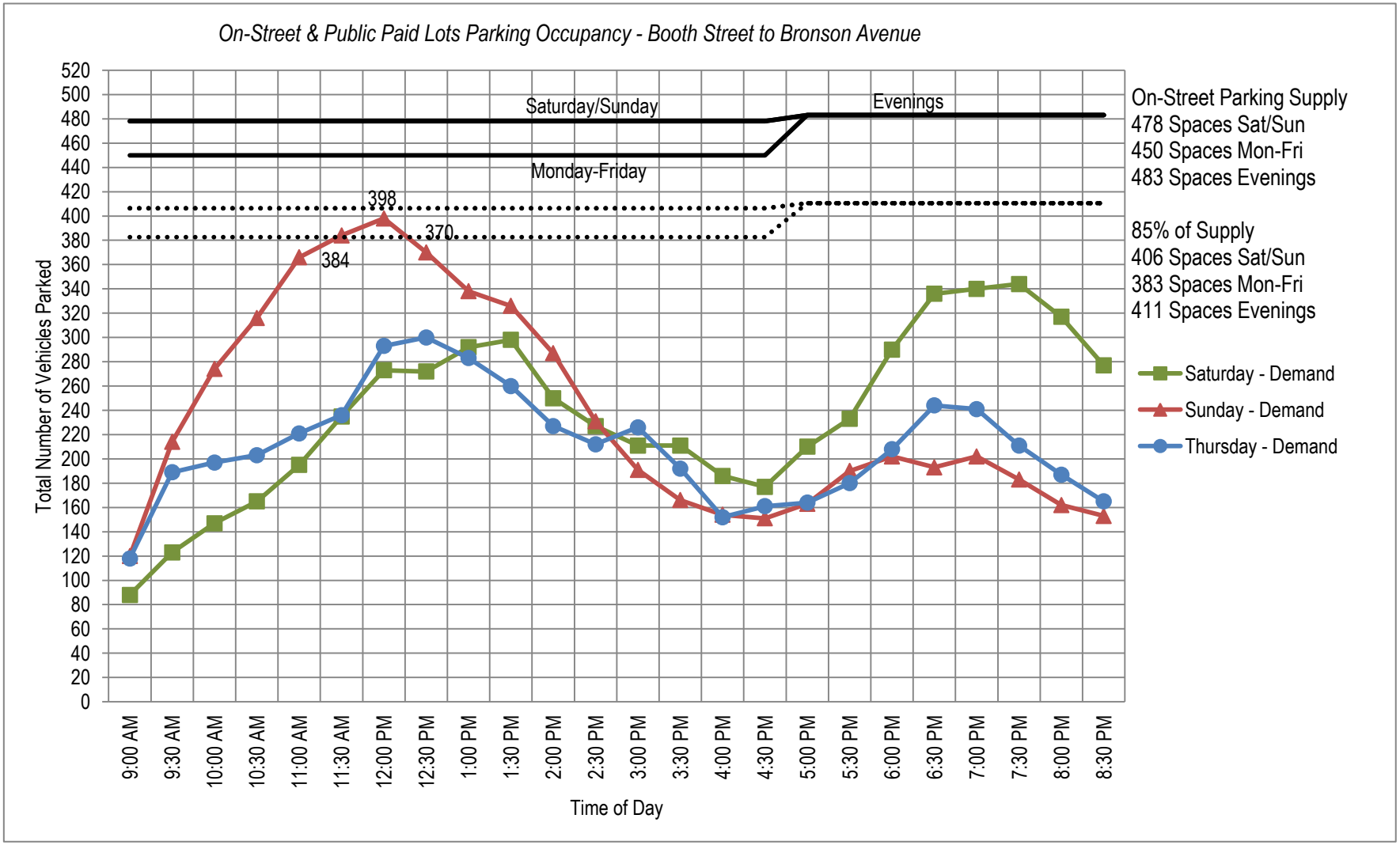
OCCUPANCY			
Time	Saturday, Nov 3, 2012	Sunday, Nov 4, 2012	Thursday, Nov 8, 2012
	Total	Total	Total
9:00 AM	5	2	30
9:30 AM	5	3	32
10:00 AM	5	4	34
10:30 AM	6	6	36
11:00 AM	8	6	38
11:30 AM	8	11	35
12:00 PM	11	11	33
12:30 PM	11	10	36
1:00 PM	9	10	35
1:30 PM	8	8	33
2:00 PM	7	4	33
2:30 PM	6	5	31
3:00 PM	4	5	27
3:30 PM	3	2	28
4:00 PM	3	2	22
4:30 PM	1	1	17
5:00 PM	0	1	7
5:30 PM	1	2	4
6:00 PM	1	2	3
6:30 PM	1	0	1
7:00 PM	1	1	3
7:30 PM	1	0	2
8:00 PM	1	1	2
8:30 PM	1	1	2

Chinatown Local Area Parking Study 2012
CUSO Parking Lot Occupancy



On-Street Parking Occupancy Summary

Chinatown LAPS 2012
12-6952



On-Street Parking Occupancy Summary

Chinatown LAPS 2012
12-6952