

Final Report

# Proposed Château Laurier Addition Parking Utilization Study

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Prepared for Capital Holdings Inc.  
by IBI Group

December 2016

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# 1 Introduction

IBI Group was retained by Capital Holdings Inc. to undertake a Parking Utilization Study for their Château Laurier Hotel at 1 Rideau Street in Ottawa, Ontario. The study will provide an estimate of existing utilization during both weekday and weekend hotel events in order to determine residual capacity of the parking facilities for future expansion of the hotel. The results of the study will be used to support the design development for an addition to the hotel of approximately 160,000 square feet (14,765 m<sup>2</sup>) gross floor area comprising of long-term accommodation suites. It is intended that 218 new units would be constructed in this space. The study will also review the existing loading facilities to document operational concerns and deficiencies.

# 2 Background

In 2006, a similar study was conducted by HVS International to determine the parking requirements for the hotel and its proposed residential addition. The study reviewed historical usage data for the existing parking garage to determine what residual capacity could be credited toward the operational requirements of the hotel and its proposed addition.

The 2006 HVS study had assumed 101 residential units would be constructed and would provide 1 parking space per unit, falling within the acceptable range specified by City by-law. Based on a detailed parking demand analysis, the study concluded that the total amount of parking required would be 400 spaces (or 450 spaces if the proposed residential component provided reserved spaces). This represents an increase of to the existing parking supply of between 71 and 121 spaces and was predicted to satisfy parking demand the majority of the time.

The hotel has now established that the residential component of its expansion plans will be in the form of Long-Term Accommodation suites. These apartment-style suites are intended for use by longer-term guests who will reside at the hotel for durations of 3-6 months at a time. Parliamentarians are the targeted demographic for these suites due to the proximity to Parliament Hill.

# 3 Site Location

The Château Laurier is located at the northwest corner of Rideau Street and Mackenzie Avenue in the heart of the Nation's Capital. The site is well-served by adjacent public amenities, is in a highly-pedestrianized core area of the city and provides convenient access to the city-wide rapid transit system, including the Transitway and the Confederation Line Light Rail Transit system now under construction. The central location of this hotel helps minimize guests' reliance on private automobiles and therefore keeps parking demand relatively low.

The site and its surrounding context is illustrated in **EXHIBIT 1 – SITE LOCATION**.





Proposed Chateau Laurier Addition  
Parking Utilization Study

EXHIBIT 1: Site Location

PROJECT No. 39117  
DATE: December 2016  
SCALE:  
0m 10m 30m 50m



## 4 Existing Conditions

### 4.1 Site Access

The parking and loading facilities are accessed primarily via Mackenzie Avenue at the northeast corner of the site. Mackenzie Avenue is a one-way street (southbound) and therefore access is limited to right-in/right-out movements only.

A secondary driveway at the southwestern corner of the site provides two-way access between the parking garage and Rideau Street. The Rideau Street access is also restricted to right-in/right-out movements due to the presence of a concrete median.

