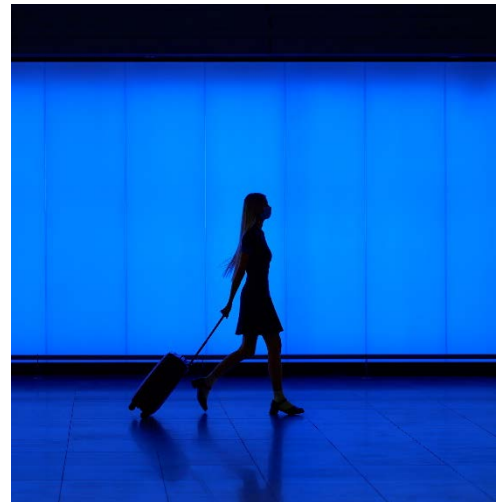


WASHINGTON-BALTIMORE REGIONAL AIR PASSENGER SURVEY - 2023

GENERAL FINDINGS REPORT

October 2024



National Capital Region
Transportation Planning Board

2023 WASHINGTON-BALTIMORE REGIONAL AIR PASSENGER SURVEY

Prepared by the National Capital Region Transportation Planning Board in cooperation with the Federal Aviation Administration
October 2024

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EXECUTIVE SUMMARY

BACKGROUND

In October 2023, the Metropolitan Washington Council of Governments (COG) conducted a regional air passenger survey (APS) at the three major commercial airports in the Washington-Baltimore Region: Baltimore/Washington International Thurgood Marshall Airport (BWI), Ronald Reagan Washington National Airport (DCA), and Washington Dulles International Airport (IAD). The APS was jointly funded by the Metropolitan Washington Airports Authority (MWAA) and the Maryland Aviation Administration (MAA) of the Maryland Department of Transportation (MDOT). Field staff collected survey responses (including partial responses) from 18,310 out of a total of 54,265 enplaning passengers on 486 randomly selected flights (417 domestic and 69 international), an overall response rate of 18 percent based on the revenue passenger response rate. Out of 18,310 responses, survey responses with partial responses and missing ID's were filtered out, yielding 9,599 valid responses used for survey analysis, thereby having an intercept passenger response rate of 52 percent. The survey questionnaires asked passengers to provide information about their upcoming flight, their trip to the airport, their choice of airport, their spending behavior and their demographic characteristics. The 2023 APS was the fifteenth in a series of regional air passenger surveys conducted since 1981. Prior surveys were conducted in 1981/82, 1987, 1992, 1998, 2000, 2002, and every two years since 2005 except for 2021, due to the COVID-19 pandemic. Data from the air passenger surveys provide the basis for analysis of major changes in airport use in the region. These surveys are an essential component of the air systems planning and master planning processes in the region and provide information necessary to account for airport ground access in the region's travel demand model.

The Washington/Baltimore air systems planning region shown in Figure 1 stretches from Harford County, Maryland on the Susquehanna River to the north, to Spotsylvania County Virginia to the south, and from the Chesapeake Bay in the east to the foothills of the Appalachian Mountains to the west. This air systems planning region consists of 29 jurisdictions, 161 Aviation Analysis Zones, and 2,604 Transportation Analysis Zones.

The General Findings Report of the 2023 APS summarizes findings regarding patterns of airport enplanement share, airport choice, airport preference, air trip purpose, ground trip origin, airport mode of access, spending behavior, air traveler characteristics, and at-airport use of parking facilities and procedures - an overview of which is provided below. This report will be followed by a more detailed report containing geography-specific analysis and conclusions: the Geographic Findings Report of the 2023 Washington-Baltimore Regional Air Passenger Survey.



Figure 1. Washington/Baltimore Air System Planning Region

Source: Metropolitan Washington Council of Governments (MWCOCG)

SUMMARY OF FINDINGS

AIRPORT ENPLANEMENT SHARE (TABLE 1)

In 2023, 38.2 million air passengers boarded a flight in the Washington-Baltimore Air System Planning Region, an increase of 1 percent from 2019 (37.8 million). This total is broken down by the percentage of passengers at each airport:

- 34 percent of passengers at BWI (down from 36 percent in 2019)
- 33 percent of passengers at DCA (up from 32 percent in 2019)
- 32 percent of passengers at IAD (down from 33 percent in 2019)

Of those 38.2 million passengers, 30.2 million originated locally from the Washington-Baltimore Air System Planning Region, a slight increase from 2019 (30.1 million), while 8.1 million made a connection through the region; an increase of 7.8 million from 2019. These totals are broken down by airport below:

Locally Originating

- 74 percent of passengers at BWI (down from 77 percent in 2019)
- 87 percent of passengers at DCA (down from 91 percent in 2019)
- 76 percent of passengers at IAD (up from 71 percent in 2019)

Connecting

- 26 percent of passengers at BWI (up from 23 percent in 2019)
- 13 percent of passengers at DCA (up from 9 percent in 2019)
- 24 percent of passengers at IAD (down from 29 percent in 2019)

FINDINGS ON AIR PASSENGER CHARACTERISTICS

- In 2023, resident passengers accounted for 43 percent of the total departing air passengers. Non-resident passengers accounted for the remaining 57 percent of departing air passengers. (Table 2 and Figure 3)
- The share of passengers in the 25-34, 35-44, 45-54, and 55-64 age groups were evenly split for each airport, with each group comprising about 20 percent, and accounting for nearly 80 percent of the total share across all airports in the region. (Table 3 and Figure 4)
- Household incomes for air travelers in the Washington-Baltimore region continued to be higher than the regional median. Only 27 percent of the region's passengers had household incomes less than \$100,000 and 34 percent had household incomes over \$200,000. (Table 5 and Figure 7)

FINDINGS ON TRIP PURPOSE (TABLE 4 AND FIGURES 5, 6)

- The share of passengers traveling for business in the region has steadily declined while non-business travel has increased. The percentage of locally originating air passengers reporting that they were traveling for non-business-related reasons increased from 65 percent in 2019 to 70 percent in 2023, while business-related trips decreased from 35 percent to 30 percent.

FINDINGS ON GROUND ACCESS

Trip Origin

- The majority of air passengers started their ground trip to the airport from a private residence. Between 2019 and 2023, trip origins from a private residence increased from 58 percent to 61 percent of total trip originations. Hotels and motels were the second most common trip origin, accounting for 31 percent in 2023. (Table 6 and Figures 8, 9)

Mode of Access (Table 7 and Figures 10, 11)

- The region's most common mode of access to the airports continued to be the automobile (private, rental, taxicab, and transportation network companies (TNCs) such as Uber/Lyft), accounting for 86 percent of all local originations, a 2 percent increase from 2019. TNC usage increased with a 2 percent increase since 2019, while taxi usage decreased during the same period from 9 to 5 percent.
- For the region in 2023, 45 percent of passengers traveled to the airport by private car, followed by 26 percent by TNC, 10 percent by rental car, 8 percent by transit, 5 percent by taxi, 2 percent by hotel/motel courtesy bus, 2 percent by airport bus/van/limo, and 3 percent by other modes.
- Since 2019, access mode share by private car increased by 4 percent, TNC increased by 2 percent, rental car remained at 10 percent, transit increased by 1 percent, hotel/motel courtesy bus decreased by 3 percent, airport bus/van/limo remained at 2 percent and other increased by 1 percent.
- **BWI** – Following the overall trend in the region, private cars remained the most popular mode of access, followed by TNCs and rental cars. The share of private cars increased from 57 percent in 2019 to 58 percent in 2023. The share of TNCs increased from 13 percent to 17 percent. Rental cars slightly decreased from 13 percent to 12 percent, taxis from 3 percent to 2 percent, and hotel/motel courtesy buses from 5 percent to 2 percent. Transit remained steady at 4 percent, airport bus/van/limo increased slightly from 2 percent to 3 percent, and “other” remained steady at 3 percent.
- **DCA** – Unlike BWI and IAD, TNCs were the most popular mode of transport with a 37 percent share in 2023, slightly up from 36 percent in 2019. This was followed by private cars at 30 percent, up from 23 percent, and transit at 12 percent, down from 13 percent. While the rental car share increased slightly from 8 percent to 9 percent, taxis fell dramatically from 12 percent to just 6 percent. The share of hotel/motel courtesy buses fell from 5 percent to 2 percent, airport bus/van/limo fell from 2 percent to 0.4 percent, and the share of passengers who chose “other” mode increased slightly from 2 percent to 3 percent.
- **IAD** – Following the overall trend in the region, private cars were the most popular mode of access, followed by TNCs and rental cars. The share of private cars increased from 45 percent in 2019 to 49 percent in 2023, and TNCs increased from 22 percent to 24 percent. Rental cars slightly decreased from 10 percent to 9 percent, whereas taxis fell drastically from 12 percent to 6 percent. Notably, transit share increased from 3 percent in 2019 to 5 percent in 2023 with the opening of the Metrorail Silver Line to IAD, while transit use remained steady at BWI and decreased slightly at DCA. For other modes, hotel/motel courtesy buses fell slightly from 4 percent to 3 percent, and both airport bus/van/limo and “other” remained steady at 2 percent.

Resident Status and Mode of Access (Table 8 and Figure 12)

- In 2023, 56 percent of resident passengers chose private cars as their preferred mode of transportation to the airport, which decreased slightly from 57 percent in 2019. The second preferred mode for residents is TNCs, which increased from 22 percent to 29 percent during the same period.
- In 2023, 28 percent of non-resident passengers chose TNCs as their mode of access to the airport, an increase from 18 percent in 2019. Following TNCs are private cars, which comprised 27 percent in 2023, a slight decrease from 29 percent in 2019.
- Non-resident passengers were more likely to use TNCs and rental cars for the mode of access to the airports than resident passengers. Rental car usage was very low for residents (only 1 percent in both 2019 and 2023).

Trip Origin and Passenger Mode of Access (Table 9 and Figure 13)

- For passengers originating from home, 55 percent traveled by private car, followed by 28 percent by TNC, 6 percent by transit, 5 percent by rental car, and 2 percent by taxi.
- For passengers originating from places other than home, 37 percent traveled by TNC, 17 percent by rental car, 12 percent by transit, 11 percent by private car, and 9 percent by taxi.

Trip Purpose and Passenger Mode of Access (Table 10 and Figure 14)

- For passengers traveling for business purposes, 42 percent traveled by TNC, followed by 29 percent by private car, 9 percent by rental car, 8 percent by taxi, and 7 percent by transit.
- For passengers traveling for non-business purposes, 43 percent traveled by private car, followed by 24 percent traveled by TNC, 11 percent by rental car, 10 percent by transit, and 4 percent by taxi.

Carpooling (Table 11 and Figure 15)

- In the region in 2023, 33 percent carpooled to the airport and 67 percent did not carpool to the airport. This breakdown remained largely unchanged from 2019.
- The share of passengers who carpooled to BWI increased from 33 to 34 from 2019 to 2023. This number decreased from 36 percent to 32 percent at DCA and increased from 32 percent to 35 percent at IAD.

Parking Choice and Drop-Off (Tables 12, 13)

- In the region in 2023, 66 percent of the passengers were dropped off at the airport.
- At BWI, 44 percent of passengers did not park. Among the passengers who parked, 21 percent parked in long term/economy parking followed by daily parking with 16 percent.
- At DCA, 73 percent of passengers did not park. Among the passengers who parked, 11 percent parked in short term/hourly parking followed by daily parking with 9 percent.
- At IAD, 64 percent of passengers did not park. Among the passengers who parked, 14 percent of passengers parked in daily parking followed by long term/economy parking with 13 percent.

FINDINGS ON PREFERENCES AND BEHAVIOR

Airport Preference (Tables 14, 15, 16, 17 and Figures 16, 17, 18, 19)

- In the region in 2023, 81 percent of passengers departed from their preferred airport, a 2 percent increase compared to 2019.
- In the 2023 survey, passengers ranked the three most important reasons for selecting their airport. The top three reasons included: closest airport (46 percent), more convenient flight time (13 percent), and less expensive airfare (11 percent).

Closest Airport

- 48 percent of BWI travelers (down from 61 percent in 2019)
- 53 percent of DCA travelers (down from 69 percent in 2019)
- 35 percent of IAD travelers (down from 44 percent in 2019)

Less Expensive Airfare

- 15 percent of BWI travelers (down from 19 percent in 2019)
- 7 percent of DCA travelers (unchanged from 2019)
- 13 percent of IAD travelers (up from 8 percent in 2019)

More Convenient Flight Times

- 10 percent of BWI travelers (up from 7 percent in 2019)
- 12 percent of DCA travelers (up from 8 percent in 2019)
- 15 percent of IAD travelers (down from 17 percent in 2019)

Reason For Choosing Mode of Transportation (Table 18 and Figure 20)

Among air passengers, the primary reason passengers chose their mode of access in the region was convenience at 58 percent (up from 53 percent in 2019), followed by cost at 12 percent (down from 14 percent in 2019) and reliability at 12 percent (up from 11 percent in 2019).

Convenience

- 55 percent of BWI travelers (up from 54 percent in 2019)
- 60 percent of DCA travelers (up from 55 percent in 2019)
- 58 percent of IAD travelers (down from 49 percent in 2019)

Cost

- 13 percent of BWI travelers (down from 15 percent in 2019)
- 14 percent of DCA travelers (unchanged from 2019)
- 15 percent of IAD travelers (up from 8 percent in 2019)

Reliability

- 19 percent of BWI travelers (up from 10 percent in 2019)
- 10 percent of DCA travelers (unchanged from 2019)
- 12 percent of IAD travelers (unchanged from 2019)

Airport Spending (Tables 19, 20, 21 and Figure 21, 22)

- For all airports, 47 percent of air passengers spent between \$1 and \$24 on airport concessions, 25 percent of passengers chose not to spend on concessions, 18 percent of passengers spent between \$25 and \$49, 7 percent of passengers spent between \$50 and \$99, and 3 percent of passengers spent \$100 or more.
- The lowest income group (less than \$25,000) had a larger share of passengers spending \$100 or more than other income groups.
- Non-resident passengers were more likely to spend more on airport concessions compared with resident passengers.

Pre/Post Pandemic Travel Behavior (Tables 22, 23 and Figure 23)

- New questions on how passengers traveled to the airport pre- and post-pandemic were added in the 2023 survey.
- In the region, 59 percent of passengers chose private car as their primary mode of transportation pre-pandemic, compared to 56 percent post-pandemic. Public transit remained constant at 10 percent pre- and post-pandemic, while the use of taxis or TNCs increased from 30 percent before pre-pandemic to 34 percent post-pandemic.
- DCA has the lowest share of passengers who chose a private or rented car and the highest share of passengers who chose taxis or TNCs and public transit as their preferred mode of access among the three airports in the region.

Check-In And Security Procedures (Tables 24, 25, 26 and Figures 24, 25, 26)

- For all airports, 54 percent used the regular security lane, followed by TSA PreCheck (36 percent), CLEAR (9 percent), and Priority (1 percent). Among DCA passengers, 52 percent used an expedited (non-regular) security lane, the highest share among all airports.
- For all airports, two-thirds of passengers used a mobile boarding pass from a cell phone or tablet, followed by printed boarding pass at kiosk (16 percent), printed boarding pass from airport ticket counter (14 percent), printed boarding pass at home (3 percent), and other (1 percent). Among DCA passengers, 72 percent used a mobile boarding pass, the highest share among all airports.
- For all airports, 46 percent of passengers did not check baggage, followed by checking in baggage with the ticket counter agent (30 percent), checking in at the kiosk (16 percent), checking at the curbside (4 percent), and checking in with the gate agent (4 percent). Among DCA passengers, 52 percent did not check baggage, the highest share among all airports.

INTRODUCTION

BACKGROUND

This report summarizes the findings from the 2023 Washington-Baltimore Regional Air Passenger Survey (APS) conducted concurrently at Baltimore/Washington International Thurgood Marshall Airport (BWI), Ronald Reagan Washington National Airport (DCA) and Washington Dulles International Airport (IAD). The Metropolitan Washington Council of Governments (COG) conducted this survey as part of its Continuous Airport System Planning (CASP) program. One of the goals of the CASP program is to continue the rational development of aviation facilities and services at the three major commercial airports serving the Washington-Baltimore region, shown in Figures 1 and 2.

The 2023 APS was the fifteenth in a series of regional air passenger surveys conducted since 1981. Prior surveys were conducted in 1981/82, 1987, 1992, 1998, 2000, 2002, and every two years since 2005 except for 2021, due to the COVID-19 pandemic. Data from the air passenger surveys provide the basis for analysis of major changes in airport use for the region. Hundreds of millions of dollars have been invested in facility improvements at the region's three major commercial airports in the past several years and more improvement planning continues. The data produced by these air passenger surveys will be invaluable in further planning for these improvements. The survey data will also be useful in the following areas:

-
- Market analyses regarding passenger air travel and ground access behavior, geographic information, and demographic data for developing airport, airline, and support services
 - Planning for airport ground access, including transportation model improvements such as enhanced mode split models and estimates of airport traffic volumes
 - Planning terminals and groundside facilities, including parking, curbside, baggage, and passenger boarding gate areas
 - Time series trend analyses of changes in air traveler characteristics and airport use
 - Air passenger demand and allocation forecasting for future updates to the Washington-Baltimore Regional Airport System Plan
-

SAMPLED FLIGHTS AND SURVEY RESPONSES

The main survey for the 2023 APS took place during the two-week period from Sunday, October 8 to Saturday, October 21. Additional surveying occurred between October 25 and October 31 for flights during the two-week period that needed to be resurveyed. As shown in Table 0, field staff collected survey responses (including partial responses) from 18,310 out of a total of 54,265 enplaning passengers on 486 randomly selected flights (417 domestic and 69 international), an overall response rate of 18 percent based on the revenue passenger response rate. Out of 18,310 responses, survey responses with partial responses and missing IDs were filtered out, yielding 9,599 valid responses used for survey analysis, thereby having an intercept passenger response rate of 52 percent.

The survey sample included flights from 27 airlines, of which 77 flights were international and 486 flights were domestic carriers. The sample flights were grouped into 137 clusters based on their destination. Some sampled flights were not surveyed due to schedule changes, cancelled flights, and other unforeseen circumstances. The survey instrument contained questions regarding the respondent's airline trip, the trip to the airport, the choice of airport, spending behavior, and several demographic questions, such as household size, household income, and respondent age. Appendix B contains the 2023 survey questionnaire for the three airports (BWI, DCA, IAD). There is slight variation among the questionnaires administered at each of the airports due to facility-specific considerations at each airport.

