




## MEMORANDUM

VIA EMAIL

Date: October 12, 2012

To: Cris Ruebush, AIA, LEED AP - PGAL  
Shane Harbison – ABIA Assistant Director of Planning and Engineering

From: M. Allen Hoffman, Vice President – Parking Planning 

Subject: PARKING DEMAND AND CAPACITY ANALYSIS, AUSTIN-BERGSTROM INTERNATIONAL AIRPORT

The City of Austin (the City) has entered into a Public Private Partnership with the rental car companies that have an existing concessionaire agreement at Austin-Bergstrom International Airport (ABIA or the Airport) to design, build and operate a new Parking Garage and Consolidated Rental Car Facility (CONRAC) on the eastern portion of Lot A located directly north of and adjacent to the existing parking Garage (Garage). The new CONRAC will accommodate the rental car ready and return operation that will be relocated from the third level of the Garage to the new CONRAC. The lower level of the new facility will function as a public parking facility that will generally replace those Lot A surface spaces that will be covered by the CONRAC structure.

The City's Department of Aviation (DOA) staff has proposed constructing a new surface parking facility to address the ongoing need for additional parking at the Airport and to replace those parking spaces that would be temporarily lost during the construction of the CONRAC. The new parking facility, known as Lot J, would be located directly east of the terminal area public parking facilities, bound by Presidential Boulevard on the west and Hotel Drive on the east. The DOA staff has requested that Ricondo & Associates, Inc. (R&A), in association with PGAL, prepare an analysis of existing and future parking demands and capacities to help quantify the need for public and employee parking at the Airport. The analysis is based on an assessment of peak day conditions for purposes of identifying the total requirements for surface parking at the Airport.

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## Existing Parking Capacity and Demands

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**Table 1** provides a summary of existing parking demands and capacity provided. As shown in the table, The Airport currently provides 11,874 spaces to accommodate public and employee parking. The Garage provides 2,384 spaces on Level 1 and Level 2 of the structure, with Level 3 currently allocated for rental car ready and return. Lot A, located directly adjacent to the Garage, provides 1,803 spaces for close-in parking. The east portion of Lot A, which will accommodate the future CONRAC provides 742 spaces with the remaining 1,061 spaces provided in the west portion of the lot. The Economy Lots (Lots B-G) are



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located directly north of Lot A and provide 7,104 spaces. Lot I, primarily functioning as an employee parking facility, provides 583 spaces located east of the terminal concourse and accessed via Hotel Drive.

**Table 1: 2011 Peak Parking Demands and Capacity**

FACILITY	CAPACITY	AVAILABLE SPACES <sup>1/</sup>	SPACE DEMAND <sup>1/</sup>		PEAK DEMAND	SURPLUS/(DEFICIT)
			PUBLIC	EMPLOYEE <sup>2/</sup>		
	[A]				[B]	[A] - [B]
Garage <sup>3/</sup>	2,384	244	2,050	90	2,140	244
Lot A (East)	742	1	712	29	741	1
Lot A (West)	1,061	1	1,019	41	1,060	1
Economy <sup>4/</sup>	7,104	135	8,068	150	8,218	(1,114)
Lot I	583	113	0	470	470	113
<b>Total</b>	<b>11,874</b>	<b>494</b>	<b>11,849</b>	<b>780</b>	<b>12,629</b>	<b>(755)</b>

NOTES:

1/ Based on lot counts of available spaces conducted from December 23 through December 26; peak occupancy occurred on December 24-25.

2/ Provided by Department of Aviation staff based on permits by location and shift activity assumptions.

3/ Includes spaces on Level 1 and Level 2.

4/ Capacity comprised of Lots B, C, D, E, F, and G.

SOURCE: City of Austin, Department of Aviation; PGAL; Ricondo & Associates, Inc., October 2012.

PREPARED BY: Ricondo & Associates, Inc., October 2012

Based on parking lot counts conducted by the Department of Aviation during peak occupancy periods between December 23 through 26, 2011, it is estimated that the Airport accommodated a total of 12,629 parked vehicles. As shown, the largest demand occurs in the Economy parking facilities where the peak demand exceeded the capacity of available spaces by an estimated 1,114 spaces which required the temporary conversion of the airside cargo apron for use as an overflow parking area. During the peak period, the Garage accommodated approximately 2,140 vehicles which equated to an occupancy level of about 90%.