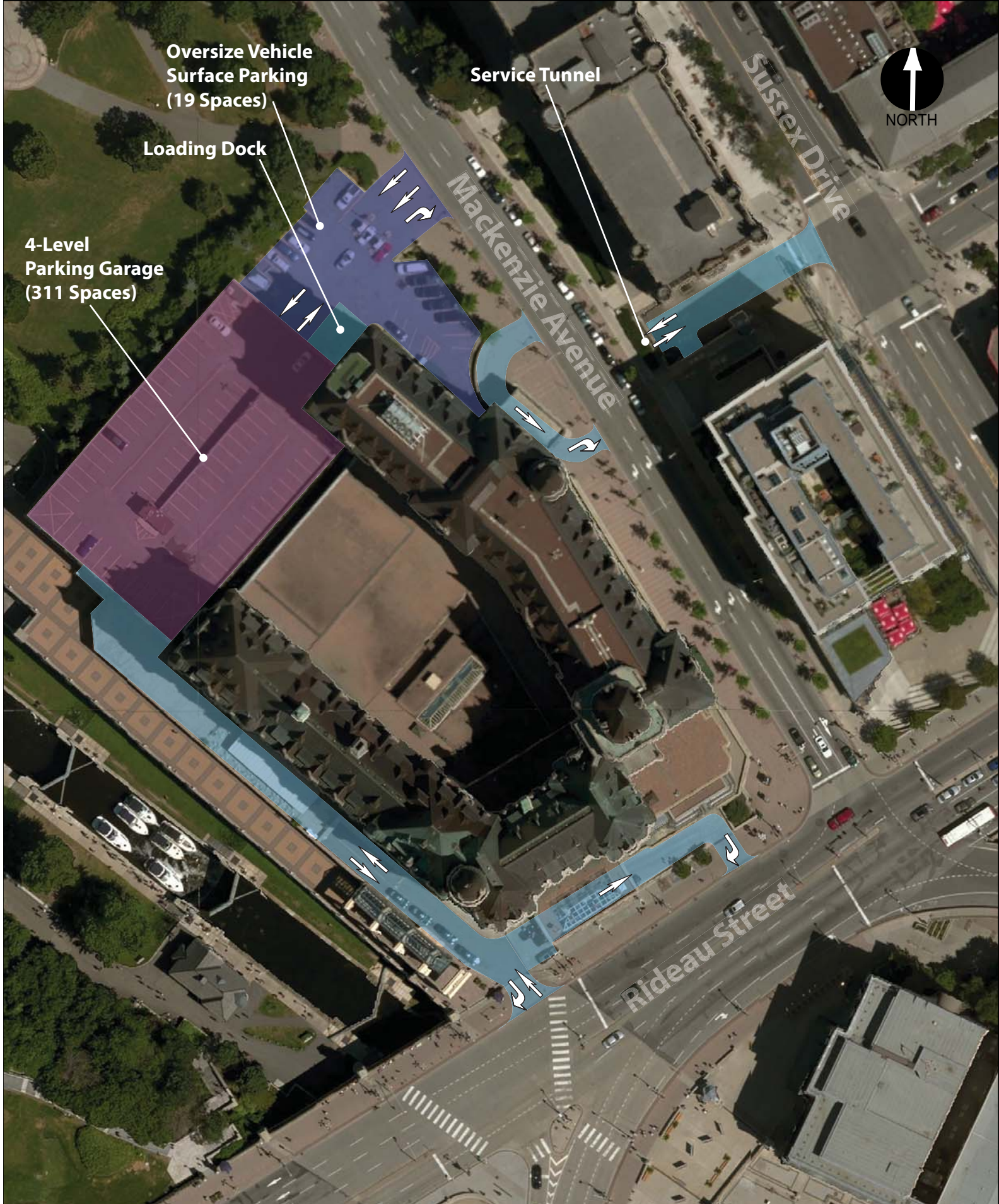


*Figure 1 - Mackenzie Avenue Entrance*



*Figure 2 - Rideau Street Entrance*

An overview of the site's parking facilities and vehicular circulation is provided on **EXHIBIT 2 – EXISTING PARKING & CIRCULATION**.

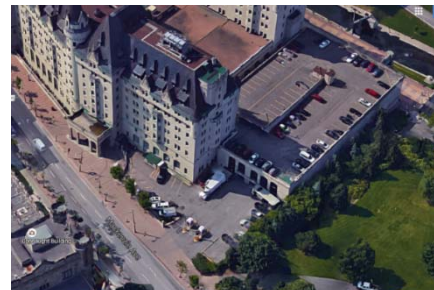




## 4.2 Existing Parking Supply

The Château Laurier Hotel provides a total of 330 Parking Spaces. The four-level parking garage includes 311 spaces, categorized as follows:

- General: 269 Spaces
- Gold (Reserved): 10 Spaces
- Valet (Reserved): 19 Spaces
- Not In Use (Construction): 13 Spaces



*Figure 3 – Parking & Loading Area*

Outside the parking garage near the loading facilities and Mackenzie Avenue access, an additional 19 parking spaces are provided for oversized vehicles.

Parking is available to the general public and all users of the parking facilities are entitled to in/out privileges. Current parking fees (taxes included) are detailed as follows:

### **Public Parking Rates:**

- Half Hour: \$5.00
- Daily: \$22.00
- Evening: 17.00
- 24-Hours: \$32.00

### **Short-Term Guest Parking Rates:**

- Self-Park: \$29.38
- Valet-Park: \$42.94

### **Long-Term User Rates:**

- Monthly Pass: \$258.77 (Prices are lower for employees, contractors and business tenants)
- Daily Pass: \$11.00
- Catering Event (morning): \$22.00
- Catering Event (evening): \$17.00
- Clubs: \$11.30

## 4.3 Off-Site Parking

Although the Château Laurier's parking facilities are available for use by the public, there are numerous public parking alternatives within the vicinity of the hotel capable of handling a portion of the Hotel's non-guest parking demand. The three nearest off-site public parking facilities are listed as follows:

- 700 Sussex Drive (1.93m vertical clearance, 76 spaces, \$24.00 daily maximum),
- Rideau Centre (1.8m vertical clearance, 742 spaces, \$20.00 daily maximum)
- 24 York Street (1.98m vertical clearance, 200 spaces, \$17.00 daily maximum)

Figure 1, below, provides an overview of the off-site public parking facilities within the vicinity of the Château Laurier as well as their daily maximum rates.



Figure 4 – Existing Off-Site Public Parking Facilities

## 4.4 Loading Facilities

### 4.4.1 Loading Dock

The Chateau Laurier's loading dock is located adjacent to the parking garage near the Mackenzie Avenue site access. The dock is designed to accommodate two trucks simultaneously, however one of the loading spaces is continually occupied by a large waste disposal bin, thereby limiting loading operations to one vehicle at a time. The dock is presently able to accommodate large trucks and material transfer is done via the outdoor loading platform.



