2016 ACI/IPI Parking SURVEY RESULTS

Prepared for
Airports Council International-North America
and International Parking Institute

by
Inter VISTAS Consulting, Inc.

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# Table of Contents

1. Survey Background and Purpose  
2. Survey Participants  
3. Survey Methodology and Limitations  
4. Importance of Airport Parking Revenues  
5. Gross Parking Revenues  
6. Public Parking Space Inventory  
7. Public Parking Products  
8. Operation of Parking Facilities  
9. Payment Types  
10. Employee Parking  
11. Cell Phone Lot  
12. Parking Security  
13. Shuttle Buses  
14. Off-Airport Parking  
15. Sources for Additional Information
Survey Background and Purpose

Since 1970, Airports Council International-North America (ACI-NA) has conducted surveys of airport parking every three to five years. The survey results include data describing parking spaces, revenues and transactions, and the resources and methods used to operate parking facilities and shuttle buses, and collect revenues. The results have been useful to airport staff, consultants, and others when comparing parking operations.

This year ACI-NA once again conducted the survey in cooperation with the International Parking Institute (IPI). This cooperative effort resulted in a survey that focused on the specific needs of the airport staff responsible for parking operations on a day-to-day basis. InterVISTAS volunteered to lead the actual survey effort and summarize the results under the guidance of an Advisory Committee.

The members of the Technical Advisory Committee are:

<table>
<thead>
<tr>
<th>Name</th>
<th>Airport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dorothy Harris (Chair)</td>
<td>Denver International Airport</td>
</tr>
<tr>
<td>Ferdinando Colavita</td>
<td>Montréal–Pierre Elliott Trudeau International Airport</td>
</tr>
<tr>
<td>Armin Cruz</td>
<td>Dallas/Fort Worth International Airport</td>
</tr>
<tr>
<td>Michael Huggins</td>
<td>Portland International Airport</td>
</tr>
<tr>
<td>Gary Myers</td>
<td>Ronald Reagan Washington National Airport</td>
</tr>
<tr>
<td>Bill O’Reilly</td>
<td>Albany International Airport</td>
</tr>
<tr>
<td>Lisa Ransom</td>
<td>Cincinnati Northern Kentucky International Airport</td>
</tr>
<tr>
<td>Lenard Robinson</td>
<td>Savannah/Hilton Head International Airport</td>
</tr>
<tr>
<td>Katie Stanciel</td>
<td>Hartsfield-Jackson Atlanta International Airport</td>
</tr>
<tr>
<td>Christopher Oswald</td>
<td>Airports Council International-North America</td>
</tr>
<tr>
<td>Aneil Patel</td>
<td>Airports Council International-North America</td>
</tr>
<tr>
<td>Shawn Conrad</td>
<td>International Parking Institute</td>
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</tbody>
</table>
Survey Participants

Nearly 60% of all Large and Medium Hub airports participated

- The staff of the largest 150 airports (ranked by the number of originating passengers) in the U.S. and 9 selected airports in Canada were invited to participate. Of those invited to participate, surveys were completed by staff at:
  - 17 of the 30 Large Hub U.S. airports
  - 15 of the 30 Medium Hub U.S. airports
  - 26 of the 72 Small Hub U.S. airports
  - 8 of the 9 Canadian airports*

* For analysis purposes, one Canadian airport was grouped with U.S. Large Hub airports, 6 with U.S. Medium Hub airports, and one with U.S. Small Hub airports.
Survey Participants by FAA Region

- Responses were received from every FAA region
- Responses were received from eight Canadian airports

5 = airports that responded
15 = airports invited to respond
Survey Methodology and Limitations

Survey Methodology

The Technical Advisory Committee reviewed prior ACI-NA / IPI parking surveys and determined what data are most useful to airport parking operators. Under the guidance of the Technical Advisory Committee, InterVISTAS prepared and conducted the survey using a web-based survey tool. A pilot survey was conducted to test the survey instrument and questions. The final survey was distributed to the individuals responsible for parking operations at the largest 150 airports in the United States and 9 selected airports in Canada in September 2016 with responses received from over 70 airports by December 2016.

This report summarizes the responses provided by representatives of 70 airports that provided sufficient valuable data. The number of responses to each question varies, as some airports did not respond fully to each question. The resulting data were reviewed and minor edits made to remove obvious errors. The summarized data are presented in the following pages.