Table 0. 2023 Regional Air Passenger Survey Responses

Airport	Flight Surveyed	Revenue Passengers	Survey Responses (including partial responses)	Valid Survey Responses	Overall Response Rate	Intercept Passenger Response Rate
BWI	149	19,468	6,909	4,018	21%	58%
DCA	185	17,276	5,138	3,039	18%	59%
IAD	152	17,521	6,263	2,542	15%	41%
TOTAL	486	54,265	18,310	9,599	18%	52%

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

While the data from the 2023 APS was collected over a two-week period in October, the survey results have been annualized to observed annual passengers for the 12-month period from January to December 2023. Therefore, the survey results reflect air traveler behavior over a yearly period. The survey focuses on travel modes used to access each airport, trip purpose, number of trips at each airport, preferred airport, trip origin, place of origin, age of air travelers and income of air travelers. These summaries of findings generally reflect trips where passengers arrive at the airport by ground transportation. Passengers arriving to the surveyed flight by a connecting flight (in contrast to ground access transportation) are only included in discussions of total enplanements in the following section of this report, where enplanements are defined as the number of passengers boarding.

AIRPORT ENPLANEMENT SHARE

As shown in Table 1, 38.2 million air passengers boarded a flight in the Washington-Baltimore region in 2023, an increase of one percent from 2019 (37.8 million). Of those 38.2 million passengers, 30.2 million passengers originated locally from the Washington-Baltimore region, a small increase from 30 million from 2019, while 8 million passengers made a connection through the region, an increase from 7.8 million. Enplanements across the region has steadily increased from 2017 to 2023, with a 421,000 increase since 2019.

Between 2019 and 2023, the percentage share of originating air passengers decreased from 77 percent to 74 percent at BWI, decreased from 91 percent to 87 percent at DCA, and increased from 71 percent to 76 percent at IAD. For the entire region, local originations decreased slightly from 80 percent to 79 percent of total enplanement in 2023 compared with 2019. By each airport in 2023, DCA had the largest share of local originations at 87 percent, followed by IAD at 76 percent, and BWI at 74 percent.

For total enplanements in 2023, BWI had the largest number of enplanements (13.1 million), followed by DCA (12.7 million) and IAD (12.4 million). Compared with 2019, BWI's total enplanement decreased from 13.5 million, DCA's total enplanement increased from 11.9 million, and IAD's total enplanement increased slightly from 12.3 million.

Table 1. 2023 Annual Air Passengers Trip Originations (000s)

Enplanement Type		BWI			DCA			IAD			REGION		
		2017	2019	2023	2017	2019	2023	2017	2019	2023	2017	2019	2023
Local originations	N	8,910	10,426	9,679	10,499	10,918	11,062	7,245	8,726	9,447	26,654	30,070	30,189
	%	67%	77%	74%	88%	91%	87%	64%	71%	76%	73%	80%	79%
Connected from another flight	N	4,305	3,116	3,420	1,458	1,031	1,673	4,062	3,603	2,960	9,825	7,750	8,052
	%	33%	23%	26%	12%	9%	13%	36%	29%	24%	27%	20%	21%
Total Enplanement	N	13,215	13,542	13,099	11,957	11,949	12,735	11,307	12,329	12,407	36,479	37,820	38,241
	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

CHANGES IN METHODOLOGY

Changes From Previous Surveys

Prior to 2023, the Washington-Baltimore Regional Air Passenger Survey (APS) was conducted as a paper-based intercept survey at boarding gates using a stratified sampling approach. However, in recent APS efforts, TPB observed a decline in the overall response rate and the quality of survey responses, such as partially completed or incomplete surveys, respondents less willing to provide origin information, and survey respondent burden. Additionally, paper questionnaires increased the burden for data post-processing, requiring manual input of survey responses into a digital format to conduct weighting and tabulation processes. In response to these methodological concerns, TPB conducted a comprehensive evaluation of the APS survey methods. Based on the evaluation, TPB developed a set of actionable recommendations to implement in future air passenger surveys. TPB presented a set of recommendations to the Aviation Technical Subcommittee, which included a pretest, transition to electronic data collection, incentives to participants, and reducing item nonresponse. A review of best practices of recent airport surveys was also conducted to develop these recommendations. The 2023 APS implemented these recommendations to improve the data collection process, explained in the next section.

Changes In Data Collection Process

Electronic data collection was utilized for the 2023 APS and offered several methodological advantages compared with a paper-based survey, such as incorporating skip logic and streamlining the data collection process, reducing respondent burden for passengers, and reducing the time for performing data post-processing and analysis. A web-based survey instrument was developed for each airport and was designed to allow surveys to be completed directly on mobile devices such as smartphones and tablets. The web survey included an interactive map/address interface for collection of ground access trip origin location that would allow for these locations to be mapped to Aviation Analysis Zones (AAZs). To maintain the previous participation rate, extensive adjustments were made throughout the entire process. Modifications were implemented in the survey design and sample selection to ensure the algorithm followed logical steps and included pertinent questions to maximize response rates while gathering relevant information. In the data collection phase, among many changes, a pretest was conducted to evaluate the efficacy of the new approach, gathering insights from passengers, data collectors, and COG staff. This allowed data collectors and staff to anticipate potential issues and undertake corrective measures before executing the full-scale survey. Technical details on the survey design and sampling approach can be found in Appendix A.

OPERATIONAL DATA COLLECTION

Pretest

A pretest was conducted at Washington Dulles International Airport (IAD) on April 18, 19, 28, and 30, 2023. The activities undertaken to complete the pretest were hiring, badging, training, and drawing sampled flights. During the pretest, 32 flights were surveyed, comprising 12 international and 20 domestic flights. Key insights from the pretest encompassed several critical areas:

-
- Training proved indispensable in familiarizing data collectors with airport security protocols, pre- and post-survey procedures, and strategies for handling uncooperative passengers, among other necessary aspects crucial for survey success.
 - Determining the optimal coverage time and staffing for each flight based on the total available seats per aircraft.
 - Establishing effective communication channels between data collectors and project managers.
 - Identifying the most effective method for appropriately addressing gate agents and identifying the necessary documentation to legitimize the survey.
 - Identifying passengers' preference for using personal devices over tablets for survey completion.
 - Identifying the optimal approach for efficiently submitting survey information to the dashboard, hence streamlining data entry, and enabling real-time monitoring.
-

The pretest yielded several key findings that resulted in various improvements that were implemented in the full-scale survey effort:

- **Onboarding, hiring, and badging:** Recruitment of field staff and the badging process were some of the challenging aspects of this survey. Therefore, fielding dates should be selected prior to the start of recruitment and additional time should be allocated for the badging process.
- **Training of data collectors and supervisors:** Provide additional hours to allow for a three-day training (instead of one day) to allow field staff and supervisors to undergo a more comprehensive training in the classroom and on-site at the airports.
- **Staff resources and scheduling:** Provide a more even distribution of sampled flights throughout the day, increase staffing hours to allow for earlier arrival times at the gate, and have at least two data collectors at each gate.
- **Sampling:** Increase size of field staff to allow more flexible scheduling and to minimize the overlapping of large flights to the extent possible.
- **Data collector supply and materials:** Provide supply kits to data collectors such as clipboard, hand counters, cinch bag, etc. Hand counters allowed for easier tracking of intercepted passengers.
- **Print materials:** Prioritize the use of the business card to encourage passengers to scan the QR code to take the survey on their mobile devices.
- **Questionnaire:** Modify question wording and options for certain questions to improve clarity and survey response rates.

- **Data collector protocol:** Update modules to reflect methods, tips, and tricks learned during the pretest and add skip option to quickly navigate to core questions for refusals.
- **Tablet:** Reduce the number of tablets to one per gate instead of one per data collector, as most pretest respondents opted to use their own mobile devices to take the survey.
- **Communication during fielding:** Set up group text and teams conference line to improve communications between field staff and project team.

Full-Scale Survey

In October 2023, a comprehensive full-scale survey was conducted simultaneously across the three primary airports within the Washington/Baltimore region, at Baltimore/Washington International Thurgood Marshall Airport (BWI), Ronald Reagan Washington National Airport (DCA) and Washington Dulles International Airport (IAD). Initial training sessions were conducted during the first week, from October 3 to 5, followed by the execution of the full-scale survey during the subsequent two weeks, from Sunday, October 8, to Saturday, October 21. The survey concluded with a re-survey period in the final week from October 25 to 31.

To facilitate the survey process, a team of 3 supervisors and 20 data collectors was assembled across all three airports, further supported by 5 members of the contractor project management team and 3 COG staff members. Initially, a targeted sample of 563 flights was designated for comprehensive data collection over the course of two weeks, resulting in a total of 373 flights surveyed—comprising 315 domestic and 58 international flights. Subsequently, during the re-survey period, a subset of 113 flights was identified for interview over a duration of six days, leading to a total of 486 flights surveyed — 417 domestic and 69 international flights. The 3-week data collection period finalized with a total of 486 flights and 18,310 passengers who initiated the survey.

Based on findings from the pretest, the following procedures were implemented throughout the phases of data collection: pre-, during, and post-collection:

Activities Before Data Collection:

Interviewer Training

The interviewer training program was a comprehensive one-day program designed to equip the data collection team with the necessary knowledge and skills to conduct the study effectively. The interviewer training program ensured a successful data collection process by covering essential topics. It familiarized the team with the study's background, individual roles and responsibilities, and standardized interview protocols. Training also addressed effective questioning techniques, leveraging airport documents, and using tablets for data collection. Finally, the program prepared the team for potential challenges encountered in the field.

Onsite Airport Training

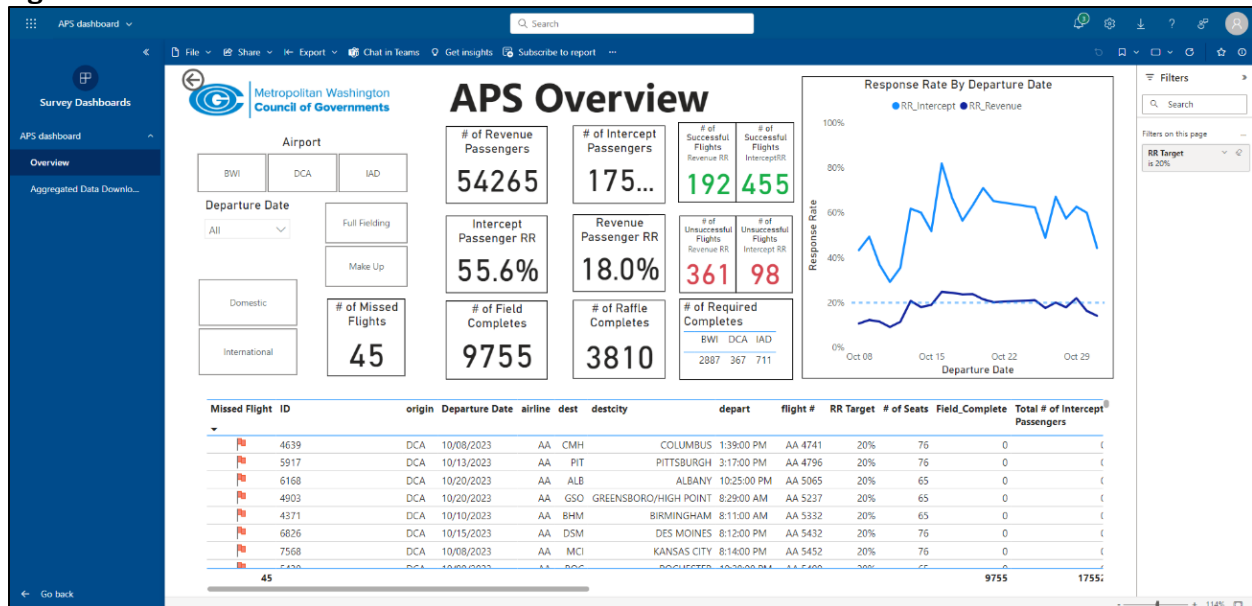
In addition to the core training program, a half-day, on-site training session was conducted at each participating airport specifically for the personnel assigned to data collection at that location. This training aimed to familiarize the team with the airport's physical layout, including terminal locations and passenger flow patterns, as well as knowledge of the specific gate locations relevant to the data collection process. It also covered important information on security procedures, including passenger screening protocols, restricted areas within the airport, and proper conduct while navigating security checkpoints.

Activities During Data Collection:

Data Collection

- **Preparation at the Gate:** Data collectors arrived early (1.5 hours domestic, 2.5 hours international) to introduce themselves and presented their ID and a survey letter to the gate agent. This verified the survey's legitimacy and gained cooperation. They confirmed flight details and requested the agent to announce the survey twice before boarding to raise passenger awareness.
- **Passenger Interaction:** Data collectors positioned at the gate approached passengers over 18 flying on the selected flight. They explained the survey and offered two options: completing it on a tablet or using a link/QR code on their personal mobile device later. This catered to passenger preferences and increased participation flexibility. A hand clicker tracked the number of passengers intercepted at the gate.
- **Wrap-up and Data Entry:** After boarding, data collectors confirmed the total number of revenue passengers with the gate agent for calculating participation rates. They thanked the agent for their assistance. Finally, within an hour of the flight's departure, data collectors entered participation data (number intercepted, number completing) into a web form.
- **Tracking and Issue Identification:** Data collectors entered key metrics after each flight, including airport, flight number, comments, number approached, and total revenue passengers. This data was automatically transmitted to a real-time PowerBI dashboard (Figure 2). The dashboard analyzed data and calculated response rates for both intercepted and revenue passengers. It tracked other metrics such as missed flights, completions (field and personal devices), and refusals. The PowerBI dashboard identified potential issues such as missed flights, operational problems (gate agent issues, schedule changes, cancellations), and areas where data collectors needed more training.

Figure 2. Data Collection Tracker - PowerBI Dashboard



Source: Metropolitan Washington Council of Governments (MWCOCG)

COG staff on site

A COG staff member served as an on-site observer during data collection at the airport. Their primary function was to verify that interviewers adhered to established protocols. If any inconsistencies with protocol were observed, COG staff would promptly communicate them to the field staff, facilitating swift corrective action and ensuring the integrity and accuracy of the data collection process.

COG staff reviewing on real time data collected

COG staff closely monitored the real-time data stream throughout the data collection process. This enabled them to identify any anomalies or missing data points promptly. By analyzing participation rates and potential inconsistencies, they ensured the overall quality and effectiveness of the data collection effort.

Creation of sample for resurvey period

Real-time data monitoring played a crucial role in identifying flights that required resurveying. By analyzing participation rates and response metrics, COG staff pinpointed flights that fell below a certain threshold or experienced operational issues. This allowed for the prompt creation of a targeted sample list for the resurvey period, ensuring a complete and representative dataset.

Activities After Data Collection:

After the successful collection of data from passengers, the next crucial step involved meticulously processing the information. This processing, which were carefully reviewed in the data processing section, transformed the raw data into a usable format, enabling in-depth analysis and extraction of key insights and findings.

FACTORING THE SURVEY DATA

Since the survey was conducted in October, and not continuously throughout the calendar year, the survey data did not reflect any specific annual period. Rather, the survey as it was conducted represented a “snapshot” of passenger activity, taken during the fall travel period, which was intended to be representative of a “typical” period of air travel that is outside of the peak summer and holiday travel seasons.

The survey responses were expanded to represent annual passenger estimates by a three-step process. The survey responses obtained on each sampled flight were first factored up to the boarding count totals (revenue passengers only). This number was obtained from the gate attendant at the closing of each flight. Second, the factored survey responses were expanded to represent bi-weekly passenger totals. Finally, observed annual enplanement of regional air travel was obtained from MWAA for DCA and IAD and from MAA for BWI.

SURVEY QUESTIONNAIRE

The airports have experienced numerous changes in recent years, particularly in their procedures for baggage handling, security lanes, and boarding pass protocols. Additionally, there has been a combined effort to assess whether there has been a substantial shift in passenger travel behavior to the airport, both before and after the pandemic. These changes underscore the importance of gaining a comprehensive understanding of these evolving dynamics.

To address this need and ensure the survey data reflects state of the practice in airport surveys, new questions were added to the questionnaire in 2023, including questions about typical mode of travel

pre- and post-pandemic, airport security lane used, baggage check-in preferences, and method of obtaining boarding pass.

Furthermore, the 2023 survey offered a gift card incentive to promote survey participation. Upon survey completion, participants were asked to be entered into a raffle for a chance to win a \$500 Amazon Gift Card. This strategy aimed to not only increase engagement but also cultivate a sense of interest and motivation among respondents. The incentive for this survey was a raffle for two \$500 Amazon gift cards at each of the three airports. Additionally, the reappearance of skipped questions during the raffle section served to enhance the completion rate of the questionnaire, resulting in the collection of more comprehensive data.

FINDINGS – AIR PASSENGER CHARACTERISTICS

Understanding the demographic and socioeconomic characteristics of survey participants is essential for gaining insights into their travel behaviors and preferences. This section provides an overview of key demographic factors, including resident status, age distribution, trip purpose, and household income.

Resident Status

Table 2 and Figure 3 summarize resident status for locally originating air passengers, comparing results by airport and across the region from 2017, 2019, and 2023. A resident was defined as a passenger originating from the Washington-Baltimore region, while a non-resident was defined as a passenger who was visiting but lives outside of the Washington-Baltimore region¹. At the regional level in 2023, the breakdown is 43 percent resident and 57 percent non-resident passengers. By airport, BWI showed a similar distribution of passengers comprising 47 percent as resident and 53 percent as non-resident, similar to 2019. IAD showed a similar pattern with 54 percent resident and 46 percent non-resident in 2023, reflecting an increase in the share of resident passengers since 2019 (45 percent resident and 55 percent non-resident). Finally, the breakdown for DCA is 33 percent resident and 67 percent non-resident, largely consistent with 2019.

Overall, across the region, the share of non-resident passengers remained larger than the share of resident passengers, although the share of resident passengers has gradually increased since 2017. Among the three airports, the largest share of non-resident passengers was reported at DCA (about two-thirds non-resident passengers). Additionally, there was not much change in the share of resident/non-resident passengers except for IAD where the share of resident passengers increased from 45 to 54 percent.

¹ The “Washington-Baltimore region” was defined by the survey respondent and may not necessarily be contiguous with the Washington/Baltimore Air System Planning Region.