Figure 5 – Loading Dock

### 4.4.2 Service Tunnel



Figure 6 – Service Tunnel Access

In addition to the primary loading area described above, a service tunnel passes under Mackenzie Avenue providing access from Sussex Drive. The tunnel forms a narrow two-way loop separated by support columns as depicted in Figure 7.



Figure 7 – Service Tunnel

Prior to 1990, this tunnel was used for all deliveries and services but is now used exclusively for recyclable material and grease collection.



#### 4.4.3 Public Works Loading Dock

A loading dock exists at the northwest corner of the site adjacent to the Rideau Canal locks, accessed from a laneway that extends north toward the Alexandra Bridge. Although the loading dock is physically connected to the hotel, it is Federally-owned and operated by Public Works and Government Services Canada (PWGSC) and is therefore not available for use by the Château Laurier Hotel.



*Figure 8 – PWGSC Loading Dock*

## 5 Parking & Loading Analysis

### 5.1 Parking Utilization Surveys

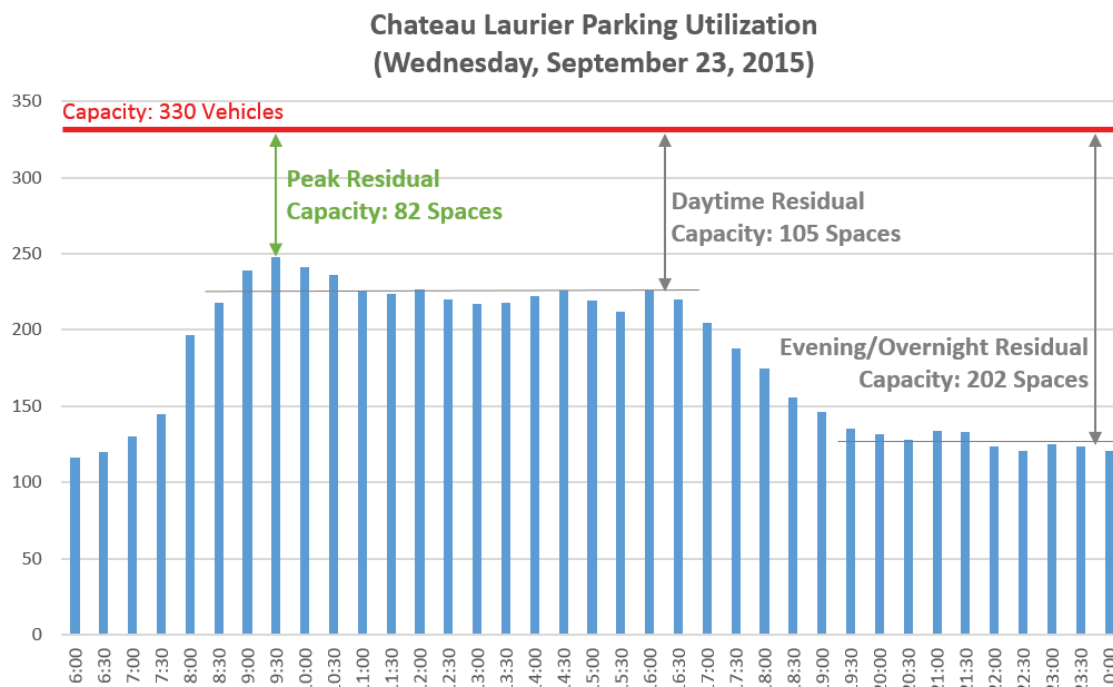
In order to properly assess the existing utilization of the Château Laurier's parking facilities, an occupancy survey was conducted to determine residual capacity during periods of peak demand and typical usage patterns throughout the day.

Two 18-hour long surveys of parking utilization within the parking garage and adjacent oversize vehicle parking area were conducted on both a weekday and a weekend. The survey dates were chosen by hotel management staff to best-represent a worst-case condition where parking utilization would be at a maximum. The dates chosen coincided with the peak season for hotel guest occupancy as well as major events taking place in the hotel's ballroom and conference rooms. Surveys began at 6am and occupancy data was collected continuously on 30-minute intervals until midnight. The data included vehicle occupancy of all available parking spaces both in the parking garage and the adjacent oversize vehicle parking. Loading dock usage/occupancy was also recorded.

#### 5.1.1 Weekday Survey

The weekday survey was conducted on Wednesday, September 23, 2015. During this survey day, the hotel had a guestroom occupancy of 81% (345 of 426 guestrooms occupied), as well as a local meeting of 110 attendees.

The results of the survey are as follows:



**Figure 9 – Weekday Parking Utilization**

#### General Occupancy Findings:

- Average Daily Occupancy: 55%
- Daily Maximum: 248 of 330 Spaces Occupied (75%)
- Daily Minimum: 116 of 330 Spaces Occupied (35%)

It was observed that there are two distinct usage patterns throughout the day:

- Daytime (8:30am to 5pm), average occupancy is very consistent around 68%, with approximately 105 available parking spaces throughout the daylight hours.
- Evening & Overnight (7:30pm to Midnight), average occupancy is also very consistent around 39%, with approximately 202 available parking spaces throughout the evening and likely overnight as well.