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## Future Parking Capacity and Demands

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Future public parking demands were calculated based on the assumption that existing 2011 demands will increase in proportion to the forecast growth of originating passengers. Employee parking demands will typically increase at a lower rate than public parking; therefore, it is assumed that employee parking demands will increase at half the rate of the forecast growth of originating passengers. Historical and projected growth in originating passenger activity is summarized in **Table 2**. As shown in the table, two alternative growth rate assumptions are depicted. The Base Growth Scenario is consistent with the most recent Terminal Area Forecast (TAF) for the Airport. The Alternative Growth Scenario assumes an annual five percent growth for the first five years and the TAF enplanement growth thereafter. The alternative scenario recognizes the historically strong growth of the Airport and is, therefore, considered the “preferred” scenario for purposes of providing a conservative but likely realistic order-of-magnitude growth rate for parking.

As described previously, the Airport is in the process of implementing a new CONRAC which will result in the loss of parking spaces during construction. **Table 3** depicts the estimated number of spaces that will be available on a yearly basis while adjusting for the loss of spaces during construction and the addition of spaces upon the completion of new facilities. The changes to the parking capacity are based on the following assumptions:

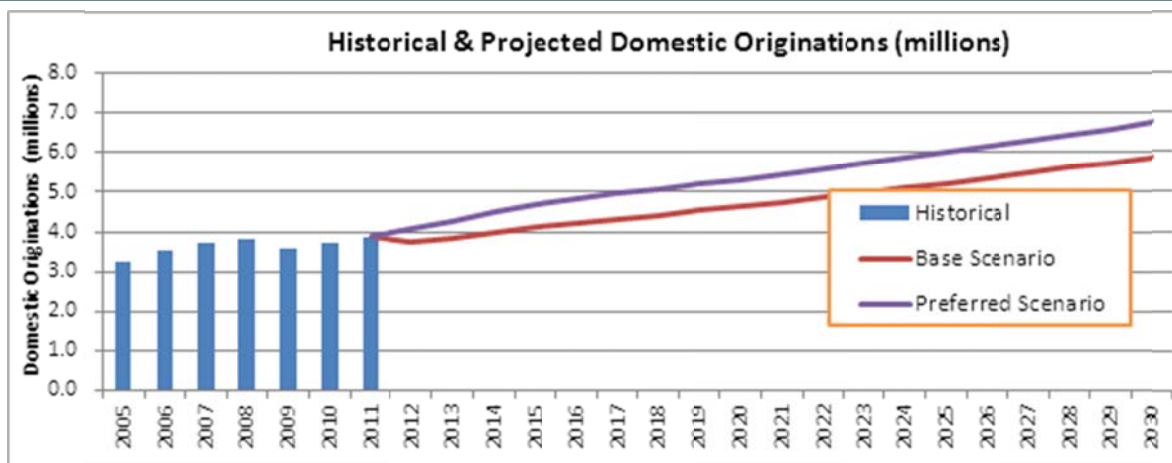
- 2013—Lot A (East) is closed to accommodate the construction of the CONRAC, along with the loss of spaces in Lot B and Lot C. It is also assumed that Lot J improvements would be in place by 2013 to help make up for lost spaces and increasing demand; however, the need for these Lot J improvements (1,464 spaces for Lot J and 250 spaces for expansion of Lot G) will be quantified separately later in this document.
- 2015—The CONRAC and associated public parking opens which provides a net increase of 1,922 Garage spaces resulting from the availability of the upper level of the parking structure and the lower level of the CONRAC.
- 2016—A Private-Public Partnership (PPP) Lot would provide 2,000 spaces on Airport property. The open site to the north of the Hilton Hotel is a potential location for this project.
- 2018—Lot I is closed to accommodate the expansion of the terminal concourse.
- 2020—Lot A (West) is closed to accommodate the construction of a new 4-Level parking deck on that site.
- 2022—The Garage supply increases by a net of 4,000 spaces after the opening of the Lot A Garage.



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**Table 2: Historical & Projected Annual Domestic Originations**