Table 2. Comparison of Resident and Non-Resident Passenger Distribution by Airport: 2017, 2019, and 2023 (000s)

Resident Status		BWI			DCA			IAD			REGION		
		2017	2019	2023	2017	2019	2023	2017	2019	2023	2017	2019	2023
Resident	N	3,043	3,202	2,298	2,842	2,586	3,067	2,247	2,297	3,775	8,132	8,085	9,140
	%	42%	46%	47%	34%	34%	33%	49%	45%	54%	40%	41%	43%
Non-Resident	N	4,213	3,733	2,557	5,480	5,089	6,249	2,327	2,761	3,265	12,020	11,583	12,071
	%	58%	54%	53%	66%	66%	67%	51%	55%	46%	60%	59%	57%
TOTAL	N	7,256	6,935	4,855	8,322	7,675	9,316	4,574	5,058	7,040	20,152	19,668	21,211
	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: 2017/2019/2023 Washington-Baltimore Regional Air Passenger Survey

**Comparison of Resident and Non-Resident Passenger Distribution by Airport
2017, 2019, and 2023**

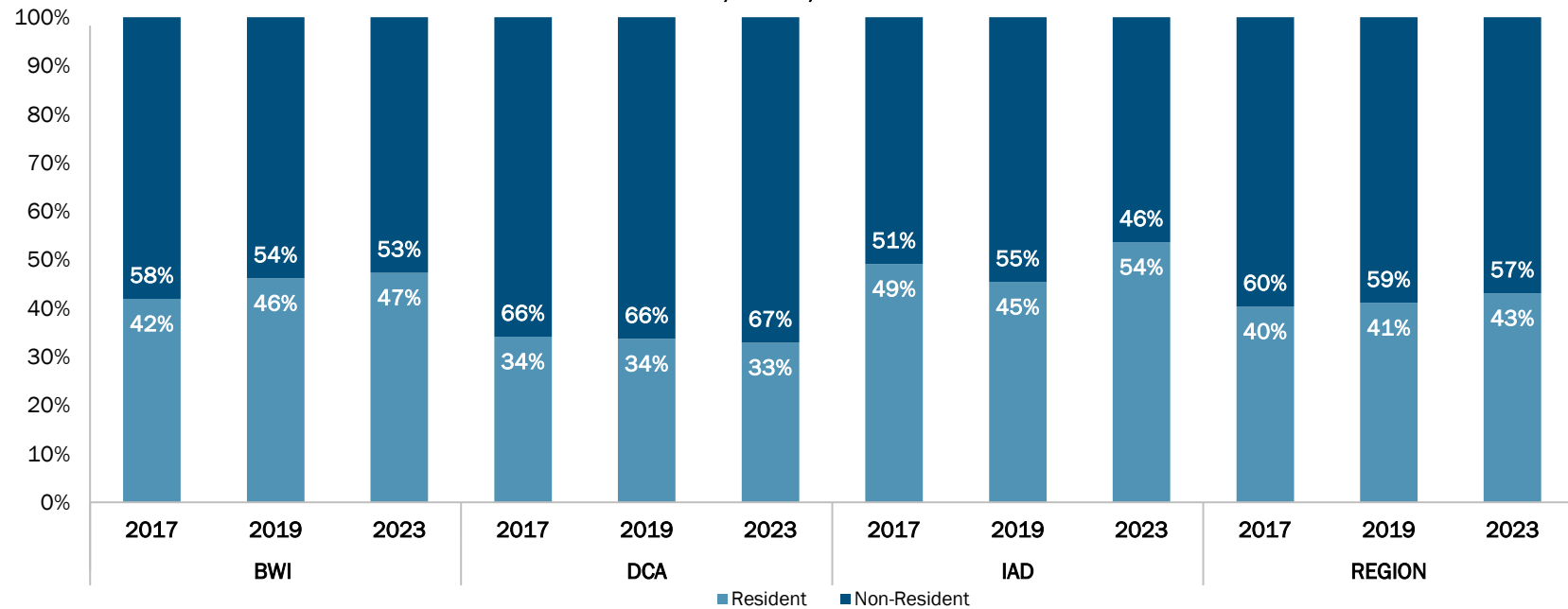


Figure 3. Comparison of Resident and Non-Resident Passenger Distribution by Airport: 2017, 2019, and 2023

Source: 2017/2019/2023 Washington-Baltimore Regional Air Passenger Survey.

Note: The size of the bars may differ slightly due to rounding of decimal percentages.

Age Distribution

As shown in Table 3 and Figure 4, the share of passengers in the 25-34, 35-44, 45-54, and 55-64 age groups were evenly split for each airport, with each group comprising about 20 percent, and accounting for nearly 80 percent of the total share across all airports in the region. The youngest and oldest age groups represented the smallest proportions of travelers, with the 65+ group having the same proportion at BWI and DCA (10 percent), but 3 percent more at IAD. For the 18 to 24 age group, the shares were similar at DCA and IAD (8 percent and 7 percent, respectively) and slightly larger at BWI (10 percent). The combined total of both the 18-24 and 65+ age groups across all airports accounted for about 20 percent of the total share.

Table 3. Passenger Age Distribution by Airport - 2023 (000's)

Age Group		BWI	DCA	IAD	REGION
Under 18 Years old	N	84	72	25	181
	%	2%	1%	0%	1%
18 to 24 Years	N	474	783	480	1,737
	%	10%	8%	7%	8%
25 to 34 Years	N	881	1,835	1,456	4,172
	%	18%	20%	21%	20%
35 to 44 Years	N	982	1,900	1,364	4,246
	%	20%	20%	19%	20%
45 to 54 Years	N	976	2,076	1,575	4,627
	%	20%	22%	23%	22%
55 to 64 Years	N	973	1,654	1,157	3,783
	%	20%	18%	17%	18%
65 Years or Older	N	512	969	945	2,426
	%	10%	10%	13%	11%
TOTAL	N	4,882	9,289	7,001	21,172
	%	100%	100%	100%	100%

Source: 2023 Washington-Baltimore Regional Air Passenger Survey.
 Note: Respondents under 18 are excluded from the survey and all tabulations.

Passenger Age Distribution by Airport 2023

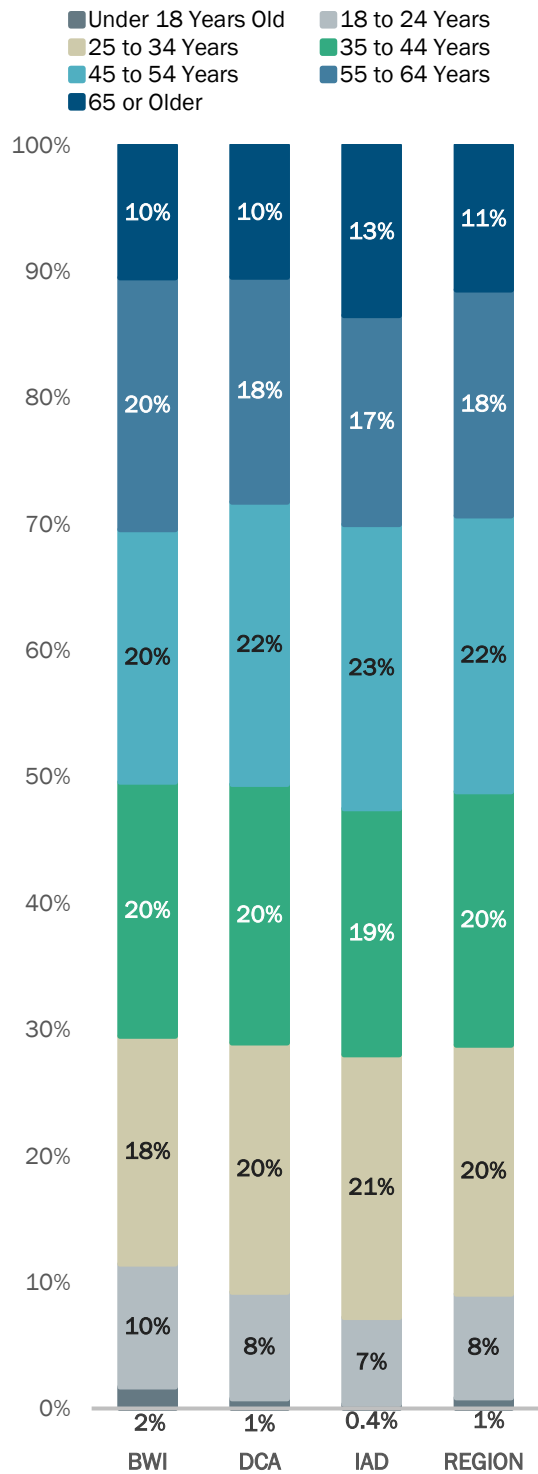


Figure 4. Passenger Age Distribution by Airport - 2023

Source: 2023 Washington-Baltimore Regional Air Passenger Survey.
 Note: The size of the bars may differ slightly due to rounding of decimal percentages.

FINDINGS – TRIP PURPOSE

Air passengers were asked to indicate the primary purpose of their air travel. These purposes were divided into the following categories:

Business:

- Business related to federal government (including military)
- Business related to state or local government
- Business that is not related to government (other business)

Non-Business:

- Leisure, vacation, or holiday
- Personal or family affairs
- Student or school related
- Other non-business

According to Table 4, in 2023, the proportion of passengers traveling for business in the region has steadily decreased since 2017 (38 percent), with a 5 percent drop from 2019 (35 percent) to 2023 (30 percent). Conversely, the share of non-business travelers steadily increased since 2017. As shown in Figure 5, among business subcategories, other business and business related to the federal government decreased from 21 to 19 percent and 12 to 9 percent, from 2019 to 2023 respectively, while business related to state and local government increased slightly from 2 to 3 percent during the same years.

Among non-business subcategories, leisure, vacation, or holiday showed the highest increase, increasing from 28 percent in 2019 to 36 percent in 2023, while personal or family affairs decreased slightly from 29 percent in 2019 to 28 percent in 2023, and school related decreased from 7 percent to 5 percent during the same years.

Figure 6 illustrates air travel by broad trip purpose (Business/Non-Business) for each airport and the region for 2017, 2019, and 2023. DCA had a higher share of business travelers than BWI and IAD. However, the drop in business travel is reflected for all three airports, with the sharpest drop at IAD from 34 percent to 24 percent from 2019 to 2023.

TRIP PURPOSE BY REGION 2017, 2019, AND 2023

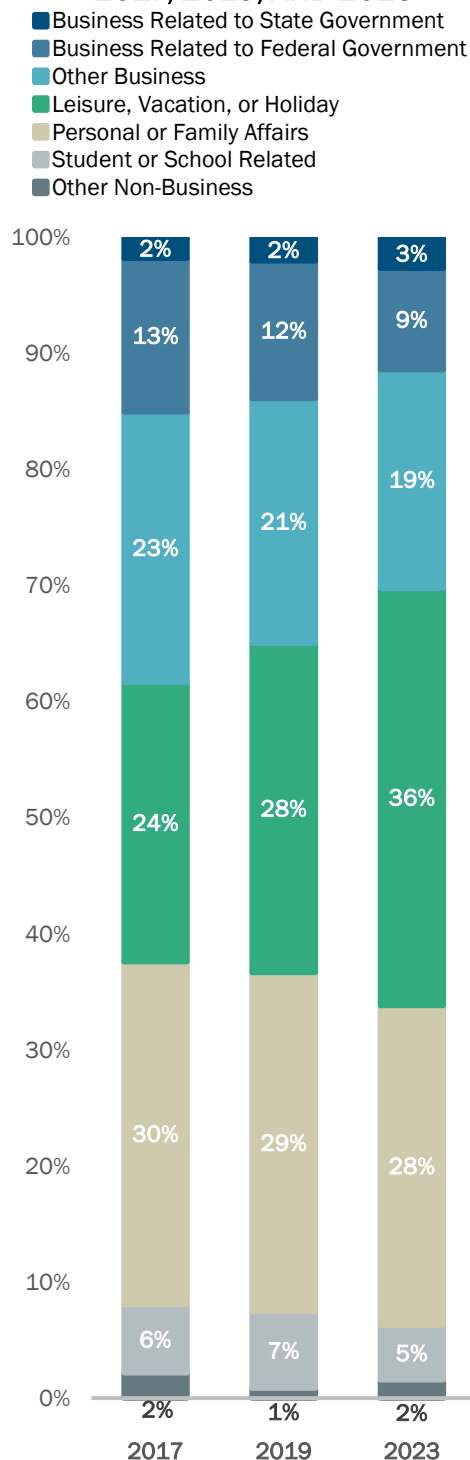


Figure 5. Trip Purpose by Region – Business/Non-Business: 2017, 2019, and 2023

Source: 2017/2019/2023 Washington-Baltimore Regional Air Passenger Survey.
Note: The size of the bars may differ slightly due to rounding of decimal percentages.

Trip Purpose by Airport - Business/Non-Business 2017, 2019, and 2023

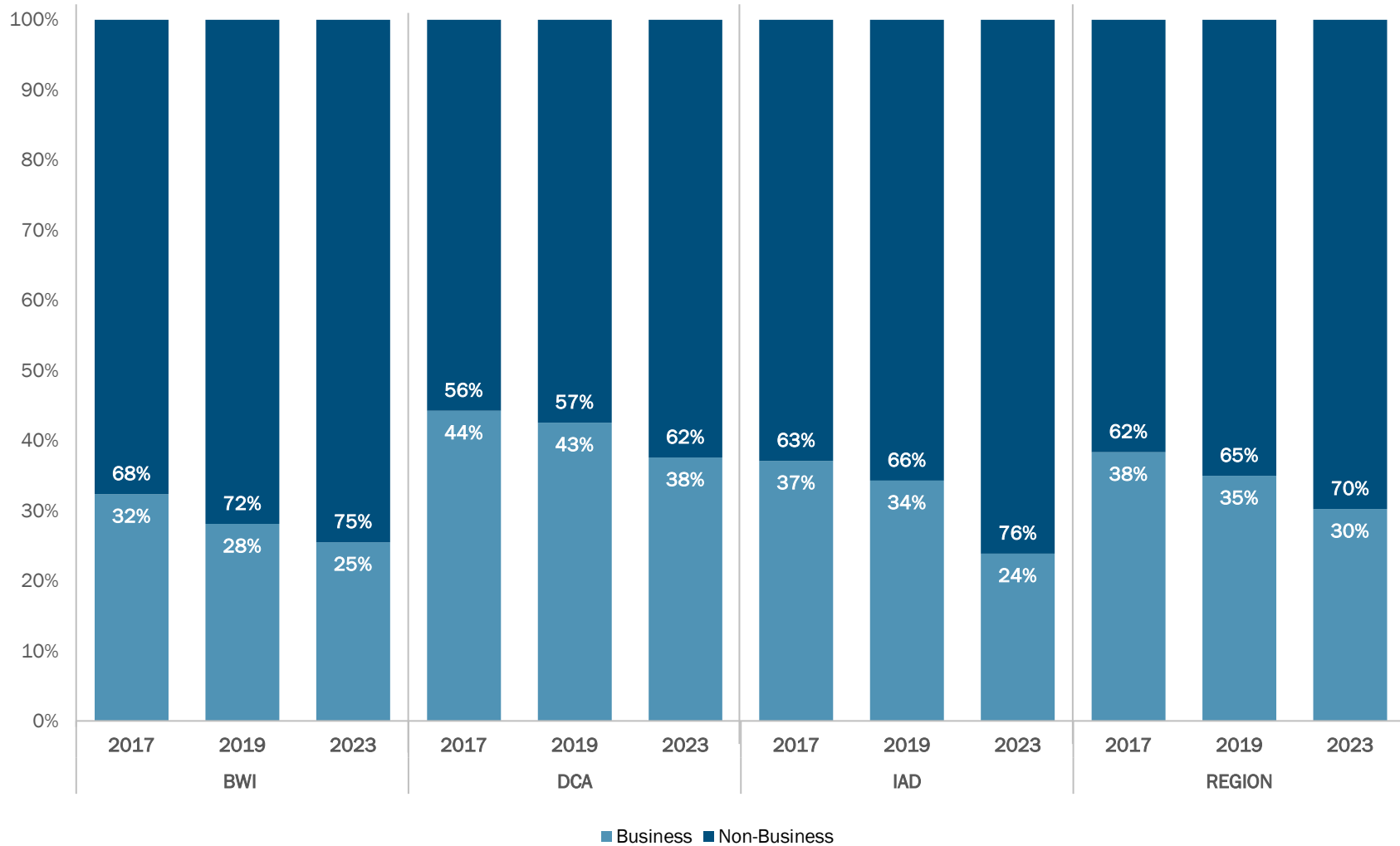


Figure 6. Trip Purpose by Airport - Business/Non-Business: 2017, 2019, and 2023

Source: 2017/2019/2023 Washington-Baltimore Regional Air Passenger Survey.
 Note: The size of the bars may differ slightly due to rounding of decimal percentages.

Table 4. Trip Purpose by Airport – Business/Non-Business: 2017, 2019, and 2023 (000s)

Trip Purpose		BWI			DCA			IAD			REGION		
		2017	2019	2023	2017	2019	2023	2017	2019	2023	2017	2019	2023
Business Related													
Business Related to Federal Government (Including Military)	N	775	699	242	1,779	1,480	1,147	901	858	482	3,455	3,037	1,871
	%	9%	8%	5%	17%	17%	12%	13%	11%	7%	13%	12%	9%
Business Related to State and Local Government	N	145	146	193	220	209	279	100	161	92	465	516	565
	%	2%	2%	4%	2%	2%	3%	1%	2%	1%	2%	2%	3%
Other Business	N	1,906	1,654	822	2,574	2,045	2,080	1,600	1,699	1,123	6,080	5,398	4,026
	%	22%	19%	17%	25%	23%	22%	23%	21%	16%	23%	21%	19%
SUBTOTAL Business Related	N	2,826	2,499	1,258	4,573	3,734	3,506	2,601	2,718	1,698	10,000	8,951	6,461
	%	32%	28%	25%	44%	43%	38%	37%	34%	24%	38%	35%	30%
Non-Business Related													
Leisure, Vacation, or Holiday	N	2,147	2,873	1,800	2,180	2,141	2,808	1,952	2,251	3,077	6,279	7,265	7,685
	%	25%	32%	37%	21%	24%	30%	28%	28%	43%	24%	28%	36%
Personal or Family Affairs	N	2,975	2,970	1,569	2,841	2,301	2,268	1,892	2,216	2,053	7,708	7,487	5,890
	%	34%	33%	32%	27%	26%	24%	27%	28%	29%	30%	29%	28%
Student or School Related	N	549	509	232	560	554	611	423	619	162	1,532	1,682	1,005
	%	6%	6%	5%	5%	6%	7%	6%	8%	2%	6%	7%	5%
Other Non-Business	N	239	46	73	184	47	140	143	127	123	566	220	336
	%	3%	1%	1%	2%	1%	2%	2%	2%	2%	2%	1%	2%
SUBTOTAL Non-Business Related	N	5,910	6,398	3,674	5,765	5,043	5,828	4,410	5,213	5,414	16,085	16,654	14,916
	%	68%	72%	75%	56%	57%	62%	63%	66%	76%	62%	65%	70%
TOTAL	N	8,736	8,897	4,932	10,338	8,777	9,333	7,011	7,931	7,112	26,085	25,605	21,377
	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: 2017/2019/2023 Washington-Baltimore Regional Air Passenger Survey

Household Income

Household incomes for air travelers in the Washington-Baltimore region continue to be higher than the regional median. Table 5 and Figure 7 show the breakdown of originating air passenger household income at the three airports and across the region in 2023. Regionwide for all airports, nearly three-quarters (72 percent) of air passengers indicated that their household income was \$100,000 or higher. The share of air travelers with household incomes more than \$200,000 was highest at 34 percent comprising about a third of all passengers. This pattern is consistent for all three airports, although BWI had a notably higher share of passengers with household incomes less than \$100,000 (about 1/3 of all passengers) compared with DCA and IAD.