**Peak parking demand was observed to occur between 9am and 10am where a minimum of 82 available parking spaces were available.**



## 5.1.2 Weekend Survey

The weekend survey was conducted on Saturday, September 19, 2015. During this survey day, the hotel had a guestroom occupancy of 81% (347 of 426 guestrooms occupied), as well as a local meeting of 25 attendees and four evening wedding receptions with a total of 425 guests. Hotel staff consider this to have been one of the busiest days of the year and therefore representative of typical peak occupancy.

The results of the survey are as follows:

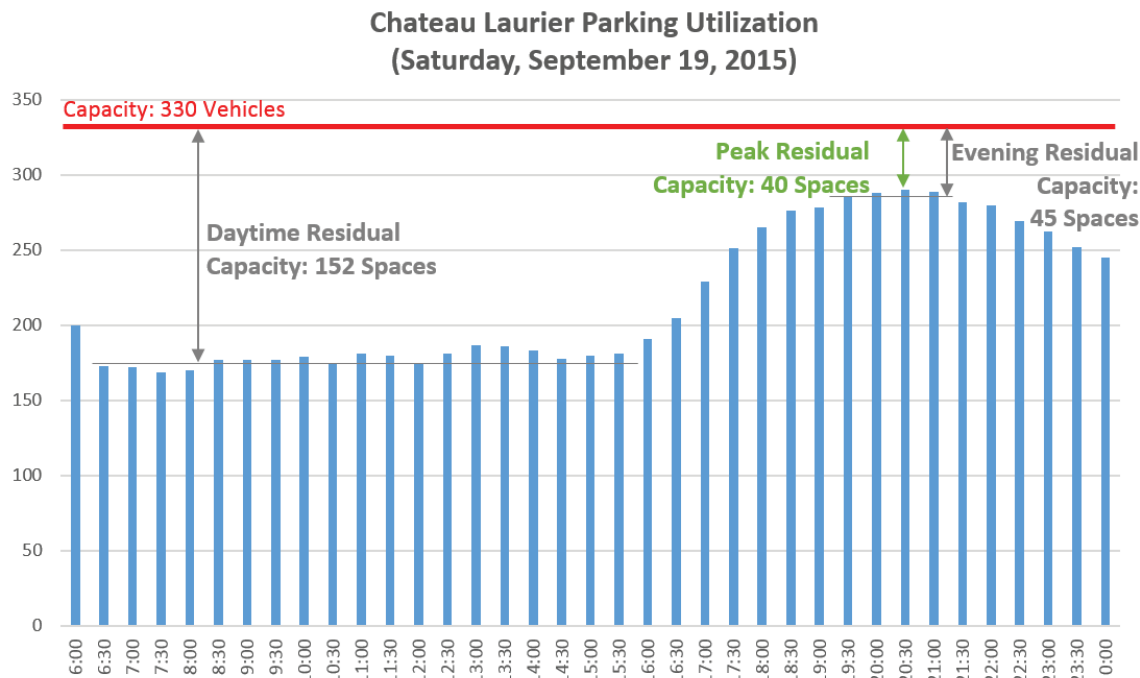


Figure 10 – Weekend Parking Utilization

### General Occupancy Findings:

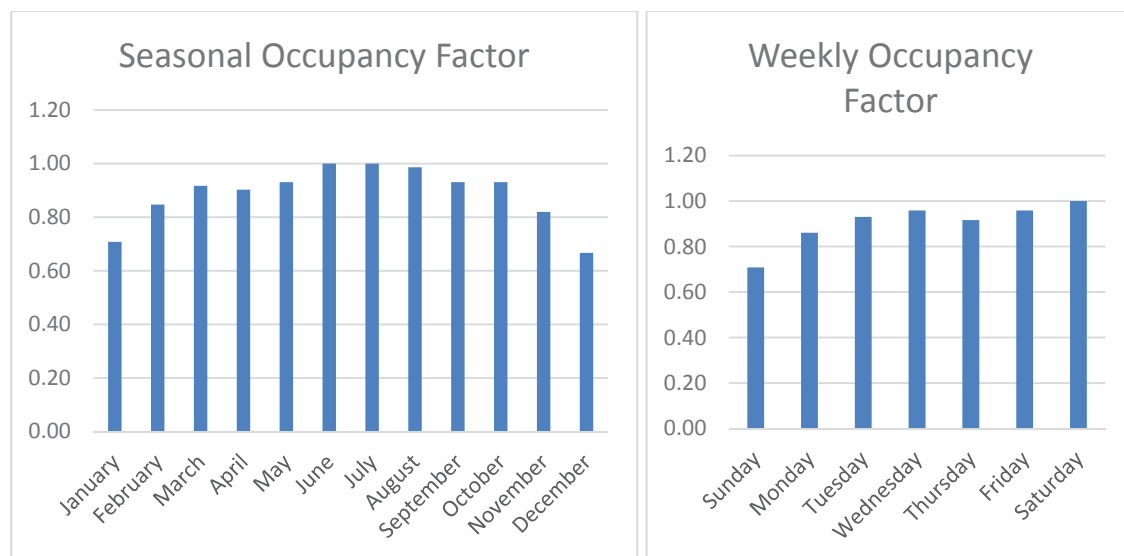
- Average Daily Occupancy: 66% (217 Occupied Spaces)
- Daily Maximum: 88% (290 Occupied Spaces) – Occurred from 8:30-9:30pm
- Daily Minimum: 51% (169 Occupied Spaces) – Occurred at 7:30am