YEAR	BASE GROWTH SCENARIO		ALTERNATIVE GROWTH SCENARIO (PREFERRED)	
	DOMESTIC ORIGINATIONS	CAGR	DOMESTIC ORIGINATIONS	CAGR
<b>Historical:</b>				
2007	3,703,160	--	3,703,160	--
2008	3,795,180	2.5%	3,795,180	2.5%
2009	3,554,040	-6.4%	3,554,040	-6.4%
2010	3,697,420	4.0%	3,697,420	4.0%
2011	3,875,500	4.8%	3,875,500	4.8%
<b>Projected:</b>				
2012	3,759,000	-3.0% <sup>1/</sup>	4,069,000	5.0%
2013	3,853,000	2.5% <sup>1/</sup>	4,272,000	5.0%
2014	3,971,000	3.1% <sup>1/</sup>	4,486,000	5.0%
2015	4,102,000	3.3% <sup>1/</sup>	4,710,000	5.0%
2016	4,219,000	2.9% <sup>1/</sup>	4,845,000	2.9% <sup>1/</sup>
2017	4,320,000	2.4% <sup>1/</sup>	4,960,000	2.4% <sup>1/</sup>
2020	4,638,000	2.4% <sup>1/</sup>	5,324,000	2.4% <sup>1/</sup>
2025	5,224,000	2.4% <sup>1/</sup>	5,998,000	2.4% <sup>1/</sup>
2030	5,893,000	2.4% <sup>1/</sup>	6,768,000	2.4% <sup>1/</sup>
<b>Compounded Annual Growth Rate</b>				
2005 - 2008	5.2%		5.2%	
2008 - 2009	-6.4%		-6.4%	
2011 - 2015	1.4%		5.0%	
2015 - 2020	2.5%		2.5%	
2020 - 2025	2.4%		2.4%	
2025 - 2030	2.4%		2.4%	



NOTES:

<sup>1/</sup> Growth rate consistent with FAA Terminal Area Forecast (TAF).

SOURCES: FAA 10% Survey Sample of Passenger Originations, FAA Terminal Area Forecast (TAF), January 2012; Ricondo & Associates, Inc., October 2012.

PREPARED BY: Ricondo & Associates, Inc., October 2012.



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**Table 3: Assumed Future Parking Capacity**

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>Garage</b>	2,384	2,384	2,384	4,306	4,306	4,306	4,306	4,306	4,306	4,306	8,306	8,306	8,306	8,306
<b>Surface</b>														
Lot A (East)	742	0	0	0	0	0	0	0	0	0	0	0	0	0
Lot A (West)	1,061	1,061	1,061	1,061	1,061	1,061	1,061	1,061	0	0	0	0	0	0
Lot B	1,284	1,238	1,238	1,238	1,238	1,238	1,238	1,238	1,238	1,238	1,238	1,238	1,238	1,238
Lot C	1,595	1,482	1,482	1,482	1,482	1,482	1,482	1,482	1,482	1,482	1,482	1,482	1,482	1,482
Lot D	1,421	1,421	1,421	1,421	1,421	1,421	1,421	1,421	1,421	1,421	1,421	1,421	1,421	1,421
Lot E	534	534	534	534	534	534	534	534	534	534	534	534	534	534
Lot F	1,117	1,117	1,117	1,117	1,117	1,117	1,117	1,117	1,117	1,117	1,117	1,117	1,117	1,117
Lot G	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153
<b>Surface Subtotal</b>	<b>8,907</b>	<b>8,006</b>	<b>8,006</b>	<b>8,006</b>	<b>8,006</b>	<b>8,006</b>	<b>8,006</b>	<b>8,006</b>	<b>6,945</b>	<b>6,945</b>	<b>6,945</b>	<b>6,945</b>	<b>6,945</b>	<b>6,945</b>
<b>Lot J Improvements<sup>1/</sup></b>	0	1,714	1,714	1,714	1,714	1,714	1,714	1,714	1,714	1,714	1,714	1,714	1,714	1,714
<b>Lot I</b>	583	583	583	583	583	583	0	0	0	0	0	0	0	0
<b>PPP Lot <sup>2/</sup></b>	0	0	0	0	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
<b>Grand Total</b>	<b>11,874</b>	<b>12,687</b>	<b>12,687</b>	<b>14,609</b>	<b>16,609</b>	<b>16,609</b>	<b>16,026</b>	<b>16,026</b>	<b>14,965</b>	<b>14,965</b>	<b>18,965</b>	<b>18,965</b>	<b>18,965</b>	<b>18,965</b>

NOTE:

1/ Consists of Lot J (1,464 spaces) plus Lot G expansion (250 spaces).

2/ Private-Public Partnership (PPP) Lot would provide 2,000 spaces on Airport property. The open site to the north of the Hilton Hotel is a potential location for this project

SOURCE: City of Austin, Department of Aviation; PGAL; Ricondo & Associates, Inc., October 2012.