Limitations of Data

The resulting data should be used carefully, recognizing the limited sample size, particularly when comparing data by hub size. The data excludes parking activity and revenues occurring in privately operated off-airport parking facilities. Finally, the data represents the actual responses provided by each participating airport and is thus limited by the accuracy of these data.

The annual originating airline passenger data used in this report were obtained from the FAA OD1A database for the fiscal year ending September 30, 2015, to correspond to the parking transaction and revenue data provided by the individual airports. The originating airline passenger data include both local residents, who generate parking demands, and non-residents who do not. Airports that primarily serve resident passengers have different parking characteristics than those having a high proportions of non-resident passengers (e.g., Orlando International Airport).
Why Parking Revenue is Important to Airports

Landside revenues—including parking, ground transportation and rental cars—represent approximately 60% of all non-aeronautical revenues.

Total 2015 Operating Revenues for all U.S. Airports (in millions)

<table>
<thead>
<tr>
<th>Revenue Source</th>
<th>Total Revenue (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aeronautical Revenue</td>
<td>$10,721</td>
</tr>
<tr>
<td>Non-Aeronautical Revenue</td>
<td>$9,105</td>
</tr>
<tr>
<td>Parking and Ground Transportation</td>
<td>$3,771</td>
</tr>
<tr>
<td>Rental cars</td>
<td>$1,748</td>
</tr>
<tr>
<td>Other</td>
<td>$890</td>
</tr>
<tr>
<td>Food and Beverage</td>
<td>$659</td>
</tr>
<tr>
<td>Retail and Duty Free</td>
<td>$742</td>
</tr>
<tr>
<td>Land and Non-Terminal</td>
<td>$692</td>
</tr>
<tr>
<td>Hotel</td>
<td>$135</td>
</tr>
<tr>
<td>*Services,</td>
<td>$468</td>
</tr>
<tr>
<td>Source: FAA, AAS-400, CATS Report 127.</td>
<td></td>
</tr>
</tbody>
</table>
Gross Revenues

Median gross revenue:
- Large Hubs: $63.4 million
- Medium Hubs: $21.4 million
- Small Hubs: $9.2 million
- Non-hubs: $0.6 million

These revenue data are influenced by:
- Number of potential customers at each airport
- Parking rates at each airport, which vary by community and region
- Parking duration (length of stay) patterns at each airport
- Proportion of customers choosing to park rather than being dropped off / picked up at the curbside or using other airport access modes
- Availability of privately-operated off-airport parking operators
Most Large and Medium Hub airports provide more than 7,000 spaces

At 19% of airports, over 30% of the parking supply is off-airport

These public parking space data reflect:
- The number of parking spaces provided rather than number required at each airport.
- For airport capacity (left chart), only the parking spaces located on the airport.

At some airports, many of the long-term economy spaces are located off the airport in privately operated lots (right chart). Thus, estimates of future needs prepared using inventory data may under-estimate public parking space needs.
Public Parking Space Inventory

Smaller airports typically provide more spaces per passenger

Median public parking spaces per 1,000 originating passengers:
- Large Hubs: 1.6 spaces
- Medium Hubs: 3.5 spaces
- Small Hubs: 3.2 spaces
- Non-hubs: 4.5 spaces

Sample size:
- Large Hubs = 10 airports
- Medium Hubs = 10 airports
- Small Hubs = 14 airports
- Non-hubs = 3 airports

These data indicate spaces per airline passenger that are provided rather than the spaces actually required to meet demand.
Public Parking Products

- Over 75% of Large and Medium Hubs, and over 50% of Small Hubs, provide parking in structures.
- 17% of responding airports indicated availability of one or more “premium” products, including products offering reservations, memberships, and guaranteed spaces.
- 35% of responding airports provide special rates for disabled parkers, 23% provide special rates for military veterans or disabled military veterans.