It was observed that there was consistent demand throughout the day with an average occupancy of 54% and 152 available parking spaces. Due to the four simultaneous wedding receptions and arrival of overnight guests, demand began to increase around 4pm, gradually peaking around 8:30pm. Between 7pm and 9pm, demand was most consistent and only fluctuated by 0-2%, meaning that **there was an average of 45 available parking spaces during the peak period of the day.**

Overnight residual capacity was at least 85 spaces, but based on the previous morning, there may have been as many as 130 spaces available.

## 5.2 Seasonal Adjustment

Institute of Transportation Engineers (ITE) Parking Generation Manual provides statistics of hotel occupancy variations throughout the year. Using the data provided, the following charts have been developed to describe the average variation in occupancy by both the month and the day of the week according to data from across North America:



According to the data provided in the Parking Generation Manual, hotel occupancy is typically highest on Saturdays and seasonally, demand peaks during the months of June and July.

The parking surveys were conducted on a Wednesday and Saturday in September. According to these statistics, September occupancy is estimated to be 93% of the peak annual occupancy. Hotel staff have indicated, however, that the peak occupancy for this particular hotel occurs in May/June and again in September/October/November. It is for this reason that hotel management feel the data collected in this survey is appropriately-representative of the annual peak.

## 5.3 Valet Services

The parking garage provides 19 dedicated parking spaces for Valet use. During the parking survey, it was observed that hotel valet staff had parked vehicles either informally or in non-designated spaces from 2:00pm to midnight on Saturday. This is typical practice as Valet staff often have a difficult time negotiating larger vehicles into the designated Valet parking spaces and they will tend to use the general parking spaces instead. Furthermore, when the first two floors of the parking garage are at capacity, Valet staff will make use of the Oversize Vehicle parking spaces outside of the parking garage rather than available spaces on upper floors of the parking garage to increase service efficiency to hotel guests.

## 5.4 Loading Dock

**Function:** The dock normally provides space for two small trucks simultaneously, however during the course of the two survey periods, a waste deposal bin was occupying one of the bays limiting deliveries to one truck at a time.

Another key deficiency in loading operations is that the loading dock is not weather-protected and therefore presents challenges for material transfer during heavy rain, ice or snow conditions.

**Frequency:** The survey data indicates that loading operations are well-distributed through the day and that the hotel typically receives less than 10 deliveries per day and therefore the single loading



bay was proven to be sufficient. Loading/delivery operations have been observed to last no longer than 30-minutes each.

**Oversize Parking:** The adjacent oversize vehicle parking lot provides space for delivery vehicles to park, however the stalls cannot easily accommodate some of the larger trucks that service the hotel.

**Maneuverability** – The greatest challenge with respect to the loading area, however, is its size. There is limited room for large delivery vehicles to maneuver, particularly when the oversized parking lot is near capacity. Fortunately, many of the delivery vehicles are relatively small and service the site without difficulty, but there are occasionally large trucks such as waste collection vehicles and other service trucks that the site is not optimally-designed for. Most delivery vehicles servicing the hotel were observed to be single-unit trucks and did not present any maneuverability issues. The largest truck observed servicing the hotel was the Coca-Cola truck pictured in Figure 5 above. Trucks of this size are able to service the hotel via the loading dock, however it is evident there is potential for trucks of this size to encounter problems if the Oversized Vehicle parking area is near capacity.

**Oversized Vehicle Parking** – During the course of the two survey periods, it was observed that only a few single-unit delivery trucks would make use of the Oversize Parking area, though their length of stay was no longer than 30 minutes in each case. The stalls are not appropriately-sized for large trucks.

**Waste Collection** – Removal of waste from the waste collection bin located at the loading dock occurred at 7:30am during the Saturday survey. It was observed that the waste collection vehicle had some difficulty retrieving the bin due to space restrictions of the loading/parking area, but was eventually successful. Again, this operation would have been more challenging had the Oversize Vehicle parking area been closer to capacity.

Five of the hotel's six waste collection services use the below-grade service tunnel to Sussex Drive for collection of recyclable materials, compost & kitchen grease and therefore do not use the above-grade loading dock.

## 6 Proposed Development

### 6.1 Future Parking Demand

#### 6.1.1 Existing Parking Ratio

The proposed hotel addition will include 218 long-term accommodation suites. Future parking demand has been estimated based on the existing parking ratio (occupied rooms vs. occupied parking spaces). Because the hotel offers parking for not only overnight guests, but also staff, contractors, special event attendees, etc., it has been assumed that the parking ratio can be best-represented by looking at overnight parking utilization. Since the surveys omitted the midnight-to-6am period, it is most reasonable to use the 6am data. It is important to note, however that the 6am data is related to overnight guests from the previous night.