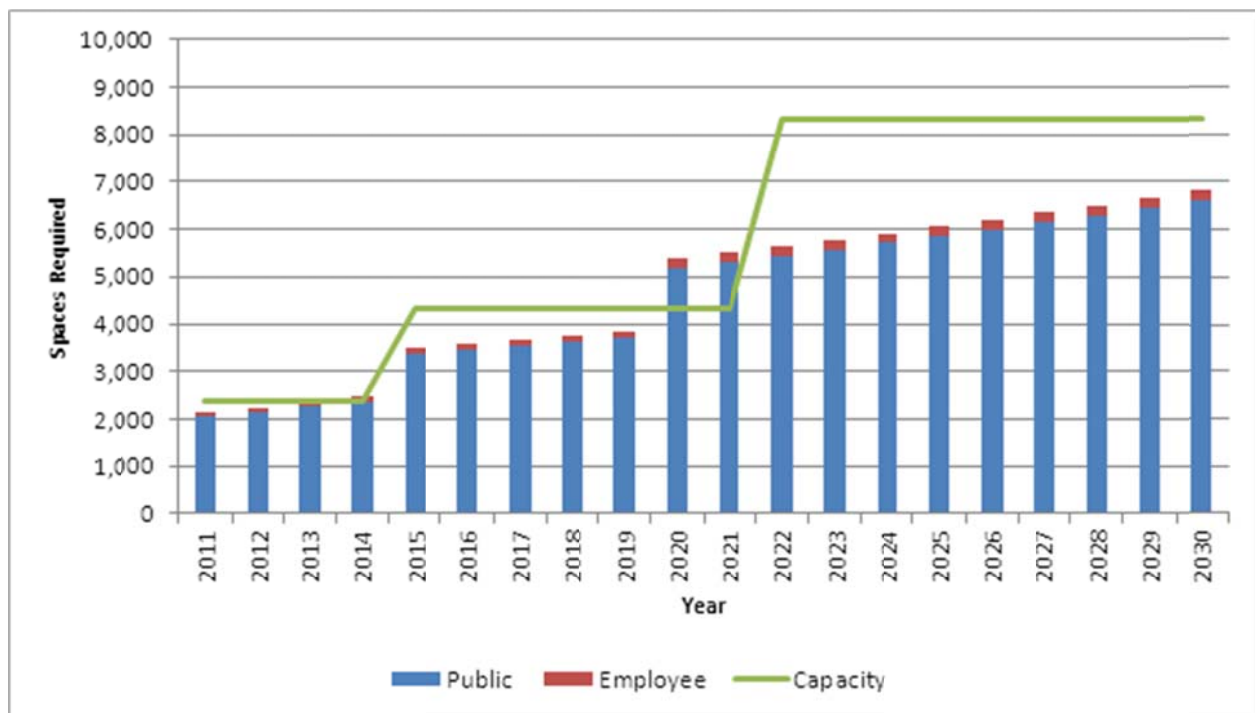
PREPARED BY: Ricondo & Associates, Inc., October 2012.



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**Exhibit 1** illustrates the estimated future demand for Garage parking products during peak month conditions and the available capacity by year. As shown in the graphic, the Garage products are anticipated to provide adequate capacity to meet peak day demands through 2030, except during the assumed transition period when Lot A (West) would be closed prior to the opening of a future Lot A garage.