Percent of Hubs Offering the Following Products in Parking Structures

<table>
<thead>
<tr>
<th></th>
<th>Large Hubs</th>
<th>Medium Hubs</th>
<th>Short Hubs</th>
<th>Non-hubs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valet</td>
<td>56%</td>
<td>45%</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td>Short-term</td>
<td>77%</td>
<td>56%</td>
<td>25%</td>
<td>0%</td>
</tr>
<tr>
<td>Long-term</td>
<td>85%</td>
<td>83%</td>
<td>80%</td>
<td>50%</td>
</tr>
<tr>
<td>Economy</td>
<td>48%</td>
<td>33%</td>
<td>35%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Percent of Hubs Offering the Following Products in Surface Lots

<table>
<thead>
<tr>
<th></th>
<th>Large Hubs</th>
<th>Medium Hubs</th>
<th>Short Hubs</th>
<th>Non-hubs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valet</td>
<td>22%</td>
<td>19%</td>
<td>17%</td>
<td>5%</td>
</tr>
<tr>
<td>Short-term</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Long-term</td>
<td>70%</td>
<td>75%</td>
<td>74%</td>
<td>75%</td>
</tr>
<tr>
<td>Economy</td>
<td>44%</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
</tr>
</tbody>
</table>
On average, airports reported 352 transactions per 1,000 originating passengers.

Median public parking spaces per 1,000 originating passengers:
- Large Hubs: 232 transactions
- Medium Hubs: 247 transactions
- Small Hubs: 466 transactions

Chart excludes data point for DFW (1,472 transactions per 1,000 passengers), which processed over 12 million transactions for vehicles that did not park. At DFW, all to access the airport terminals.

Sample size:
- Large Hubs = 16 airports
- Medium Hubs = 12 airports
- Small Hubs = 18 airports

The data for these public parking transactions reflect:
- Only parking transactions occurring on the airport
- The proportion of short-duration versus long-duration customers at each airport. Airports with more short-duration customers will have more transactions per passenger.
The largest proportion of “Other” transactions and revenue consists of vehicles entering DFW that do not park. At DFW, all vehicles must pass through the parking entry and exit plazas to access the airport terminals.
Operation of Parking Facilities

**Over 70% of airports use a contractor for parking operations and of those, most employ management agreements**

- **Large Hubs**
  - By Airport: 17%
  - By Contractor: 83%
  - Management Agreement: 87%
  - Concession Agreement: 6%
  - Other: 7%

- **Medium Hubs**
  - By Airport: 15%
  - By Contractor: 85%
  - Management Agreement: 53%
  - Concession Agreement: 6%
  - Other: 41%

- **Small Hubs**
  - By Airport: 29%
  - By Contractor: 71%
  - Concession Agreement: 30%
  - Management Agreement: 65%
  - Other: 5%

Of airports offering valet parking, 60% operate valet parking through their overall parking management contractor and 40% use a separate contractor.
Most airports oversee parking operations, facility maintenance, and contracts, through their finance/business department.

- **Operations**
- **Finance/Business**
- **Multiple Departments**
- **Facility Maintenance**

### Public Parking Operations
- Operations: 9%
- Finance/Business: 57%
- Multiple Departments: 34%
- Facility Maintenance: 9%

### Parking Contract Management
- Operations: 14%
- Finance/Business: 70%
- Multiple Departments: 16%
- Facility Maintenance: 6%

### Parking Facility/Equipment Maintenance (or Maintenance Contractor)
- Operations: 18%
- Finance/Business: 40%
- Multiple Departments: 21%
- Facility Maintenance: 22%

### Shuttle Bus Operations (or Shuttle Bus Contractor)
- Operations: 13%
- Finance/Business: 51%
- Multiple Departments: 36%
- Facility Maintenance: 5%

### Employee Parking Operations
- Operations: 42%
- Finance/Business: 48%
- Multiple Departments: 2%
- Facility Maintenance: 8%

### Taxis, Limos, and Other Ground Transportation Services
- Operations: 12%
- Finance/Business: 49%
- Multiple Departments: 40%
- Facility Maintenance: 58%

*Includes Finance, Properties, Concessions, and/or Commercial Development*
Cost of Parking Operations

Methods of reporting operating costs and responsibilities vary widely among airports. Costs also reflect local conditions (especially snow), age and size of parking facilities, and the proportion of spaces in parking structures versus surface parking lots.

Average operating costs as a share of gross revenues:
- Large Hubs 18%
- Medium Hubs 22%
- Small Hubs 30%
- Non-hubs 27%
Over 45% of the exits occur in staffed lanes; over 65% of revenue is paid using credit cards.