Based on the data presented in *Section 4.2 – Seasonal Adjustment*, Tuesday occupancy typically represents 97% of Wednesday occupancy and Friday occupancy typically represents 96% of Saturday occupancy.

Hotel room occupancy on the night before each survey day had been recorded as follows:

- Tuesday September 22, 2015: 292 Rooms Occupied
- Friday, September 18, 2015: 338 Rooms Occupied

It is assumed that by 6am, the majority of vehicles remaining in the parking garage belong to overnight guests and hotel staff. Although staff levels increase throughout the day, parking demand for a number of other hotel patrons, contractors and non-guests also increases and therefore the 6am data provides the best relation to hotel room occupancy. The parking ratio for each of the survey days were factored to account for the daily occupancy fluctuations described above.

**Table 1 – Existing Parking Ratio**

SURVEY DAY	6AM PARKING OCCUPANCY	GUEST ROOM OCCUPANCY	DAILY ADJUSTMENT FACTOR	CALCULATED RATIO
Wednesday	116 Vehicles	292 Rooms	1.031	0.41 Vehicles per Room
Saturday	200 Vehicles	338 Rooms	1.042	0.59 Vehicles per Room

### 6.1.1 ITE Parking Ratio

Based on the Institute of Transportation Engineers (ITE) Parking Generation Manual, 4<sup>th</sup> Edition, surveys undertaken across North America over the latter half of the 20<sup>th</sup> century yield the following average parking supply ratios for hotels:

- Suburban sites: 1.3 spaces per room
- Urban Sites: 1.0 spaces per room

Hotel locations vary between suburban and urban and therefore the data included in the database may over-represent parking demand for hotels in a highly-urbanized and central location. As such, the ITE rates can be considered a conservative estimate of future parking demand for this site and are included in the study for the purpose of comparison with the existing recorded rates.

Based on the average parking demand rates from the ITE publication stated above, the hotel addition is estimated to increase parking demand by a **maximum of 218 spaces**, or 1 parking space per unit.

### 6.1.2 Ottawa Zoning By-Law 2008-250 (Part 4, Sections 100-114)

The City of Ottawa's Zoning By-law, Part 4, Sections 100-144 'Parking, Queuing and Loading Provisions' has been referenced. The property is zoned **MD F(4.5)**, which translates to Mixed Downtown Zone with a permitted gross floor area of up to 4.5 times the area of the lot.

The existing Château Laurier Hotel's parking facilities fall within the City of Ottawa's Heritage Overlay and therefore the minimum parking ratios prescribed in the Zoning By-law are not applicable to check conformance with the by-law. A case can therefore be made that any residual parking from the existing parking facilities can be credited toward the hotel addition's minimum requirements.

Relevant excerpts for the by-law are as follows:

- **Section 101 (4):** Where a lot is located within 600 metres of a rapid transit station identified on Schedule 2A or Schedule 2B of this by-law, the minimum required motor vehicle parking rate is reduced where specified in Table 101:
  - Hotel - Parking Rate of 0.5 per 100 m<sup>2</sup> of gross floor area (**Approx. 74 spaces required**)
  - or



- Apartment – Parking Rate of 0.25 per dwelling unit (**Approx. 55 spaces required**)
- **Section 101 (6):** Despite subsection (1), where all parking spaces provided or required for a permitted land use are located below grade in the same building as that land use, the parking required by Table 101 for that land use may be reduced by 10% to a maximum of 20 spaces.
  - Hotel – Reduction of 7 spaces to **67 spaces required**
  - or
  - Apartment – Reduction of 6 spaces to **49 spaces required**

Other elements of note extracted from the by-law and relevant to the proposed development are as follows:

- **Section 106 (1):** Parking spaces must be 2.6 to 2.75 meters wide and 5.2 meters in length
- **Section 106 (2):** Barrier-free parking space dimensions must comply with the City of Ottawa Traffic & Parking Bylaw
- **Section 106 (3):** Up to 40% of parking spaces other than visitor parking spaces can be reduced to 2.4m wide and 4.6m long, provided the facility has at least 20 spaces and that the reduced-size spaces are clearly identified for small cars only.
- **Section 106 (4):** Parking spaces adjacent to a wall or column must have a minimum width of 2.6 meters.
- **Section 107 (1):** Two-way driving lanes within a parking garage must have a minimum width of 6.7 meters.
- **Section 107 (1):** One-way driving lanes are permitted to be 3.0 meters in width.
- **Section 110 (3):** Outdoor loading and refuse areas must be located at least 9 meters from the lot line of a public street and must be screened from view.
- **Section 111 (Table 111A):** Minimum bicycle parking spaces are required at a rate of 0.5 per dwelling unit for apartments (**approx. 109 spaces**), or 1.0 per 1,500 m<sup>2</sup> gross floor area for any other use (**approx. 10 spaces**).
- **Section 113 (3):** Loading space is permitted wholly or partially within a building or structure.
- **Section 113 (Table 113A):** Buildings greater than 2,000 m<sup>2</sup> (22,000 ft<sup>2</sup>) require 2 vehicle loading spaces.
- **Section 113 (Table 113B):** Vehicle loading spaces shall be at least 3.5 meters in width and 9 meters in length and shall have a vertical clearance of at least 4.3 meters.