**Exhibit 1: Garage Parking Demand and Capacity**



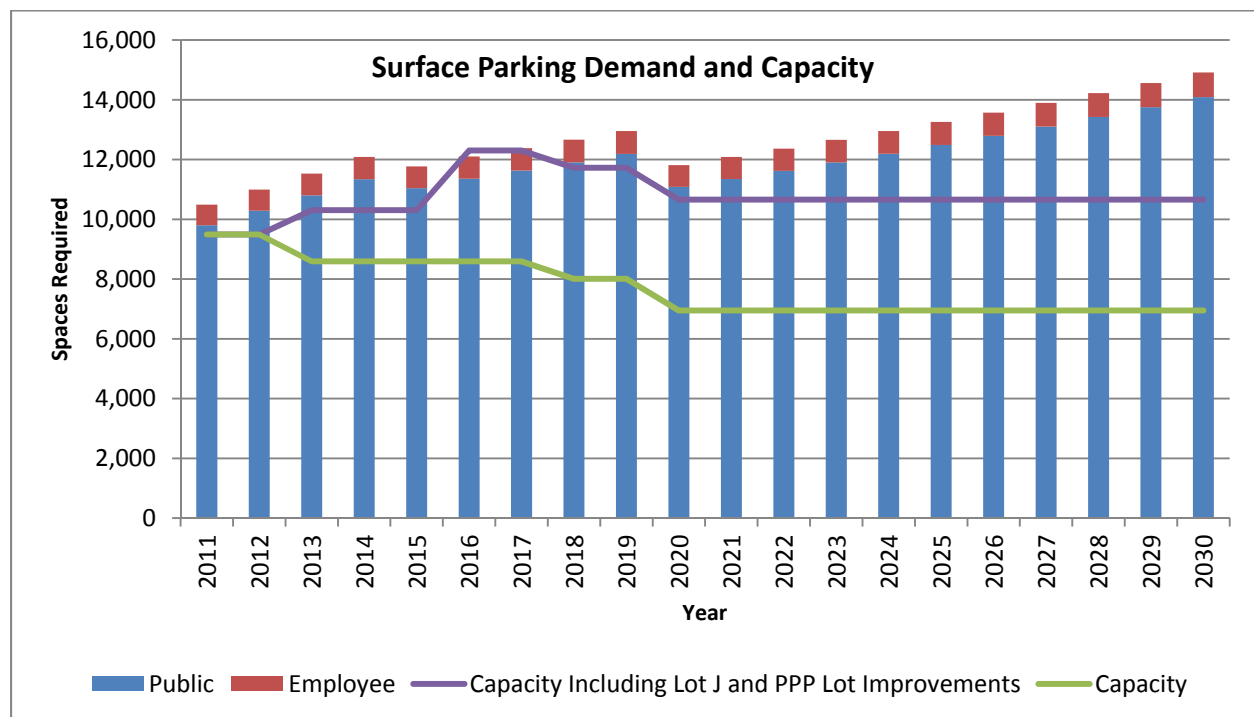
SOURCE: City of Austin, Department of Aviation; PGAL; Ricondo & Associates, Inc., October 2012.  
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**Exhibit 2** illustrates the estimated future demand for surface parking during peak day conditions by year. The green line in the chart depicts the available capacity based on the existing and anticipated future changes to the surface parking facilities. The purple line depicts the available capacity assuming Lot J improvements would be in place in 2013 and PPP Lot improvements would be in place in 2016. As shown, it is estimated that parking demands currently exceed the capacity of the surface parking areas. It is anticipated that the implementation of the Lot J improvements and the PPP Lot improvements will accommodate the deficit during the initial years of their operation, but in subsequent years demands will begin to exceed capacity of the available lots during peak day conditions without additional redistribution of parking demand between the surface and Garage parking products (discussed in the next section).

**Exhibit 2: Surface Parking Demand and Capacity**



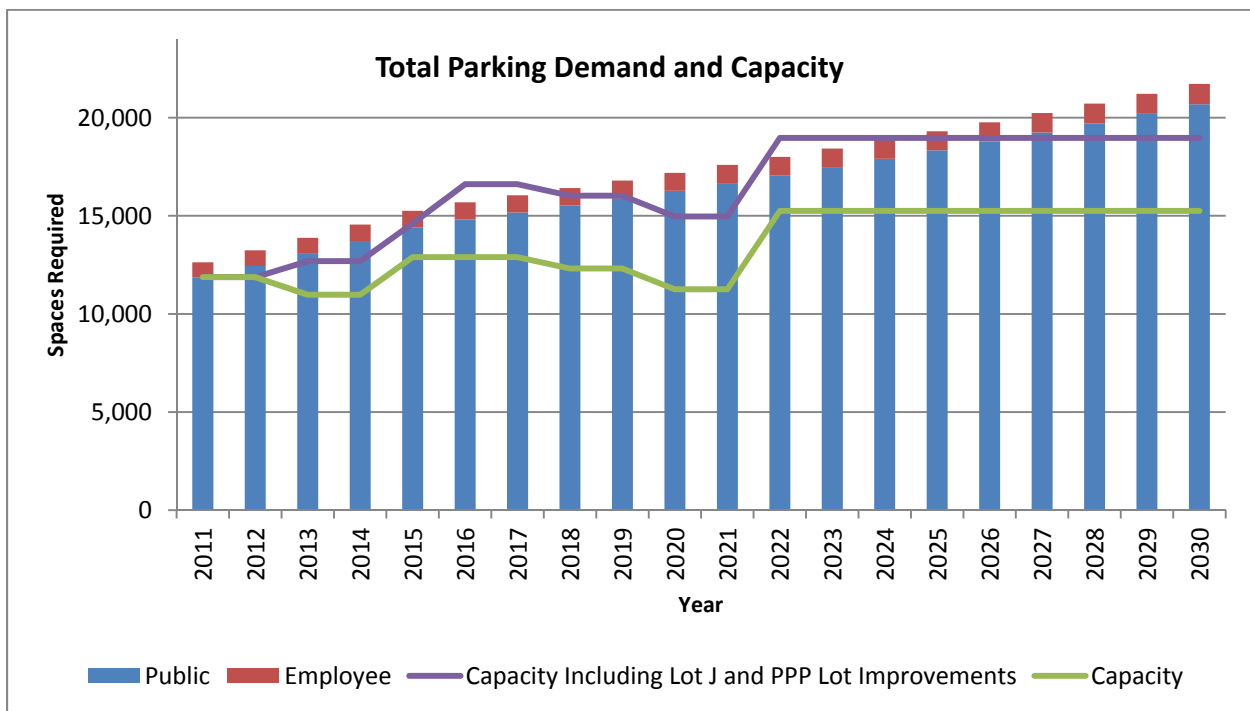
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**Exhibit 3** illustrates the estimated total demand for parking and available capacity by year based on the assumption that demand for Garage and surface facilities could be balanced such that the Garage facilities would also be filled on the peak day. Parking product price differentials between surface and Garage products will not typically allow a perfect balance of demand between products as is implied by this graphic. However, if future parking prices were adjusted to balance Garage and surface parking demands then it is estimated that the available capacity with the addition of the Lot J improvements and PPP Lot improvements would accommodate or come close to accommodating the peak day demand for parking through 2030, with some potential diversion to overflow parking or off-airport parking facilities.