Table 5. Household Income of Passengers by Airport - 2023 (000's)

Annual Household Income		BWI	DCA	IAD	REGION
Less than \$25,000	N	233	459	245	937
	%	5%	5%	4%	5%
\$25,000 - \$49,999	N	255	450	331	1,037
	%	6%	5%	5%	5%
\$50,000 - \$99,999	N	966	1,413	1,010	3,389
	%	21%	16%	15%	17%
\$100,000 - \$149,999	N	1,030	1,762	1,453	4,246
	%	23%	20%	22%	21%
\$150,000 - \$199,999	N	756	1,571	1,127	3,453
	%	17%	18%	17%	17%
\$200,000 and up	N	1,252	3,078	2,375	6,705
	%	28%	35%	36%	34%
TOTAL	N	4,492	8,733	6,541	19,766
	%	100%	100%	100%	100%

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

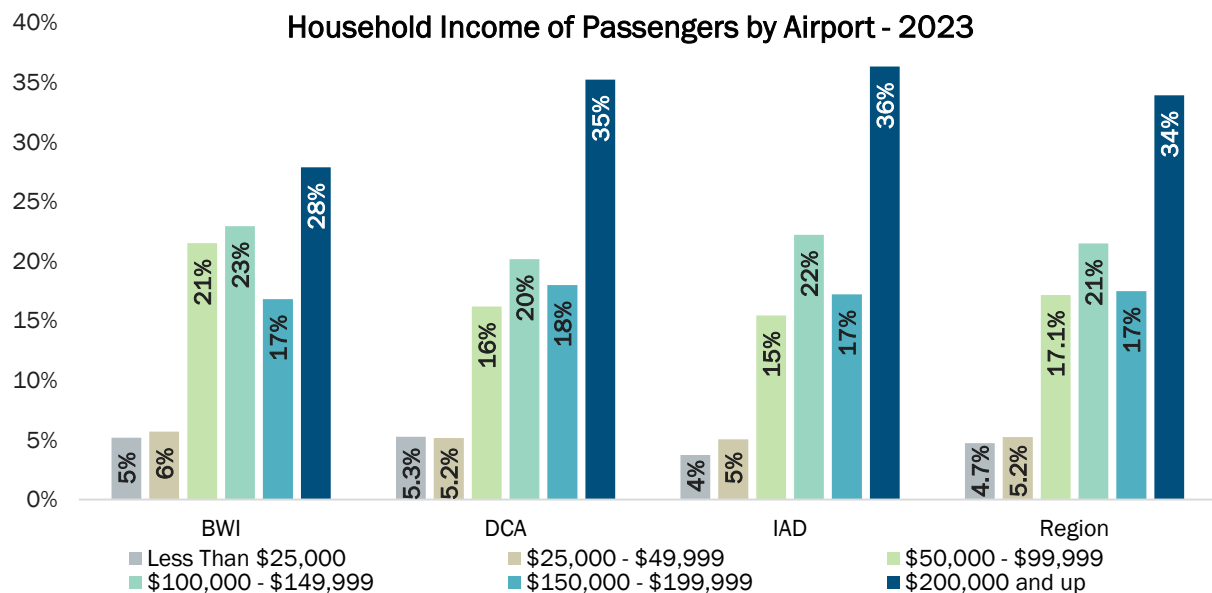


Figure 7. Household Income of Passengers by Airport - 2023

Source: 2023 Washington-Baltimore Regional Air Passenger Survey.

Note: The size of the bars may differ slightly due to rounding of decimal percentages.

FINDINGS - GROUND ACCESS

This section summarizes key findings on ground access to the airport which provide insights into travel patterns and preferences of air travelers. These include origins of passenger trips, the modes of transportation used to access airports, and differences between business-related and non-business-related travel. Additionally, this section analyzes preferences of carpooling, parking choice and drop-off.

Passenger Trip Origin

Figure 8 shows the distribution of passenger trip origins for all three airports in the region. The majority of passengers started their ground trip to the airport from a private residence, accounting for 61 percent of the total distribution. Hotels or motels were the second most common trip origin, accounting for 31 percent. The remaining trip origin categories (short-term rental, place of employment, another place of business, and other) were more evenly distributed, together accounting for a total of 8 percent.

When examining the bar charts in Figure 9, which compare the three airports and the region over the years, the percentage of passengers starting their trips from a private residence in the region decreased slightly from 60 percent in 2017 to 58 percent in 2019 and rebounded to 61 percent in 2023. The same pattern of a drop in 2019 followed by a recovery in 2023 is observed across all three airports.

Comparing airports, DCA had a notably lower share of trips starting at a private residence, and a higher share of trips starting at a hotel/motel than BWI and IAD, which reflected the higher share of business travelers at DCA. Approximately two-thirds of BWI and IAD passengers started their ground trip to the airport from a private residence, compared with about half of DCA passengers. These shares increased for all airports from 2019 to 2023, with the highest increase at IAD, rising from 64 percent in 2019 to 71 percent in 2023. Similarly, BWI increased from 65 percent to 71 percent, while DCA saw a smaller rise from 45 percent to 49 percent.

When comparing the proportion of passengers originating from hotels/motels by airports, BWI's share dropped slightly from 23 percent in 2019 to 22 percent in 2023, while IAD dropped more sharply from 27 percent to 22 percent, which likely reflected the drop in business travelers at IAD from 2019 to 2023. Conversely, DCA's share increased from 39 percent to 42 percent during this period.

Passenger Trip Origin by Region - 2023

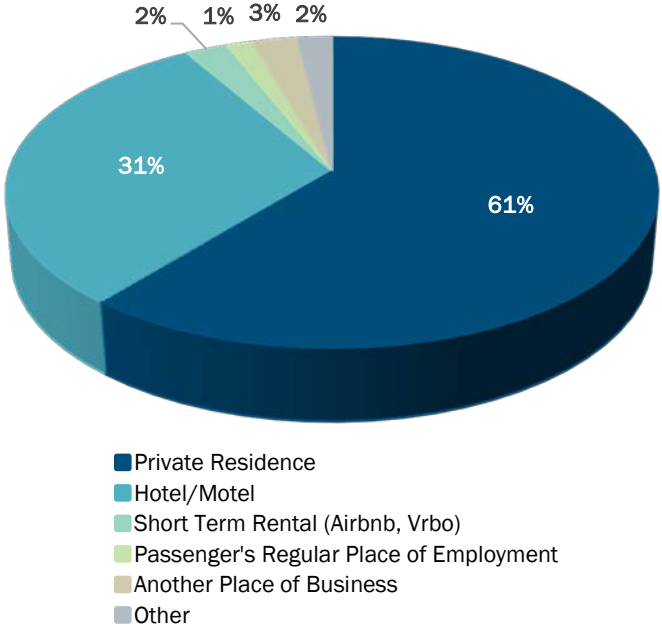


Figure 8. Passenger Trip Origin by Region - 2023

Source: 2023 Washington-Baltimore Regional Air Passenger Survey.
Note: The size of the bars may differ slightly due to rounding of decimal percentages.

The share of passengers starting their trip from a regular place of employment declined across all airports: BWI's share dropped from 4 percent to 1 percent, DCA's share decreased from 4 percent to 2 percent, and IAD's share decreased from 3 percent to 1 percent. A similar trend was observed for trips starting at another place of business where BWI's share fell from 4 percent to 1 percent, DCA's share decreased from 6 percent to 4 percent, and IAD's share remained steady at 2 percent.

**Passenger Trip Origin by Airport
2017, 2019, and 2023**

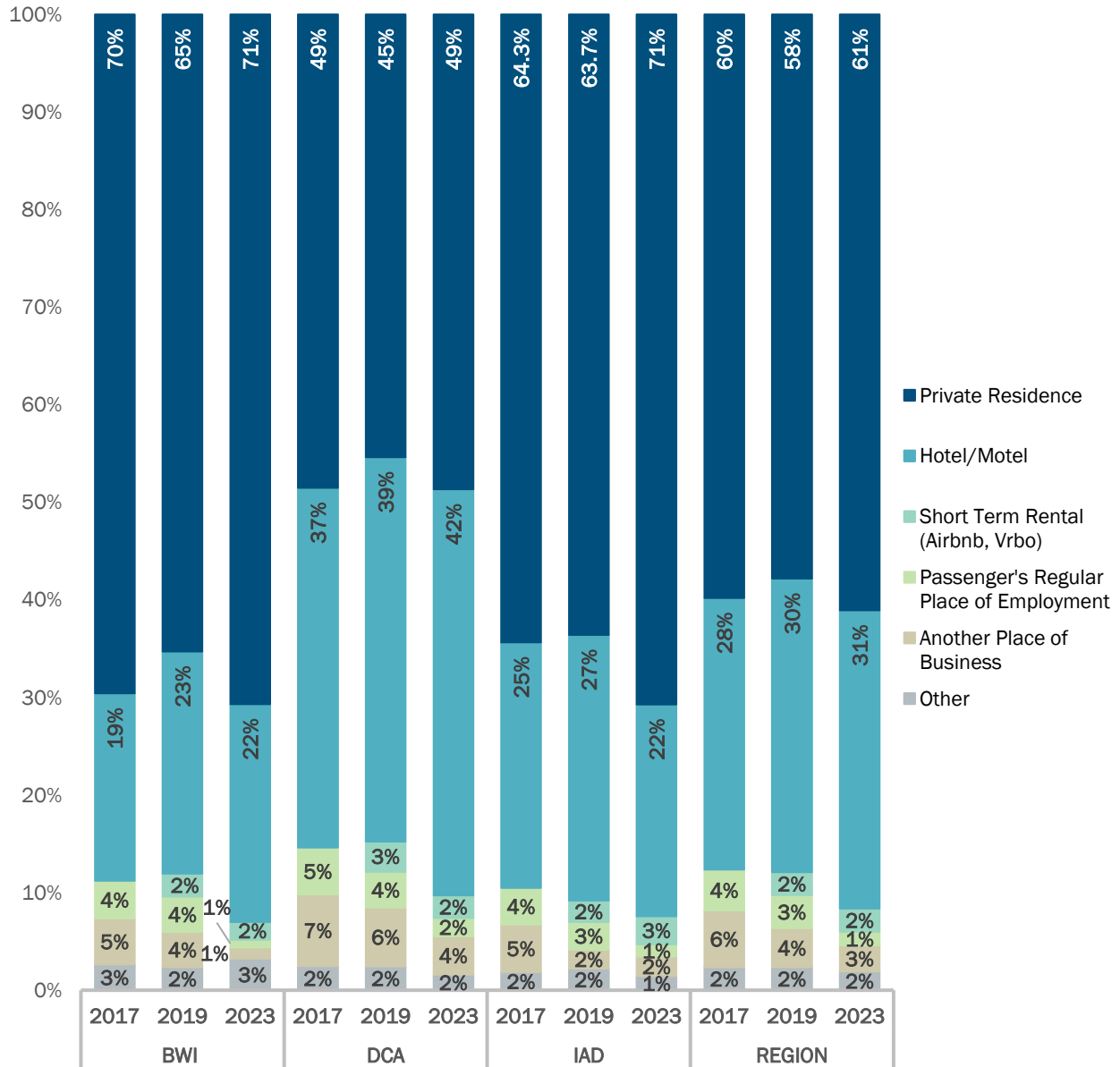


Figure 9. Passenger Trip Origin by Airport: 2017, 2019, and 2023

Source: 2017/2019/2023 Washington-Baltimore Regional Air Passenger Survey.

Note: The size of the bars may differ slightly due to rounding of decimal percentages.

Origins classified as "Other" and short-term rentals remained relatively unchanged at around 2 percent for each category. The option of short-term rentals was not included in the survey prior to 2019; hence, this category is missing in 2017. For more detailed tabulations, refer to Table 6.

Table 6. Passenger Trip Origin by Airport: 2017, 2019, and 2023 (000's)

Trip Origin		BWI			DCA			IAD			REGION		
		2017	2019	2023	2017	2019	2023	2017	2019	2023	2017	2019	2023
Private Residence	N	5,985	6,004	3,447	4,940	4,302	4,512	4,385	5,030	4,996	15,310	15,336	12,955
	%	70%	65%	71%	49%	45%	49%	64%	64%	71%	60%	58%	61%
Hotel/Motel	N	1,652	2,093	1,089	3,755	3,735	3,859	1,716	2,154	1,533	7,123	7,982	6,481
	%	19%	23%	22%	37%	39%	42%	25%	27%	22%	28%	30%	31%
Short Term Rental (Airbnb, Vrbo)	N	N/A	222	90	N/A	295	213	N/A	161	203	N/A	678	506
	%	N/A	2%	2%	N/A	3%	2%	N/A	2%	3%	N/A	2%	2%
Passenger's Regular Place of Employment	N	332	334	38	488	347	173	256	223	90	1,076	904	301
	%	4%	4%	1%	5%	4%	2%	4%	3%	1%	4%	3%	1%
Another Place of Business	N	404	330	56	747	570	365	332	155	140	1,483	1,055	561
	%	5%	4%	1%	7%	6%	4%	5%	2%	2%	6%	4%	3%
Other	N	228	218	158	252	233	148	126	174	103	606	625	409
	%	3%	2%	3%	2%	2%	2%	2%	2%	1%	2%	2%	2%
TOTAL	N	8,601	9,201	4,877	10,182	9,482	9,271	6,815	7,897	7,065	25,598	26,580	21,213
	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: 2017/2019/2023 Washington-Baltimore Regional Air Passenger Survey.
 Note: "N/A" indicates that this was not an option on the airport survey for that year.

Passenger Mode of Access

Figure 10 shows the distribution of mode of access chosen by passengers across the region comparing 2017, 2019, and 2023. In 2023, the primary mode of access to the airports in the region remained automobiles, including private cars, rental cars, taxicabs, and TNCs (Transportation Network Companies), accounting for 86 percent of all local originations. This marked an increase from 84 percent in 2019. Moreover, private cars accounted for the largest share of passenger mode of access in the region (45 percent in 2023). This was a rebound from 2017, when private car usage was at 47 percent, before dropping to 41 percent in 2019.

TNC mode share has increased since 2017, with a steep increase of 10 percent from 2017 to 2019, and a small increase of 2 percent from 2019 to 2023. The increase in TNC mode share is also reflected more broadly in the Washington/Baltimore region and its usage has increased in every survey conducted by COG/TPB since TNCs were introduced as a travel option. Conversely, taxi share decreased sharply since 2017 from 12 percent to 5 percent in 2023. Rental car share slightly decreased from 12 percent in 2017 to 10 percent in 2019, but remained steady at 10 percent in 2023. Transit mode share has remained steady at 8 percent since 2017. The remaining mode categories (e.g., hotel/motel courtesy bus, airport bus/van/limo, and other) have remained steady since 2017, altogether accounting for 7 percent in 2023. The following sections describe the distribution of mode of access by airport as shown in Figure 11.

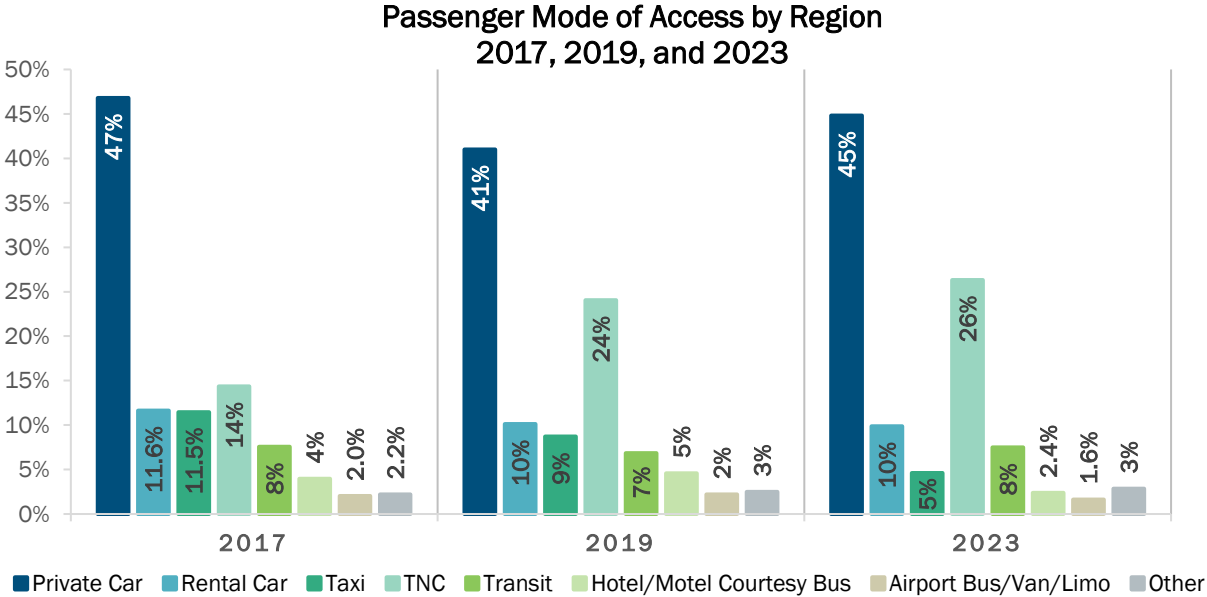


Figure 10. Passenger Mode of Access by Region: 2017, 2019, and 2023

Source: 2017/2019/2023 Washington-Baltimore Regional Air Passenger Survey.
 Note 1: Transit includes Metrorail, Light Rail (only for BWI), and Metrobus/MTA bus. "Other" includes Biked, walked, and other modes.
 Note 2: The size of the bars may differ slightly due to rounding of decimal percentages.

BWI

Table 7 shows that at BWI, private cars continued to be the most popular mode of access, followed by TNCs and rental cars, consistent with regional trends. The share of private cars increased from 57 percent in 2019 to 58 percent in 2023. The share of TNCs increased from 13 percent to 17 percent. Rental cars slightly decreased from 13 percent to 12 percent, taxis from 3 percent to 2 percent, and hotel/motel courtesy buses from 5 percent to 2 percent. Transit remained steady at 4 percent,

airport bus/van/limo increased slightly from 2 percent to 3 percent, and “other” remained steady at 3 percent.

DCA

Table 7 shows that at DCA, TNCs were the most popular mode of access in 2023, with a 37 percent share, up slightly from 36 percent in 2019, unlike the trends observed at other airports. This was followed by private cars at 30 percent, up from 23 percent, and transit at 12 percent, down from 13 percent. While the rental car share increased slightly from 8 percent to 9 percent, taxis fell dramatically from 12 percent to just 6 percent. The share of hotel/motel courtesy buses fell from 5 percent to 2 percent, airport bus/van/limo fell from 2 percent to 0.4 percent, and the share of passengers who chose “other” mode increased slightly from 2 percent to 3 percent.