*Note: Please refer to the by-law document for exact wording of the requirements and other relevant paragraphs.*

### 6.1.3 Summary

The following summarizes the key design requirements:

- **Vehicular Parking Requirements:**
  - Existing Ratio: 0.59 Spaces per Unit (129 Spaces)
  - ITE Parking Ratio: 1.0 Spaces per Unit (218 Spaces)
  - City of Ottawa By-law:
    - Hotel: 0.45 Spaces per 100m<sup>2</sup> Gross Floor Area (66 Spaces)
    - Apartment: 0.23 Spaces per Unit (50 Spaces)

As stated previously, the target demographic for the long-term accommodation suites is Parliamentarians. Due to the location of the hotel with respect to Parliament Hill, other major corporate centres and proximity to high-quality light rail transit system, as well as its intended function being a hybrid between hotel and apartment-style accommodation, reliance on private automobiles may be reduced as compared to short-term guests of the hotel. It is our opinion that a parking ratio for the hotel addition less than the existing ratio noted above is justified. It is therefore suggested that the rate of 0.45 spaces per 100 square meters of gross floor area is the most appropriate design value.

#### Existing Residual Parking Supply

The Parking Occupancy analysis presented in Section 5 of this report indicated that there were, on average, 45 spaces available during peak demand. Allowing a 10% buffer to account for fluctuation in demand or future growth in hotel occupancy, the parking garage is shown to be substantially at capacity.

With the addition of 218 long-term accommodation units, it is recommended that the proposed parking garage include at least 66 additional parking spaces, bringing the total targeted supply to 397 spaces.

- **Bicycle Parking Requirements:** Based on the above, between 11 and 93 parking spaces are required, depending on the scale of the hotel addition. In general terms, this implies 0.5 spaces per dwelling unit or 1 space for every 1,500 square meters of gross floor area.
- **Loading Requirements:** A minimum of two loading spaces are required and are permitted within the building. Exterior loading spaces must be at least 9 meters from the lot line and screened from view from any public street.

## 6.2 Opportunities

**Car Sharing** – One method of reducing overall parking demand is to implement a car-sharing program. Car-sharing services are offered in Ottawa by both *Vrtucar* and *Zipcar*, however the nearest facility is at 150 Elgin Street, over 550 meters (or an 8-minute walk) from the hotel.

**Reduce Non-Guest Parking Demand** - Parking demand could potentially be reduced by further-increasing rates to the general public or restricting parking garage use to hotel patrons only. Compared to other public parking facilities in the vicinity of the hotel, the Château Laurier already has more expensive rates for public parking and therefore it is likely that users pay the premium for convenience of location. Because of the availability of alternative parking facilities nearby, it is unlikely that non-guest parking demand is substantial.

**Oversized Vehicles** - Existing vertical clearance within the garage is 1.82 meters. This prevents some types of larger vehicles from using the parking garage. These vehicles must make use of the oversized vehicle parking area. The new parking garage should be designed to accommodate larger vehicles.

**Improve Valet Facilities** - It has been observed that Valet staff occasionally park vehicles in non-designated or regular parking spaces. This is dependent on the size of vehicles, and availability of spaces on the first and second levels of the parking garage. Valet staff have indicated that designated Valet stalls are difficult to manoeuvre large SUV's and trucks into and therefore they use regular stalls instead. Due to loss in productivity, staff prefer to use the Oversize Vehicle parking outside of the parking garage rather than use spaces on upper levels of the garage. The redesigned parking garage should consider larger Valet parking stalls and configure them such that it optimizes service by Valet staff.

**Improve Loading Dock** - It has been noted that large delivery trucks have a challenging time manoeuvring within the loading area, particularly if the Oversize Vehicle parking lot is heavily-occupied. The proposed loading facilities should accommodate the required turning movements and vertical clearance (if necessary) of the design delivery vehicle. The loading area should be designed to accommodate turning movements of large 2-unit trucks. The dock should have a raised loading platform to facilitate transfer of goods and be weather-protected.

**Make Use of Existing Loading Facilities** - The planned reconstruction of the Château Laurier parking garage may present an opportunity for shared use of the western loading dock belonging to Public Works and Government Services Canada. An agreement with Public Works could be explored to make use of this existing facility for shared Hotel and Public Works' use, however due to complex security requirements of PWGSC, this may not be a viable alternative.

**Optimize Oversize Vehicle Parking Area** – The parking area for oversize vehicle should have at least 2 extra-long stand-by parking spaces to accommodate large delivery trucks.