**Exhibit 3: Total Parking Demand and Capacity**



SOURCE: City of Austin, Department of Aviation; PGAL; Ricondo & Associates, Inc., October 2012.  
PREPARED BY: Ricondo & Associates, Inc., October 2012.





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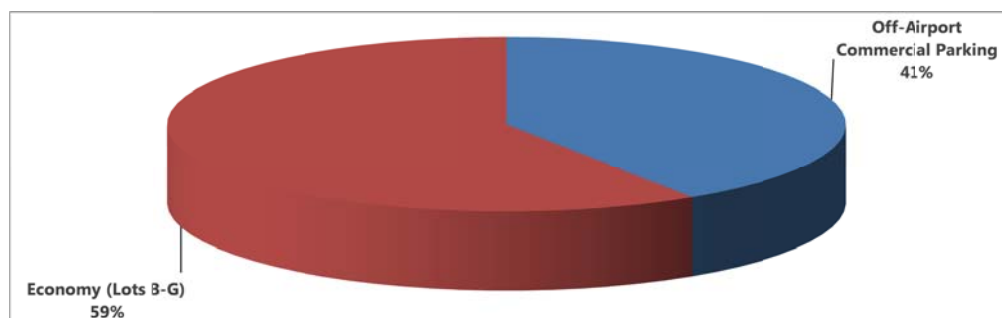
## Off-Airport Commercial Parking System

As shown in the previous exhibits, it is anticipated that the implementation of the Lot J improvements and the future PPP Lot will generally accommodate future peak on-airport parking demands; however, it is anticipated that there will be several years where parking demands may slightly exceed the available capacity. In such situations, it is anticipated that those peak demands would be accommodated by the off-airport commercial parking operators.

**Table 4** provides an overview of the spaces currently provided by the off-airport commercial operators. There are currently two off-airport commercial operators that service the Airport and supplement the Airport's Economy product. The off-airport commercial operators maintain a total of 4,900 spaces, representing 41 percent of remote parking capacity servicing the Airport.

**Table 4: Summary of Off-Airport Commercial Parking Facilities**

OFF-AIRPORT COMMERCIAL PARKING FACILITY	NUMBER OF SPACES	PERCENT OF TOTAL CAPACITY
Airport Fast Park	3,500 <sup>1/</sup>	
The Parking Spot	1,400 <sup>1/</sup>	
<b>Total Off-Airport Commercial Parking</b>	<b>4,900</b>	<b>41%</b>
Economy (Lots B-F)	5,951	49%
Economy (Lot G)	1,153	10%
<b>Total On-Airport Economy</b>	<b>7,104</b>	<b>59%</b>
<b>Total Remote Parking Capacity</b>	<b>12,004</b>	<b>100%</b>



Notes:

<sup>1/</sup> Number of spaces are approximated.

Source: City of Austin, Department of Aviation; Ricondo & Associates, Inc., October 2012.

Prepared by: Ricondo & Associates, Inc., October 2012.

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