IAD

Table 7 shows that at IAD, the trends were similar to the regional patterns: private cars were the most popular mode of access, followed by TNCs and rental cars. The share of private cars increased from 45 percent in 2019 to 49 percent in 2023, and TNCs increased from 22 percent to 24 percent. Rental cars slightly decreased from 10 percent to 9 percent, whereas taxis fell sharply from 12 percent to 6 percent. Notably, transit share increased from 3 percent in 2019 to 5 percent in 2023 with the opening of the Metrorail Silver Line to IAD, while transit use remained steady at BWI and decreased at DCA. For other modes, hotel/motel courtesy buses fell slightly from 4 percent to 3 percent, and both airport bus/van/limo and “other” remained steady at 2 percent.

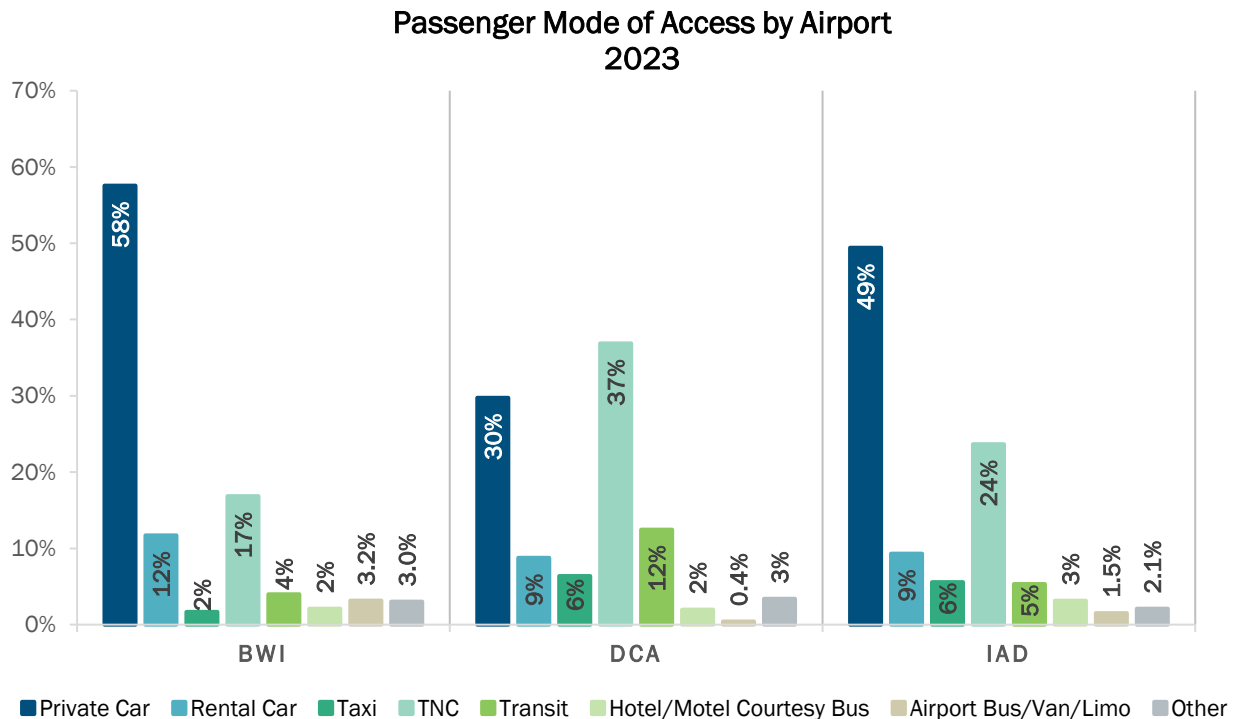


Figure 11. Passenger Mode of Access by Airport - 2023

Source: 2023 Washington-Baltimore Regional Air Passenger Survey.

Note 1: Transit includes Metrorail, Light Rail (only for BWI), and Metrobus/MTA bus. “Other” includes Biked, Walked, and other modes.

Note 2: The size of the bars may differ slightly due to rounding of decimal percentages.

Table 7. Passenger Mode of Access by Airport (000's): 2017, 2019, and 2023

Mode of Access		BWI			DCA			IAD			REGION		
		2017	2019	2023	2017	2019	2023	2017	2019	2023	2017	2019	2023
Private Car	N	5,299	5,670	5,571	2,889	2,418	3,292	3,420	3,607	4,667	11,608	11,695	13,529
	%	63%	57%	58%	29%	23%	30%	52%	45%	49%	47%	41%	45%
Rental Car	N	1,193	1,253	1,132	853	845	967	837	785	880	2,883	2,883	2,979
	%	14%	13%	12%	9%	8%	9%	13%	10%	9%	12%	10%	10%
Taxi	N	303	288	163	1,783	1,217	705	759	980	527	2,845	2,485	1,394
	%	4%	3%	2%	18%	12%	6%	11%	12%	6%	11%	9%	5%
TNC (Uber, Lyft, etc.)	N	633	1,273	1,631	2,057	3,802	4,079	871	1,780	2,236	3,561	6,855	7,946
	%	8%	13%	17%	21%	36%	37%	13%	22%	24%	14%	24%	26%
Metrorail	N	N/A	N/A	N/A	1,263	1,264	1,347	N/A	N/A	493	1,298	1,272	1,841
	%	N/A	N/A	N/A	13%	12%	12%	N/A	N/A	5%	5%	4%	6%
Commuter Rail and Amtrak	N	217	265	182	62	16	0	N/A	N/A	N/A	304	282	182
	%	3%	3%	2%	1%	0%	0%	N/A	N/A	N/A	1%	1%	1%
Light Rail (BWI)	N	53	34	18	N/A	N/A	N/A	N/A	N/A	N/A	53	34	18
	%	1%	0%	0%	N/A	N/A	N/A	N/A	N/A	N/A	0%	0%	0%
Airport Bus/Van/Limo	N	188	245	305	172	191	47	143	193	142	503	629	495
	%	2%	2%	3%	2%	2%	0%	2%	2%	2%	2%	2%	2%
Hotel/Motel Courtesy Bus	N	269	466	202	467	495	218	247	345	297	983	1,306	717
	%	3%	5%	2%	5%	5%	2%	4%	4%	3%	4%	5%	2%
Metrobus*	N	94	58	184	16	62	32	113	241	8	223	361	225
	%	1%	1%	2%	0%	1%	0%	2%	3%	0%	1%	1%	1%

Table 7. Passenger Mode of Access by Airport (000's): 2017, 2019, and 2023 (Continued)

Mode of Access		BWI			DCA			IAD			REGION		
		2017	2019	2023	2017	2019	2023	2017	2019	2023	2017	2019	2023
Walked	N	N/A	8	21	N/A	4	9	N/A	6	4	N/A	18	34
	%	N/A	0%	0%	N/A	0%	0%	N/A	0%	0%	N/A	0%	0%
Biked	N	N/A	0	1	N/A	3	43	N/A	0	0	N/A	3	44
	%	N/A	0%	0%	N/A	0%	0%	N/A	0%	0%	N/A	0%	0%
Other	N	151	324	271	243	224	322	215	154	193	609	702	785
	%	2%	3%	3%	2%	2%	3%	3%	2%	2%	2%	2%	3%
TOTAL	N	8,400	9,876	9,679	9,805	10,534	11,062	6,605	8,085	9,447	24,810	28,516	30,189
	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: 2017/2019/2023 Washington-Baltimore Regional Air Passenger Survey.
 Note 1: "N/A" indicates that this was not an option on the airport survey for that year.
 Note 2: * "Metrobus" includes: Metrobus, MTA Bus, RTA Bus, and Fairfax Connector.

RESIDENT STATUS AND MODE OF ACCESS

Figure 12 provides a regional comparison between resident and non-resident passengers by mode of access in 2019 and 2023. For residents, the distribution of the mode of access showed minor changes across different modes, with TNC experiencing the largest percentage change, increasing by 7 percent from 2019 to 2023. For non-residents, there was a more noticeable shift in their primary mode of access. In 2019, the private car was the primary mode of access at 29 percent but declined to 27 percent in 2023. The share of TNCs rose sharply from 18 percent to 28 percent in 2023.

When comparing the preferred modes of access for residents in 2019 and 2023, the most preferred modes are private cars. The majority of residents chose private car as the primary mode of access, which decreased slightly from 57 percent to 56 percent. The second preferred mode for residents is TNCs, which increased by 7 percent, from 22 percent to 29 percent during the same period. Transit increased slightly by 2 percent, while rental cars remained steady, accounting for 10 percent in both years. The remaining categories saw decreases: 3 percent for hotel/motel courtesy buses, 2 percent for taxis and other modes, and 1.5 percent for airport vans/limousines.

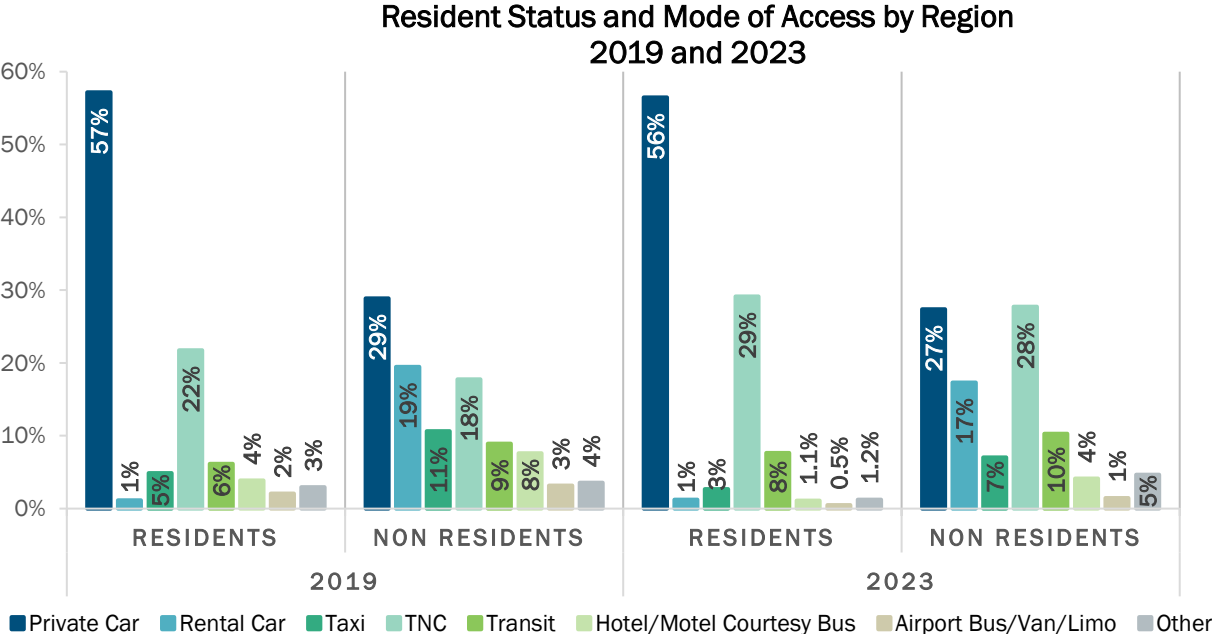


Figure 12. Resident Status and Mode of Access by Region: 2019 and 2023

Source: 2019/2023 Washington-Baltimore Regional Air Passenger Survey.
 Note 1: Transit includes Metrorail, Light Rail (only for BWI), and Metrobus/MTA bus. "Other" includes Biked, Walked, and other modes.
 Note 2: The size of the bars may differ slightly due to rounding of decimal percentages.

In 2023, TNCs comprised 28 percent of the mode share for non-residents, an increase from 18 percent in 2019. Following TNCs are private cars, which comprised 27 percent in 2023, a slight decrease from 29 percent in 2019. The share of non-residents using taxi declined from 11 percent in 2019 to 7 percent in 2023, which may be partially explained by the increase in TNC use. Rental car slightly declined from 19 to 17 percent, while transit use slightly increased from 9 to 10 percent.

Comparing residents and non-residents, non-residents were more likely to use TNCs and rental cars for the mode of access to the airports. Rental car usage was very low for residents (only 1 percent in both 2019 and 2023). Additionally, private car usage was considerably lower for non-residents compared with residents for both years. More detailed tabulations on resident status and mode of access by region are provided in Table 8.

Table 8. Resident Status and Mode of Access by Region: 2017, 2019, and 2023 (000's)

Mode of Access		Residents			Non-Residents			TOTAL		
		2017	2019	2023	2017	2019	2023	2017	2019	2023
Private Car	N	5,143	4,834	5,124	4,036	2,992	3,293	9,179	7,826	8,417
	%	65%	57%	56%	36%	29%	27%	48%	40%	40%
Rental Car	N	83	97	111	2,183	2,017	2,086	2,266	2,114	2,196
	%	1%	1%	1%	20%	19%	17%	12%	11%	10%
Taxi	N	605	411	245	1,384	1,103	846	1,989	1,514	1,091
	%	8%	5%	3%	12%	11%	7%	10%	8%	5%
TNC (Uber Lyft, etc.)	N	1,270	1,839	2,645	1,270	1,839	3,335	2,852	4,662	5,980
	%	16%	22%	29%	11%	18%	28%	15%	24%	28%
Metrorail	N	349	320	648	735	608	1,050	1,084	928	1,697
	%	4%	4%	7%	7%	6%	9%	6%	5%	8%
Commuter Rail and Amtrak	N	96	73	23	129	140	43	225	213	66
	%	1%	1%	0%	1%	1%	0%	1%	1%	0%
Light Rail (BWI)	N	12	8	3	12	8	4	46	23	7
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Airport Bus/Van/Limo	N	135	175	44	240	328	175	375	503	219
	%	2%	2%	0.5%	2%	3%	1%	2%	3%	1%
Hotel/Motel Courtesy Bus	N	50	327	101	724	788	498	774	1,115	598
	%	1%	4%	1%	7%	8%	4%	4%	6%	3%
Metrobus*	N	60	121	19	83	169	143	143	290	162
	%	1%	1%	0%	1%	2%	1%	1%	1%	1%
Walked	N	N/A	2	5	N/A	2	25	N/A	4	30
	%	N/A	0%	0%	N/A	0%	0%	N/A	0%	0%
Biked	N	N/A	0	37	N/A	0	6	N/A	0	43
	%	N/A	0%	0%	N/A	0%	0%	N/A	0%	0%
Other	N	94	251	113	290	367	559	384	618	672
	%	1%	3%	1%	3%	4%	5%	2%	3%	3%
TOTAL	N	7,897	8,456	9,076	11,086	10,359	12,031	19,317	19,806	21,106
	%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: 2017/2019/2023 Washington-Baltimore Regional Air Passenger Survey

Note 1: "N/A" indicates that this was not an option on the airport survey for that year.

Note 2: * "Metrobus" includes: Metrobus, MTA Bus, RTA Bus, and Fairfax Connector.

PASSENGER MODE OF ACCESS BY TRIP ORIGIN

Figure 13 shows passenger mode of access by trip origin between “home” (home, someone else’s home) and “non-home” (hotel/motel, short term rental, regular place of employment, other place of business) locations. For passengers originating from home, private car remained the most popular mode of access to the airport in both 2019 and 2023, although the share decreased from 62 percent to 55 percent. Meanwhile, the use of TNCs increased from 20 percent to 28 percent. Rental car remained steady at 5 percent, unchanged from 2019. Taxi usage declined sharply from 5 percent to 2 percent, aligning with the overall downward trend in taxi usage in the region. Metrorail usage among air passengers increased from 3 percent to 5 percent in 2023.

For passengers originating from places other than home, the share of private car usage was only 11 percent in 2023, unchanged from 2019. However, the share of rental car for non-home originations was significantly higher at 17 percent in 2023 compared to just 4.5 percent for home-based trips. This is a slight decrease from 18 percent in 2019. Taxi usage decreased from 14 percent to 9 percent, while TNC usage increased from 29 percent to 37 percent. Metrorail usage was also higher compared to originations from home at 11 percent, up from 6 percent in 2019. For more details, refer to Table 9.

**Passenger Mode of Access by Home/Non-Home Trip Origin by Region
2019 - 2023**

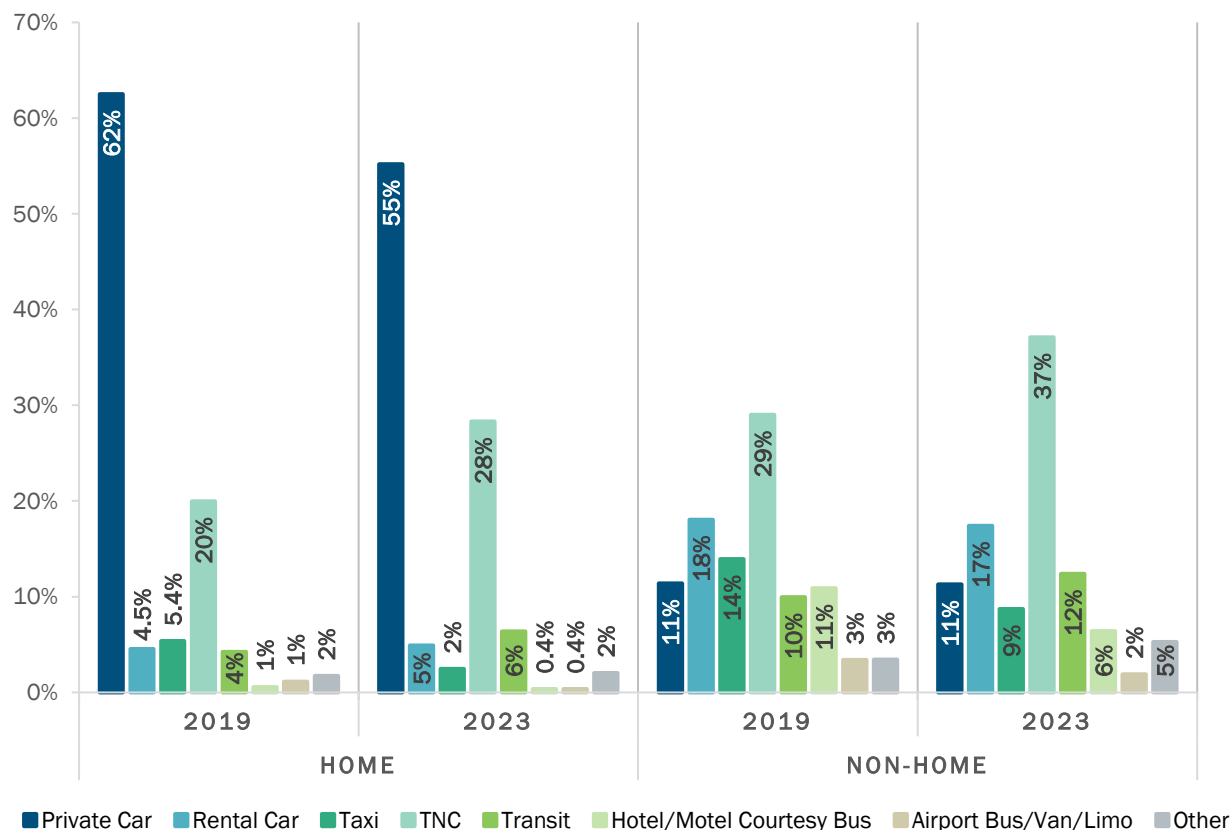


Figure 13. Passenger Mode of Access by Home/Non-Home Trip Origin by Region: 2019 - 2023

Source: 2019/2023 Washington-Baltimore Regional Air Passenger Survey.