**Waste Disposal** – Waste disposal services (including recycling) should be consolidated to a single area with a convenient interior connection to the hotel.



## 7 Findings & Conclusions

Based on the analyses undertaken in this study, the main findings and conclusions are as follows:

- The existing parking facilities have been observed to reach a peak utilization of 88%. This implies that there are as few as 40 parking spaces available when the hotel is operating at its typical peak guest capacity of 81%. Assuming a 10% buffer to allow for fluctuations in demand, the existing facilities can be considered to be at capacity and potentially unable to accommodate any additional parking demand triggered by the proposed development.
- The proposed development is expected to generate demand of approximately 0.45 parking spaces per 100 square meters of gross floor area. Based on a 218-unit / 14,765m<sup>2</sup> addition, the proposed parking garage would require 397 spaces to meet the expected demand.
- Existing loading facilities are insufficient in handling large delivery trucks efficiently. A minimum of two loading docks are required per the City of Ottawa by-law. Loading docks should be weather-protected to facilitate transfer of materials and goods and the forecourt should be able to accommodate large single-unit trucks.

Prepared by:



**David Hook, P.Eng.**  
Project Engineer, Transportation

# **APPENDIX A**

## **Parking Survey Data**

# Geospace Research Associates

Urban and Regional Geographers 491 Edgeworth Avenue, Ottawa, Ontario. K2B5L2

Location: Chateau Laurier Hotel

## PARKING DEMAND FIELD SHEET

Road Conditions dry

Date 23/9/2015

Day Name Wednesday

Start Time 0600

Number of Hours 18

TIME	TOTAL AVAILABLE PARKING SPACES : 330 (includes parking garage spaces and oversize vehicle surface level spaces)		
	VACANT SPACES	LOADING BAY PARTIAL PLATE NUMBERS	COMMENTS (ILLEGALLY PARKED, ETC.)
600	214		
630	210	AE565	
700	200	AE565	MOVED TO OVERSIZE PARKING
730	185		
800	133	2553P	
830	112		
900	91		
930	82		
1000	89		
1030	94		
1100	104		
1130	106		
1200	103		
1230	110	AA832	
1300	113		
1330	112		
1400	108	AD987	
1430	104	AB792	
1500	111		
1530	118		
1600	104		
1630	110		

NOTE: FOR THE 19TH AND 23RD COUNTS ONLY ONE LOADING ZONE SPACE WAS FREE. DUMPSTER TOOK UP OTHER SP



**Urban and Regional Geographers 491 Edgeworth Avenue, Ottawa, Ontario. K2B5L2**

## PARKING DEMAND FIELD SHEET

**Day Name** Wednesday

Number of Hours 18

[illegible]

# Geospace Research Associates

Urban and Regional Geographers 491 Edgeworth Avenue, Ottawa, Ontario. K2B5L2

Location: Chateau Laurier Hotel

## PARKING DEMAND FIELD SHEET

Road Conditions dry

Date 19/9/2015

Day Name Saturday

Start Time 0600

Number of Hours 18

TIME	TOTAL AVAILABLE PARKING SPACES : 330 (includes parking garage spaces and oversize vehicle surface level spaces)		
	VACANT SPACES	LOADING BAY PARTIAL PLATE NUMBERS	COMMENTS (ILLEGALLY PARKED, ETC.)
600	130		
630	157	AJ868	
700	158		
730	161	GARBAGE TRUCK	
800	160		
830	153		
900	153		
930	153		
1000	151		
1030	155	AL378	
1100	149		
1130	150		
1200	156	AH969	
1230	149		
1300	143	AD987	TRUCK PARKED ACROSS THREE STALLS
1330	144		CARS IN NON DESIGNATED SPACES IN VALET
1400	147		
1430	152		
1500	150	AC624	
1530	149		
1600	139	AL748	
1630	125		

NOTE: CARS PARKED IN NON DESIGNATED SPACES IN VALET PARKING BETWEEN 1400 AND 2400 FOR EVERY INTERVAL

Geospace Research Associates

Urban and Regional Geographers 491 Edgeworth Avenue, Ottawa, Ontario. K2B5L2

Location: Chateau Laurier Hotel

PARKING DEMAND FIELD SHEET

Road Conditions dry

Date 19/09/15

Day Name Saturday

Start Time 0600

Number of Hours 18

TIME	TOTAL AVAILABLE PARKING SPACES : 330		
	VACANT SPACES	LOADING BAY PARTIAL PLATE NUMBERS	COMMENTS (ILLEGALLY PARKED, ETC.)
1700	101		CARS IN NON DESIGNATED SPACES IN VALET
1730	79		
1800	65		
1830	54		
1900	52		
1930	45		
2000	42		
2030	40		
2100	41		
2130	48		
2200	50		
2230	61		
2300	68		
2300	78		
2400	85		

NOTE: CARS PARKED IN NON DESIGNATED SPACES IN VALET PARKING BETWEEN 1400 AND 2400 FOR EVERY INTERVAL