Share of Transactions by Payment Type

- Staffed - Cash/Check: 16.3% Staffed - Credit/Debit: 23.7%
- Pay-on-Foot: 16.7% Ticket In/Credit Out: 18.6%
- Credit In/Out: 24.3% Monthly Access Card: 7.3%
- AVI (toll): 3.8% Other: 15.4%

Share of Revenues by Payment Type

- Cash: 12.8% Check: 0.6%
- Credit/Debit: 65.3% Prepaid: 0.8%
- AVI (toll): 4.3% Other: 25.0%

**Payment Type**

- Large Hub
- Medium Hubs
- Small Hubs
- Non-hubs

2016 ACI/IPI Parking SURVEY RESULTS – MARCH 2017
Over 90% of employee spaces were walkable at 17% of Large Hubs, 36% of Medium Hubs, and 58% of Small Hubs
Monthly employee parking fees typically vary between $50 and $100 at Large Hub airports and $0 to $50 at Medium and Small hub airports.
Almost all responding Large and Medium Hub airports have cell phone lots

Airports with cell phone lots:

- 93% of Large Hubs
- 92% of Medium Hubs
- 71% of Small Hubs
- 33% of Non-hubs
Parking Security

Use of security measures by airports at public and employee parking facilities by percent of airports using each measure

- Large Hub
- Medium Hubs
- Small Hubs
- Non-hubs

Public Parking

Employee Parking

Cameras
Armed Patrols
Unarmed Patrols
Random Patrols
Scheduled Patrols
Vehicular Patrols
Foot Patrols
Horseback/Bicycle Patrols
CCTV
None
Shuttle Bus Service

- Airports with shuttle bus service to public or employee parking facilities:
  - 93% of Large Hub airports
  - 71% of Medium Hub airports
  - 29% of Small Hub airports
  - 0% of Non-hub airports

- Service hours: Of 21 reporting airports, 20 operated shuttle buses 24 hours per day

- Average headways for airport parking shuttle vehicles
  - Up to 5 minutes: 38%
  - 5 to 10 minutes: 48%
  - Over 10 minutes: 14%

- Seating capacity of airport parking shuttle vehicles
  - Up to 15 seats: 36%
  - 16 to 29 seats: 41%
  - 30 seats and up: 23%
Shuttle Bus Operations

- Parking shuttle bus contracts:
  - Of 18 responding Large and Medium Hub airports, 5 have an agreement directly with a shuttle bus operator, 11 contract shuttle bus service through their parking operator, and 2 self-operate the shuttle buses.
  - Of 4 responding Small Hub airports, 1 has an agreement directly with a shuttle bus operator and 3 contract shuttle bus service through their parking operator.

- Vehicle purchase and maintenance:
  - Of 22 responding airports, 15 were responsible for vehicle purchases, 6 used their shuttle operator for vehicle purchases, and 1 used both approaches.
  - Of 22 responding airports, 9 were responsible for vehicle maintenance and 13 used their shuttle operator for vehicle maintenance.

- Fuel used for parking shuttle buses:
  - Regular fuel (diesel or gasoline) is used by 22% of Large Hub airports and 75% of Medium and Small Hub airports.
  - CNG is used by 67% of Large Hub airports, 13% of Medium Hub airports, and 25% of Small Hub airports.
  - One Large Hub airport reported using Bio-diesel and one Medium Hub airport reported using electric vehicles.
Airports charging off-airport parking operator privilege fees (i.e., percent of gross revenues)

- **Large Hub Airports**
  - Sample size = 19
  - Yes: 36.8%
  - No: 52.4%
  - Did not respond: 31.6%

- **Medium Hub Airports**
  - Sample size = 21
  - Yes: 23.8%
  - No: 11.1%
  - Did not respond: 52.4%

- **Small Hub Airports**
  - Sample size = 27
  - Yes: 11.1%
  - No: 3.7%
  - Did not respond: 85.2%

Of airports charging off-airport parking privilege fees, 73% charge a fee calculated as 10% of the business’ gross parking revenues. Other airports charge a lower percentage or vary the percentage based on an operator’s annual revenues.
Sources for Additional Information

**Airports Council International-North America**

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