Note 1: Transit includes Metrorail, Light Rail (only for BWI), and Metrobus/MTA bus. “Other” includes Biked, Walked, and other modes.

Note 2: The size of the bars may differ slightly due to rounding of decimal percentages.

Table 9. Passenger Mode of Access by Home/Non-Home Trip Origin by Region: 2019 – 2023 (000's)

Mode of Access		Home		Non-Home		TOTAL	
		2019	2023	2019	2023	2019	2023
Private car	N	9,381	7,548	1,173	959	10,554	8,508
	%	62%	55%	11%	11%	42%	38%
Rental car	N	683	673	1,861	1,549	2,554	2,222
	%	5%	5%	18%	17%	10%	10%
Taxi	N	804	335	1,435	776	2,239	1,110
	%	5%	2%	14%	9%	9%	5%
TNC (Uber, Lyft, etc.)	N	2,997	3,870	2,990	3,301	5,987	7,171
	%	20%	28%	29%	37%	24%	32%
Metrorail	N	424	701	646	1,004	1,070	1,706
	%	3%	5%	6%	11%	4%	8%
Commuter Rail and Amtrak	N	75	49	170	17	245	66
	%	0%	0	2%	0%	0%	0%
Light Rail (BWI)	N	11	4	14	4	25	7
	%	0%	0%	0%	0%	0%	0%
Airport Bus/Van/Limo	N	169	50	349	169	518	219
	%	1%	0%	3%	2%	2%	1%
Hotel/Motel Courtesy Bus	N	84	51	1,121	570	1,205	621
	%	1%	0%	11%	6%	5%	3%
Metrobus*	N	125	116	196	78	321	194
	%	1%	1%	2%	1%	1%	1%
Walked	N	0	4	15	26	15	30
	%	0%	0%	0%	0%	0%	0%
Biked	N	0	37	0	6	0	43
	%	0%	0%	0%	0%	0%	0%
Other	N	258	236	339	437	597	673
	%	2%	2%	3%	5%	2%	3%
TOTAL	N	15,011	13,674	10,309	8,896	25,320	22,569
	%	100%	100%	100%	100%	100%	100%

Source: 2019/2023 Washington-Baltimore Regional Air Passenger Survey
 Note: * "Metrobus" includes: Metrobus, MTA Bus, RTA Bus, and Fairfax Connector

TRIP PURPOSE AND PASSENGER MODE OF ACCESS

As shown in Figure 14 and Table 10, for business travel, the largest share of passengers traveled to the airport by TNC, which increased significantly since 2019 from 31 percent to 42 percent. The share of passengers taking private car increased slightly from 28 to 29 percent. The share of trips by Metrorail increased from 4 percent to 5 percent. However, the share of trips by rental car fell from 13 percent to 9 percent, and taxi declined from 12 percent to 8 percent.

As shown in Figure 14 and Table 10, for non-business travel, the largest share of passengers traveled to the airport by private car, which decreased since 2019 from 49 to 43 percent. The share of trips by TNC increased from 19 to 24 percent. The share of trips by Metrorail increased from 4 percent to 9 percent. The share of trips by rental car increased from 9 percent to 11 percent, and taxi fell from 7 percent to 4 percent.

**Passenger Mode of Access by Business/Non-Business by Region
2019 - 2023**

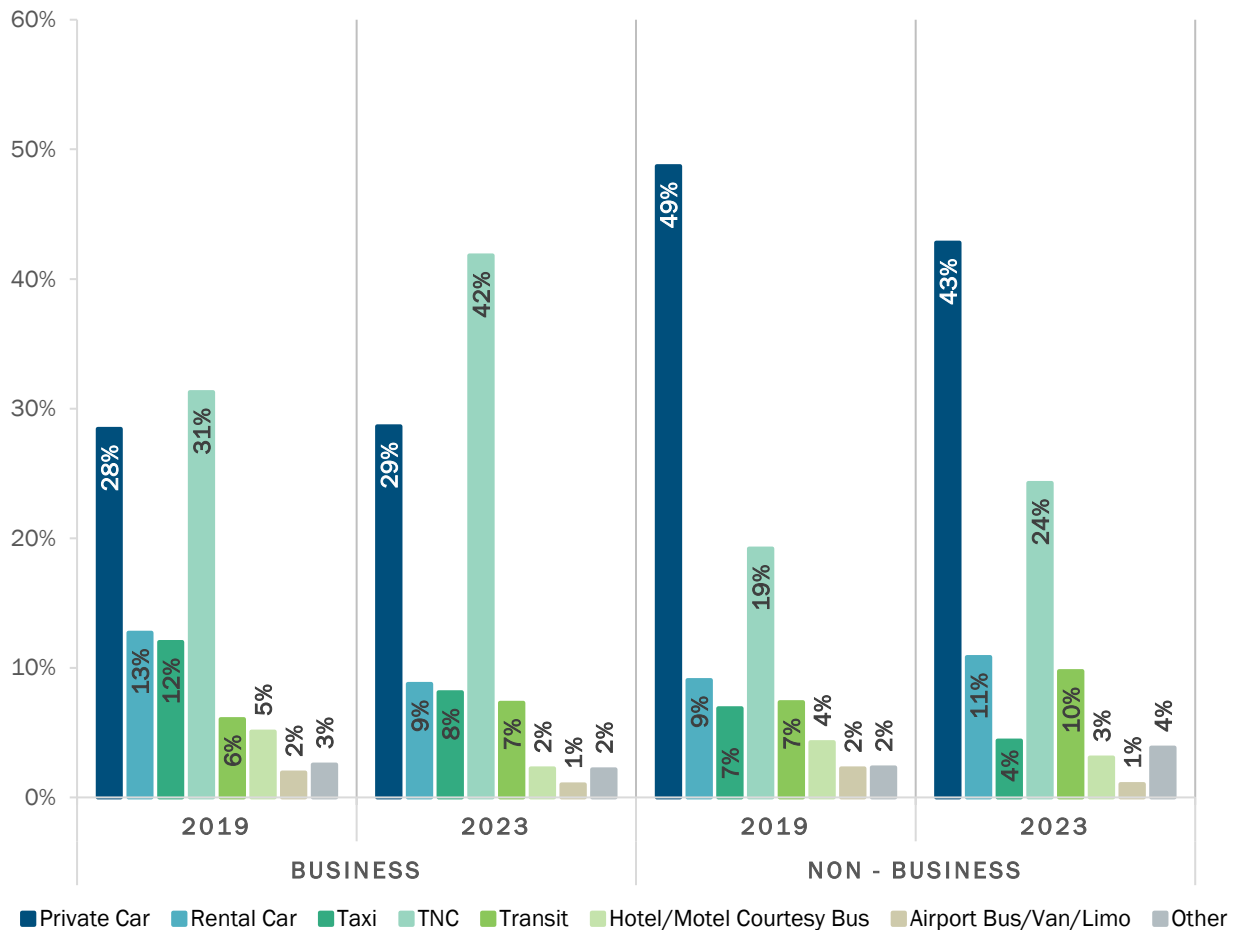


Figure 14. Passenger Mode of Access by Business/Non-Business by Region: 2019 - 2023

Source: 2019/2023 Washington-Baltimore Regional Air Passenger Survey.

Note 1: Transit includes Metrorail, Light Rail (only for BWI), and Metrobus/MTA bus. "Other" includes Biked, Walked, and other modes.

Note 2: The size of the bars may differ slightly due to rounding of decimal percentages.

Table 10. Passenger Mode of Access by Business/Non-Business Travel by Region (000's)

Mode of Access		Business		Non - Business		TOTAL	
		2019	2023	2019	2023	2019	2023
Private Car	N	2,457	1,315	7,741	7,193	10,198	8,508
	%	28%	29%	49%	43%	42%	40%
Rental Car	N	1,099	401	1,440	1,821	2,539	2,222
	%	13%	9%	9%	11%	10%	10%
Taxi	N	1,036	372	1,092	738	2,128	1,110
	%	12%	8%	7%	4%	9%	5%
TNC (Uber, Lyft, etc.)	N	2,703	1,919	3,050	4,078	5,753	5,997
	%	31%	42%	19%	24%	23%	28%
Metrorail	N	366	243	671	1,463	1,037	1,706
	%	4%	5%	4%	9%	4%	8%
Commuter Rail and Amtrak	N	62	3	198	63	260	66
	%	1%	0%	1%	0%	1%	0%
Light Rail (BWI)	N	14	4	11	4	25	7
	%	0%	0%	0%	0%	0%	0%
Airport bus/Van/Limo	N	166	46	357	173	523	219
	%	2%	1%	2%	1%	2%	1%
Hotel/Motel Courtesy Bus	N	440	102	678	519	1,128	621
	%	5%	2%	4%	3%	5%	3%
Metrobus*	N	81	87	287	107	368	194
	%	1%	2%	2%	1%	1%	1%
Walked	N	4	1	11	29	15	30
	%	0%	0%	0%	0%	0%	0%
Biked	N	0	6	0	37	0	43
	%	0%	0%	0%	0%	0%	0%
Other	N	216	93	357	580	573	673
	%	2%	2%	2%	3%	2%	3%
TOTAL	N	8,644	4,590	15,893	16,805	24,537	21,395
	%	100%	100%	100%	100%	100%	100%

Source: 2019/2023 Washington-Baltimore Regional Air Passenger Survey.

Note: * "Metrobus" includes: Metrobus, MTA Bus, RTA Bus, and Fairfax Connector.

Carpooling

In this survey, "carpooling" included shared rides in private cars, rented cars, taxis, or TNC services. It excluded airport vans and other large vehicles.

Table 11 and Figure 15 show the breakdown of passengers who carpooled to the airport by each airport and for the entire region. In the region in 2023, one-third of passengers carpooled to the airport, which remained unchanged from 2019. The 1 to 2 ratio of carpool vs. non-carpool trips is similar for each airport. Specifically at BWI, 34 percent carpooled to the airport in 2023, a slight increase from 33 percent. The share of carpools at DCA decreased from 36 percent to 32 percent, while IAD increased from 32 percent to 35 percent.

Table 11. Carpooling by Airport for 2019 and 2023 (000's)

Carpool		BWI		DCA		IAD		REGION	
		2019	2023	2019	2023	2019	2023	2019	2023
Yes	N	1,814	1,468	2,192	2,347	1,681	2,144	5,687	5,959
	%	33%	34%	36%	32%	32%	35%	33%	33%
No	N	3,723	2,794	3,981	5,033	3,588	4,037	11,292	11,864
	%	67%	66%	64%	68%	68%	65%	67%	67%
TOTAL	N	5,537	4,263	6,173	7,379	5,269	6,181	16,979	17,823
	%	100%	100%	100%	100%	100%	100%	100%	100%

Source: 2019/2023 Washington-Baltimore Regional Air Passenger Survey

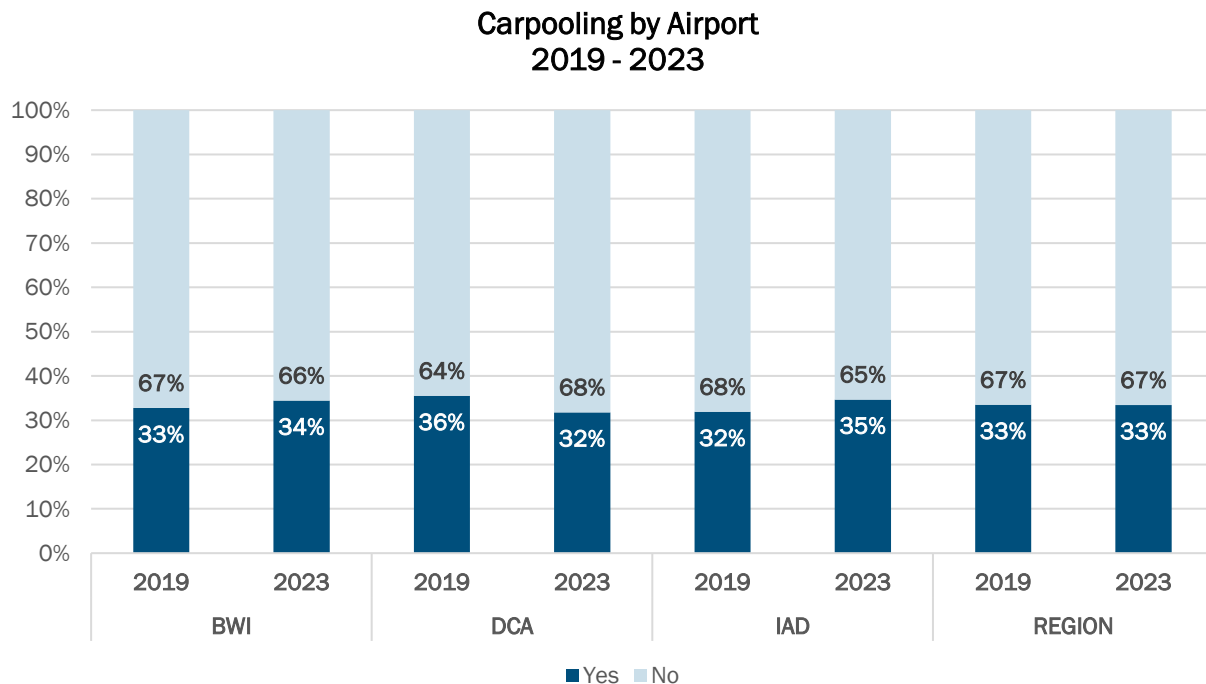


Figure 15. Carpooling by Airport: 2019 - 2023

Source: 2019/2023 Washington-Baltimore Regional Air Passenger Survey.
 Note: The size of the bars may differ slightly due to rounding of decimal percentages.

Passenger Drop-Off and Parking Facility Used

Table 12 shows the breakdown of passengers who were dropped off at the airport by each airport and for the entire region. In the region, two-thirds of air passengers were dropped off at the airport curbside in 2023. The largest share of drop-offs was at DCA (77 percent), followed by IAD (66 percent), and BWI (58 percent).

Table 12. Passenger Drop-Off by Airport in 2023 (000's)

Drop-off		BWI	DCA	IAD	REGION
Yes	N	1,606	1,776	2,176	5,558
	%	58%	77%	66%	66%
No	N	1,174	529	1,098	2,801
	%	42%	23%	34%	34%
Total	N	2,779	2,305	3,274	8,359
	%	100%	100%	100%	100%

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

Table 13 shows the distribution of parking facilities used by air passengers in 2023 by airport. For all airports, the largest share of passengers did not park at the airport, which was highest at DCA (73 percent), followed by IAD (64 percent), and BWI (44 percent). For BWI, 21 percent of passengers used long term/economy parking, 16 percent used daily parking, and 7 percent used short term/hourly parking. For DCA, 11 percent of passengers used short term/hourly parking, 9 percent used daily parking, and 6 percent used long term/economy parking. For IAD, 14 percent used daily parking, 13 percent used long term/economy parking, and 8 percent used short term/hourly parking. In sum, a smaller share of travelers at DCA used parking facilities compared with the other two airports, and among those who parked, they tended to be shorter term parking than BWI or IAD. Conversely, BWI had a larger share of passengers who parked longer term and off-airport compared with the other two airports.

Table 13. Parking Facility Used by Air Passengers in 2023 (000's)

Parking Facility Used		BWI	DCA	IAD
Not Parked	N	1,191	1,690	2,072
	%	44%	73%	64%
Short Term/Hourly Parking *	N	178	246	255
	%	7%	11%	8%
Daily Parking **	N	431	211	444
	%	16%	9%	14%
Long Term/Economy Parking ***	N	565	129	409
	%	21%	6%	13%
Express Parking Lot (BWI)	N	98	N/A	N/A
	%	4%	N/A	N/A
BWI Rail Station Garage	N	10	N/A	N/A
	%	0%	N/A	N/A
Valet Parking	N	3	7	10
	%	0%	0%	0%
Off Airport Private Parking	N	251	29	72
	%	9%	1%	2%
TOTAL	N	2,725	2,312	3,262
	%	100%	100%	100%

Source: 2023
Washington-Baltimore
Regional Air Passenger
Survey

"N/A" indicates that this was not an option for this airport.

* Short Term/Hourly Parking includes Hourly Parking Lot at BWI and Short Term Hourly Parking at DCA and IAD.

** Daily Parking includes Daily Parking Garage at BWI and Long Term/Daily Parking at DCA and IAD.

*** Long Term/Economy Parking includes Long Term A or B Parking Garage at BWI and Long Term / Economy Parking at DCA and IAD.

FINDINGS - PREFERENCES AND BEHAVIOR

This section focuses on survey questions that provide insights on air passenger preferences and behavior, including airport selection, reasons for selecting mode of transportation, and airport spending (differences between residents and non-resident passengers). It also includes new survey questions asking about pre- and post-pandemic travel behavior, check-in and security procedures, boarding pass options, and baggage check.

Airport Preference and Reason for Choosing Airport

These findings are based on two questions from the survey that asked passengers to list the three most important reasons for selecting their airport, and to rank the region’s airports in order of preferences.

The two questions are listed below, followed by an analysis of the findings, starting with the regional findings and then findings for each airport.

Q-C1. Rank the three most important reasons for choosing [BWI/DCA/IAD] Airport for your flight today. Please drag your top 3 choices into the empty box to indicate your answers.

- 1. Closest airport
- 2. Easy road access
- 3. Easy access by Metrorail or public transit
- 4. Convenient van/limo or shuttle bus service
- 5. Good parking facilities
- 6. More convenient flight times
- 7. Less expensive airfare
- 8. Only airport with non-stop flights
- 9. Only airport that serves my destination
- 10. Frequent flyer/airline loyalty program
- 11. Other

Q-C2. Rank the region’s airports in your order of preference. Please drag your top 3 choices into the empty box to indicate your answers.

- 1. Washington Dulles International (IAD)
 - 2. Reagan Washington National (DCA)
 - 3. Baltimore/Washington International Marshall (BWI)
-

Airport Preference

REGIONAL FINDINGS

When analyzing regional airport preferences, 81 percent of passengers departed from their preferred airport, as shown in Table 14. This represents a 2 percent increase compared to 2019. This suggests that for most passengers, the airport they departed from met most of their travel needs.

Table 14. Airport Preference by Region

Year	1st Choice	2nd Choice	3rd Choice
2019	79%	16%	4%
2023	81%	15%	4%

Source: 2019/2023 Washington-Baltimore Regional Air Passenger Survey

The 2023 survey asked air passengers to rank the three most important reasons for selecting their airport. As shown in Figure 16, the top three reasons include: closest airport (46 percent), more convenient flight times (13 percent), and less expensive airfare (11 percent). In the next section, the airport preferences for each airport will be examined in more detail which provides insights on the key reasons for why passengers chose to fly out of their particular airport.

Airport Choice Reason by Region

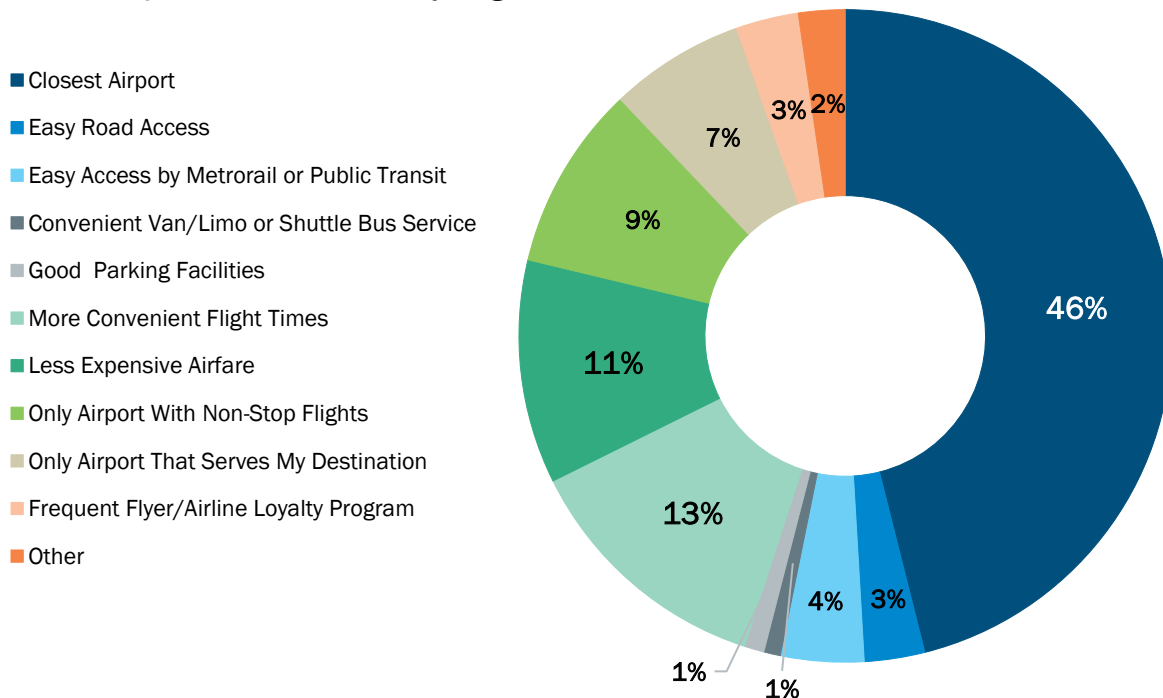


Figure 16. Airport Choice Reason by Region

Source: 2023 Washington-Baltimore Regional Air Passenger Survey.

Note: The size of the pie chart segments may differ slightly due to rounding of decimal percentages.

BALTIMORE/WASHINGTON INTERNATIONAL THURGOOD MARSHALL AIRPORT (BWI)

When reviewing the airport preferences of BWI passengers in Table 15, 82 percent chose BWI as their preferred airport in 2023, a slight increase from 81 percent in 2019. Additionally, 12 percent of passengers selected BWI as their second choice in 2023, a slight decrease from 13 percent in 2019. The percentage of passengers who chose BWI as their third choice remained consistent at 6 percent for both years.

Table 15. Airport Preference - BWI

Year	1st Choice	2nd Choice	3rd Choice
2019	81%	13%	6%
2023	82%	12%	6%

Source: 2019/2023 Washington-Baltimore Regional Air Passenger Survey

As shown in Figure 17, the largest share of BWI passengers indicated closest airport as the reason for choosing BWI, accounting for 48 percent. The second largest share indicated less expensive airfare, accounting for 15 percent.

Airport Choice Reason - BWI

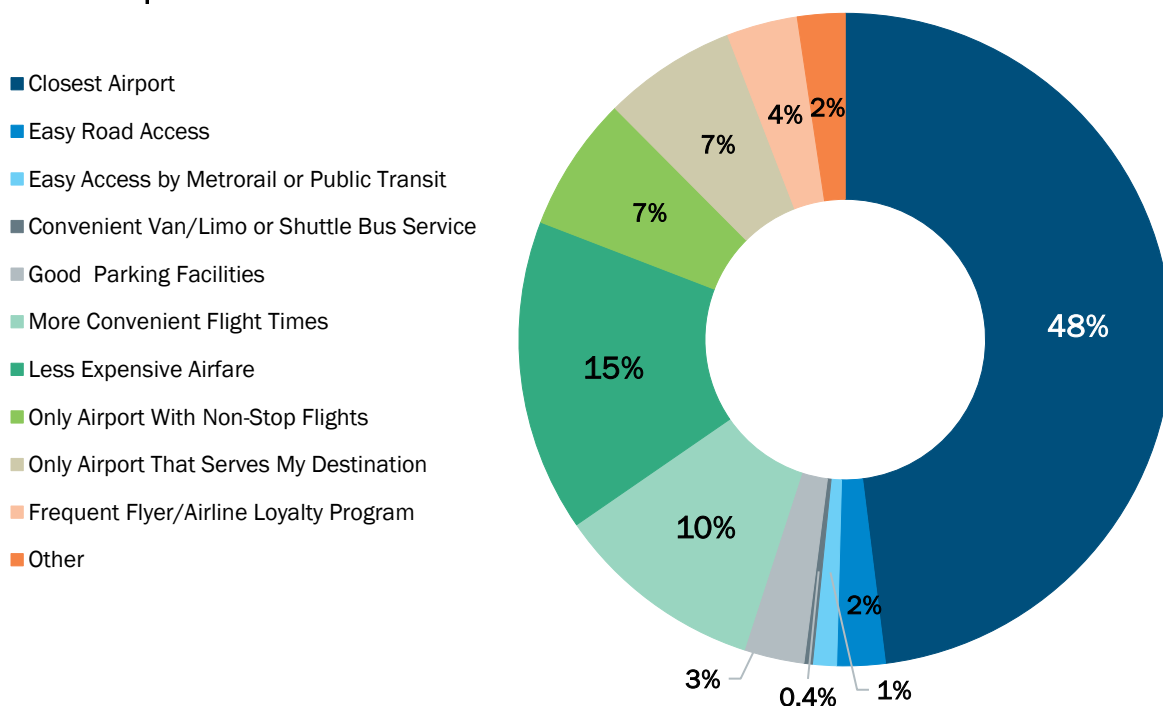


Figure 17. Airport Choice Reason - BWI

Source: 2023 Washington-Baltimore Regional Air Passenger Survey.

Note: The size of the pie chart segments may differ slightly due to rounding of decimal percentages.

The top five reasons collectively comprise 87 percent of the responses, which included closest airport (48 percent), less expensive airfare (15 percent), more convenient flight times (10 percent), only airport with non-stop flights (7 percent), and only airport that serves my destination (7 percent). A larger share of BWI passengers cited less expensive airfare as the reason for choosing BWI compared with DCA and IAD, which suggests that BWI may be attractive to passengers who prefer to

fly with low-cost and budget airlines. Additionally, BWI had a higher share of passengers with household incomes less than \$100,000 compared with other airports which further underscores BWI's role as a regional hub for low-cost airlines.

Furthermore, BWI passengers indicated several other factors: only airport that serves their destination (7 percent), easy road access (4 percent), and good parking facilities (2 percent). This suggests that BWI attracts a diverse range of passengers with varying needs, from accessibility to cost and convenience.

RONALD REAGAN WASHINGTON NATIONAL AIRPORT (DCA)

When examining the preferences of DCA passengers in Table 16, 87 percent chose it as their first choice, an increase from 2019. Additionally, only 2 percent of passengers selected DCA as their third option, which is the lowest percentage among the three airports.

Table 16. Airport Preference - DCA

Year	1st Choice	2nd Choice	3rd Choice
2019	85%	13%	2%
2023	87%	10%	2%

Source: 2019/2023 Washington-Baltimore Regional Air Passenger Survey

As shown in Figure 18, the primary reason why passengers chose DCA airport is its proximity (i.e., closest airport), accounting for 53 percent of passengers. Given that DCA is the closest airport to Washington, DC and serves a higher share of business travelers, this finding suggests that the proximity of DCA to downtown DC may play a key role in influencing passengers' decisions to use this airport.

Airport Choice Reason - DCA

- Closest Airport
- Easy Road Access
- Easy Access by Metrorail or Public Transit
- Convenient Van/Limo or Shuttle Bus Service
- Good Parking Facilities
- More Convenient Flight Times
- Less Expensive Airfare
- Only Airport With Non-Stop Flights
- Only Airport That Serves My Destination
- Frequent Flyer/Airline Loyalty Program
- Other

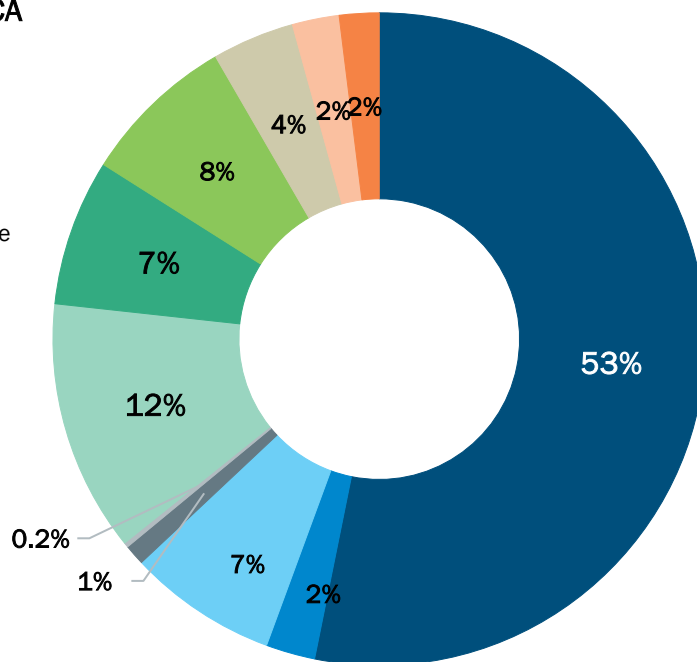


Figure 18. Airport Choice Reason - DCA

Source: 2023 Washington-Baltimore Regional Air Passenger Survey.

Note: The size of the pie chart segments may differ slightly due to rounding of decimal percentages.

Following closest airport, the second most common reason passengers chose DCA is the availability of more convenient flight times, accounting for 12 percent. This share was slightly lower than both BWI (15 percent) and IAD (15 percent). Other notable factors included only airport with non-stop flights (8 percent), less expensive airfare (7 percent), and only airport serving my destination (7 percent). The share of passengers who indicated less expensive airfare as the reason to fly out of DCA was lower than the other two airports, suggesting that DCA passengers may be willing to pay more in airfare to fly into a closer airport.

Notably, only 0.2 percent of passengers chose DCA for its good parking facilities, suggesting that . public transit access to the airport such as Metrorail may reduce the need for extensive parking options. Given that a larger share of DCA passengers take TNCs and public transit compared with the other airports, it suggests that DCA passengers may find driving to be a less attractive option for reaching the airport.

Collectively, these five categories—proximity, convenient flight times, non-stop flights, less expensive fares, and only airport that serves my destination—comprised 87 percent of the total share, indicating that most passengers are influenced by these key factors when selecting DCA as their airport.

WASHINGTON DULLES INTERNATIONAL AIRPORT (IAD)

When reviewing the airport preferences of IAD passengers in Table 17, 72 percent chose IAD as their preferred airport, a slight increase from 2019. The share of passengers who chose IAD as their first choice is notably lower compared to BWI and DCA (10 percent lower than BWI and 15 percent lower than DCA) in 2023. Additionally, IAD had the highest percentage of passengers who selected it as their second choice when compared to the other two airports.

Table 17. Airport Preference - IAD

Year	1st Choice	2nd Choice	3rd Choice
2019	71%	24%	5%
2023	72%	23%	5%

Source: 2019/2023 Washington-Baltimore Regional Air Passenger Survey

Among reasons why passengers chose IAD, there is a more even distribution across categories as shown in Figure 19. Although the largest share of passengers indicated closest airport, accounting for 35 percent, this is 18 percent lower than DCA and 13 percent lower than BWI.

Other than closest airport, IAD passengers indicated other reasons including more convenient flight times (15 percent), less expensive airfares (13 percent), the availability of non-stop flights (13 percent), and being the only airport serving their destination (10 percent). This suggests a broader range of passenger preferences at IAD compared to the other two airports.

The more evenly distributed reasons for choosing IAD may also be attributed to its extensive offering of international destinations. IAD's unique position as a major international hub likely attracts a variety of travelers with different priorities, such as cost efficiency, direct routes, and flight schedules. Additionally, IAD's role as an international gateway not only caters to local passengers but also to international travelers who prioritize direct international flights.

Airport Choice Reason - IAD

- Closest Airport
- Easy Road Access
- Easy Access by Metrorail or Public Transit
- Convenient Van/Limo or Shuttle Bus Service
- Good Parking Facilities
- More Convenient Flight Times
- Less Expensive Airfare
- Only Airport With Non-Stop Flights
- Only Airport That Serves My Destination
- Frequent Flyer/Airline Loyalty Program
- Other

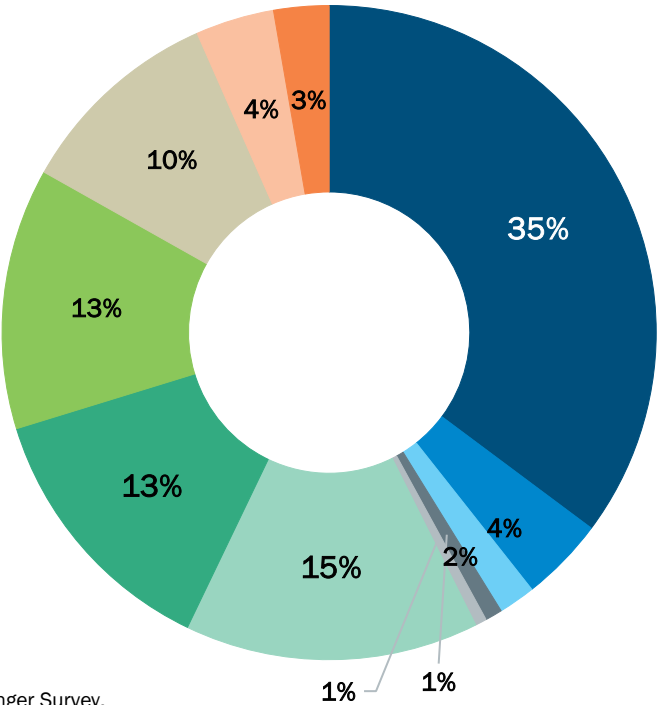


Figure 19. Airport Choice Reason - IAD
 Source: 2023 Washington-Baltimore Regional Air Passenger Survey.
 Note: The size of the pie chart segments may differ slightly due to rounding of decimal percentages.

Reason for Choosing Mode of Ground Transportation

Air passengers were asked to indicate their main reason for choosing their mode of ground transportation to the airport. They were required to choose only one option.

As shown in Table 18 and Figure 20, the primary reason passengers chose their mode of access in the region was convenience, which accounted for 58 percent, up from 53 percent in 2019. This was followed by cost at 12 percent (down from 14 percent) and reliability at 12 percent (up from 11 percent). Other reasons cited among passengers in the region included travel time at 6 percent, “other” at 5 percent, and comfort at 4 percent, compared to 5 percent, 14 percent, and 4 percent, respectively in 2019.

This trend is similarly observed for each airport in the region (see Figure 20). At BWI, convenience was the top reason at 55 percent (up from 54 percent in 2019), followed by reliability at 19 percent, which increased significantly from 10 percent, and cost at 13 percent (down from 15 percent).

At DCA, convenience was the top reason at 60 percent, up from 55 percent in 2019. Cost was the second highest reason at 14 percent (up from 12 percent), followed by reliability at 10 percent (unchanged from 2019).

At IAD, convenience was also the top reason with 58 percent in 2023, up from 49 percent in 2019. This was followed by cost at 15 percent and reliability at 12 percent (both unchanged from 2019).

Table 18. Reason for Choosing Mode of Ground Transportation by Airport: 2019 and 2023

Reason for Choosing Mode of Ground Transportation		BWI		DCA		IAD		REGION	
		2019	2023	2019	2023	2019	2023	2019	2023
Cost	N	1,279	613	1,121	1,308	1,105	1,068	3,505	2,989
	%	15%	13%	12%	14%	15%	15%	14%	12%
Reliability	N	889	933	915	902	911	817	2,715	2,652
	%	10%	19%	10%	10%	12%	12%	11%	12%
Travel Time	N	345	235	548	627	381	343	1,274	1,205
	%	4%	5%	6%	7%	5%	5%	5%	6%
Convenience	N	4,676	2,673	5,083	5,583	3,693	4,141	13,452	12,397
	%	54%	55%	55%	60%	49%	58%	53%	58%
Comfort	N	294	155	240	318	383	398	917	872
	%	3%	3%	3%	3%	5%	6%	4%	4%
Other	N	1,237	285	1,367	551	1,033	322	3,637	1,158
	%	14%	6%	15%	6%	14%	5%	14%	5%
TOTAL	N	8,720	4,895	9,274	9,290	7,506	7,089	25,500	21,274
	%	100%	100%	100%	100%	100%	100%	100%	100%

Source: 2019/2023 Washington-Baltimore Regional Air Passenger Survey

Reason for Choosing Mode of Ground Transportation by Airport 2019 - 2023

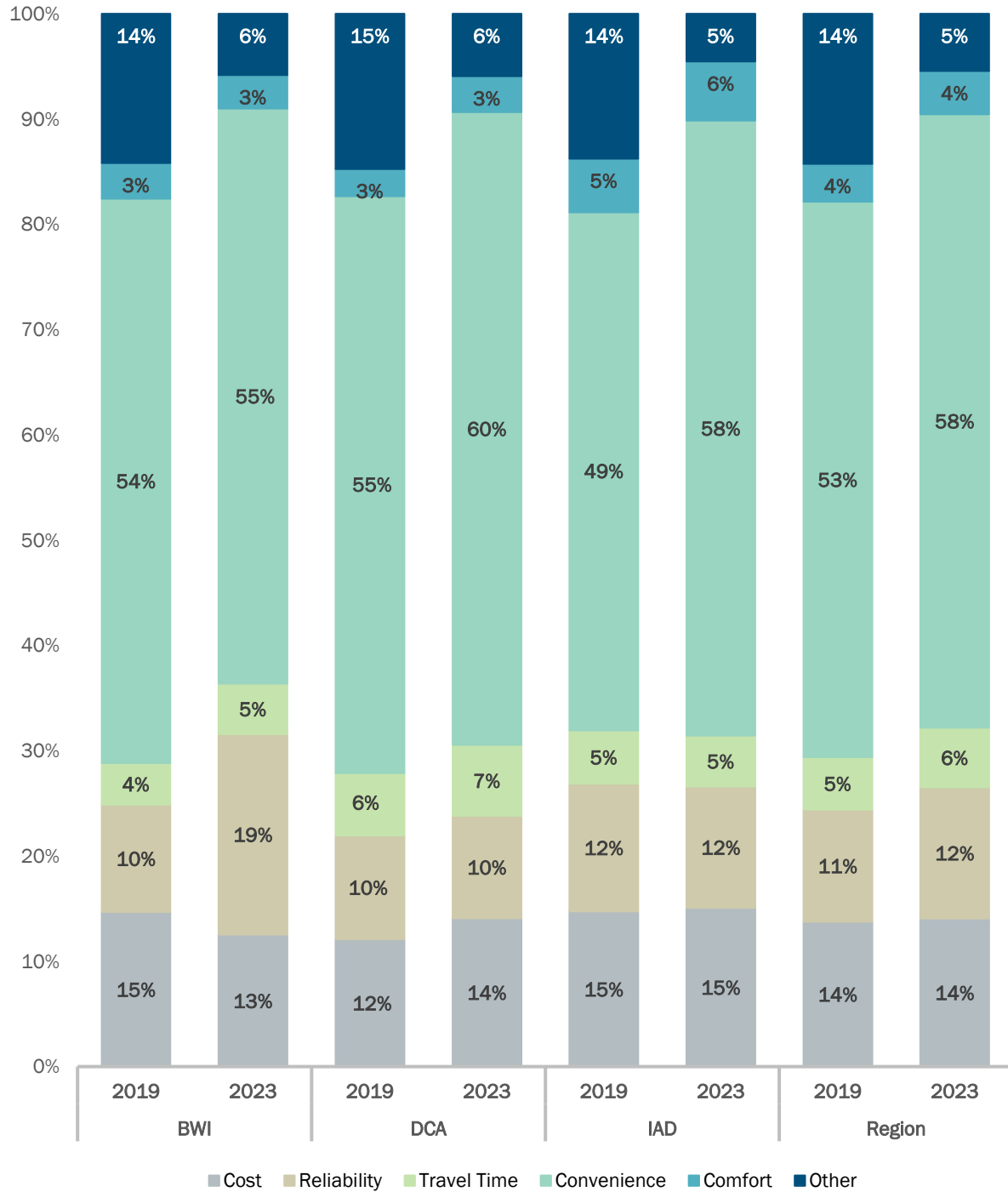


Figure 20. Reason For Choosing Mode of Ground Transportation by Airport: 2019 and 2023

Source: 2019/ 2023 Washington-Baltimore Regional Air Passenger Survey

Note: The size of the bars may differ slightly due to rounding of decimal percentages.

Airport Concessions Spending

In the region, the largest share of air passengers reported spending between \$1 and \$24 on airport concessions, accounting for 47 percent (see Figure 21). Meanwhile, 25 percent of passengers chose not to spend on concessions. Additionally, 18 percent spent between \$25 and \$49, 7 percent spent between \$50 and \$99, and 3 percent spent \$100 or more.

The pattern of airport spending was relatively similar across airports (see Figure 22 below). However, the share of passengers who spent \$100 or more was twice as large at IAD (4 percent) compared with BWI and DCA, which may reflect a larger share of international passengers purchasing duty free items. For more information, refer to Table 19.

AIRPORT CONCESSIONS SPENDING BY REGION 2023

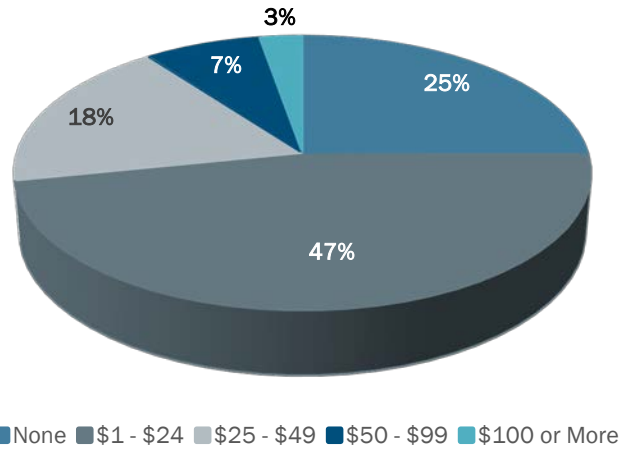


Figure 21. Airport Concessions Spending by Region 2023

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

Table 19. Airport Concessions Spending by Airport in 2023

Airport Concessions Spending		BWI	DCA	IAD	REGION
None	N	1,133	2,263	1,848	5,244
	%	24%	25%	27%	25%
\$1 - \$24	N	2,288	4,164	3,253	9,705
	%	48%	45%	47%	47%
\$25 - \$49	N	844	1,792	1,101	3,737
	%	18%	19%	16%	18%
\$50 - \$99	N	374	762	425	1,562
	%	8%	8%	6%	7%
\$100 or More	N	88	216	272	576
	%	2%	2%	4%	3%
TOTAL	N	4,728	9,197	6,899	20,823
	%	100%	100%	100%	100%

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

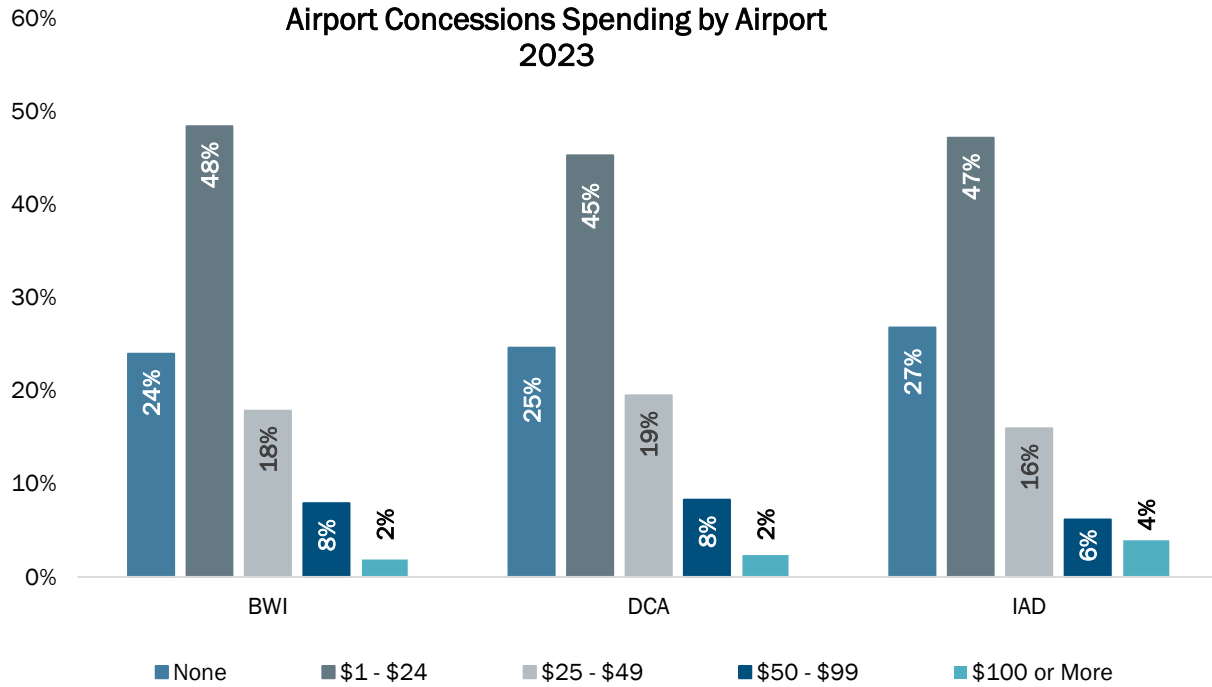


Figure 22. Airport Concessions Spending by Airport in 2023

Source: 2023 Washington-Baltimore Regional Air Passenger Survey.

Note: The size of the bars may differ slightly due to rounding of decimal percentages.

AIRPORT CONCESSIONS SPENDING BY HOUSEHOLD INCOME

Table 20 shows the breakdown of airport concessions spending by household income for the region. There does not appear to be a correlation between higher income and higher amounts of airport concessions spending, and counterintuitively, the lowest income group (less than \$25,000) had a larger share of passengers spending \$100 or more than other income groups. For more information, refer to Table 20.

Table 20. Airport Concessions Spending by Household Income - 2023

Airport Concessions Spending		Less than \$25,000	\$25,000 - \$49,999	\$50,000 - \$99,999	\$100,000 - \$149,999	\$150,000 - \$199,999	\$200,000 and up	TOTAL
None	N	188	337	960	877	828	1,727	4,917
	%	20%	33%	28%	21%	24%	26%	25%
\$1 - \$24	N	550	434	1,354	2,097	1,607	3,218	9,169
	%	59%	42%	40%	50%	47%	47%	47%
\$25 - \$49	N	75	176	691	767	658	1,193	3,560
	%	8%	17%	21%	18%	19%	18%	18%
\$50 - \$99	N	56	65	329	329	236	463	1,477
	%	6%	6%	10%	8%	7%	7%	8%
\$100 or More	N	68	22	37	141	109	183	560
	%	7%	2%	1%	3%	3%	3%	3%
TOTAL	N	937	1,034	3,371	4,210	3,438	6,694	19,684
	%	100%	100%	100%	100%	100%	100%	100%

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

AIRPORT CONCESSIONS SPENDING BY RESIDENT STATUS

Table 21 shows airport concessions spending by resident status for the region. Non-residents are more likely to spend more on airport concessions compared to residents. The largest share of residents reported spending between \$1 and \$24 on airport concessions, accounting for 52 percent, compared to 43 percent of non-residents. Meanwhile, 14 percent of residents spent between \$25 and \$49, compared to 21 percent of non-residents. Additionally, 4 percent of residents spent between \$50 and \$99, compared to 10 percent of non-residents. Only 2 percent of residents spent \$100 or more, compared to 3 percent of non-residents. Finally, 29 percent of residents did not spend on airport concessions, compared to 22 percent of non-residents.

Table 21. Airport Concessions Spending by Resident Status - 2023

Airport Concessions Spending		Residents	Non - Residents	TOTAL
None	N	2,620	2,600	5,220
	%	29%	22%	25%
\$1 - \$24	N	4,618	5,046	9,663
	%	52%	43%	47%
\$25 - \$49	N	1,209	2,504	3,713
	%	14%	21%	18%
\$50 - \$99	N	329	1,221	1,550
	%	4%	10%	7%
\$100 or More	N	164	406	571
	%	2%	3%	3%
TOTAL	N	8,939	11,778	20,717
	%	100%	100%	100%

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

Pre/Post Pandemic Travel Behavior

In 2023, air passengers were asked to report the typical mode of travel to the airport before the COVID-19 pandemic (before March 2020) and their mode of travel now and in the future (i.e., post-pandemic). These questions were intended to assess the impacts of the pandemic on typical travel mode to the airport.

As shown in Tables 22 and 23, the share of passengers who indicated private or rented car as their preferred mode of travel in the region declined slightly from 58 percent of passengers before the pandemic to 55 percent after the pandemic. Public transit remained steady at 10 percent before and after the pandemic, while taxis or ride-hailing services increased from 30 percent pre-pandemic to 34 percent post-pandemic. Figure 23 illustrates the noticeable decrease in the use of private or rented cars following the pandemic.

BWI had the highest percentage of passengers overall who chose a private or rented car as their preferred mode of transport, at 78 percent pre-pandemic and 76 percent post-pandemic. The typical use of taxis or ride-hailing services increased from 15 percent to 18 percent, while public transit usage decreased from 5 percent to 3 percent.

DCA had the lowest share of passengers who chose a private or rented car and the highest share of passengers who chose taxis or ride-hailing services and public transit as their preferred mode of transport among the three airports in the region. Similar to regional trends, the percentage of passengers who chose private or rented car post-pandemic has decreased compared to pre-pandemic, from 43 percent to 39 percent. The preference of taxis or ride-hailing services increased from 39 percent pre-pandemic to 45 percent post-pandemic, while public transit preference slightly decreased from 17 percent to 15 percent.

At IAD, the percentage of passengers who chose private or rented car decreased post-pandemic from 63 percent to 61 percent. The preference of taxis or ride-hailing services increased slightly from 28 percent to 30 percent, while public transit preference increased from 5 percent to 9 percent, which may reflect the recent opening of the Metrorail Silver Line to IAD.

Table 22. Mode of Travel Pre-Pandemic by Airport - 2023

Mode of Travel Pre-Pandemic		BWI	DCA	IAD	REGION
Private or Rented Car	N	3,198	3,276	3,842	10,315
	%	78%	43%	63%	58%
Taxi or ride-hail	N	629	2,930	1,718	5,278
	%	15%	39%	28%	30%
Public transit	N	197	1,257	329	1,783
	%	5%	17%	5%	10%
Other	N	99	74	163	336
	%	2%	1%	3%	2%
TOTAL	N	4,122	7,538	6,052	17,712
	%	100%	100%	100%	100%

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

Table 23. Mode of Travel Post-Pandemic by Airport - 2023

Mode of Travel Post-Pandemic		BWI	DCA	IAD	REGION
Private or rented car	N	3,103	2,946	3,600	9,650
	%	76%	39%	61%	55%
Taxi or ride-hail	N	757	3,374	1,770	5,900
	%	18%	45%	30%	34%
Public transit	N	137	1,112	521	1,769
	%	3%	15%	9%	10%
Other	N	98	81	30	210
	%	2%	1%	1%	1%
TOTAL	N	4,095	7,513	5,921	17,529
	%	100%	100%	100%	100%

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

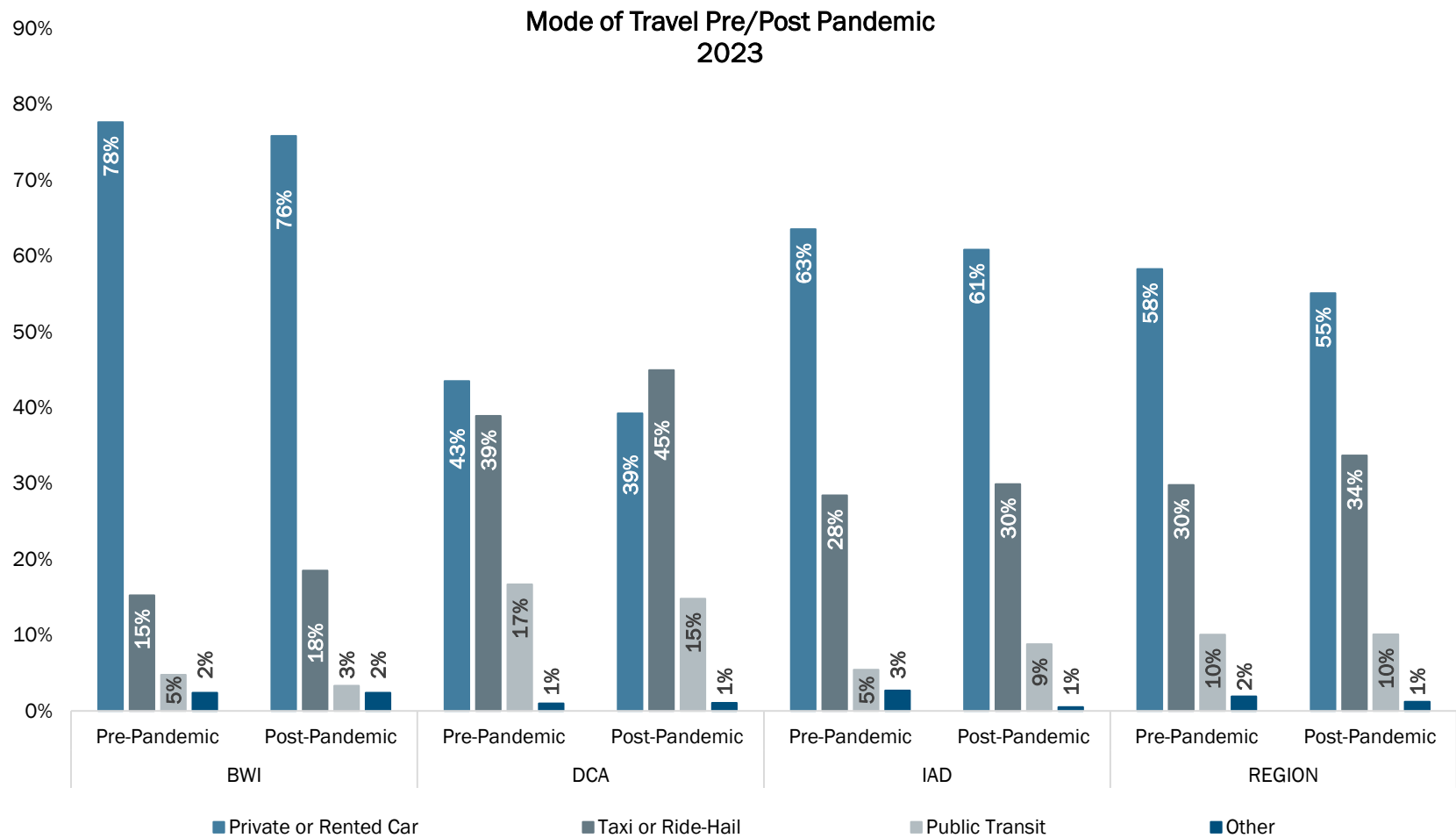


Figure 23. Mode of Travel Pre/Post Pandemic by Airport - 2023

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

Check-In and Security Procedures

In 2023, air passengers were asked new questions about check-in and security procedures at the airports: 1) "Which TSA security lane did you use?"; 2) "Where did you check your baggage?"; and 3) "Where did you obtain your boarding pass for your flight?".

AIRPORT SECURITY LANE

As shown in Figure 24, for all airports in the region, 54 percent of passengers used the regular security lanes, followed by TSA PreCheck at 36 percent, CLEAR at 9 percent, and Priority at 1 percent.

At BWI, 56 percent of passengers used the regular security lanes, 34 percent used TSA PreCheck, and 8 percent used CLEAR. BWI had the highest share of passengers using Priority compared to other airports in the region at 3 percent.

At DCA, 48 percent of passengers used the regular security lane, the lowest share among the three airports, while 41 percent used TSA PreCheck, the highest share among the airports in the region. Additionally, 10 percent of passengers used CLEAR, and 1 percent used Priority.

At IAD, 59 percent of passengers used the regular security lane, while 31 percent used TSA PreCheck, 9 percent used CLEAR, and 1 percent used Priority.

Comparing the airports, a higher share of DCA passengers used TSA PreCheck and CLEAR compared with IAD and BWI, which may suggest a higher share of business travelers at DCA. Over half of DCA passengers used an expedited (non-regular) security lane. Tabulations are shown in Table 24.

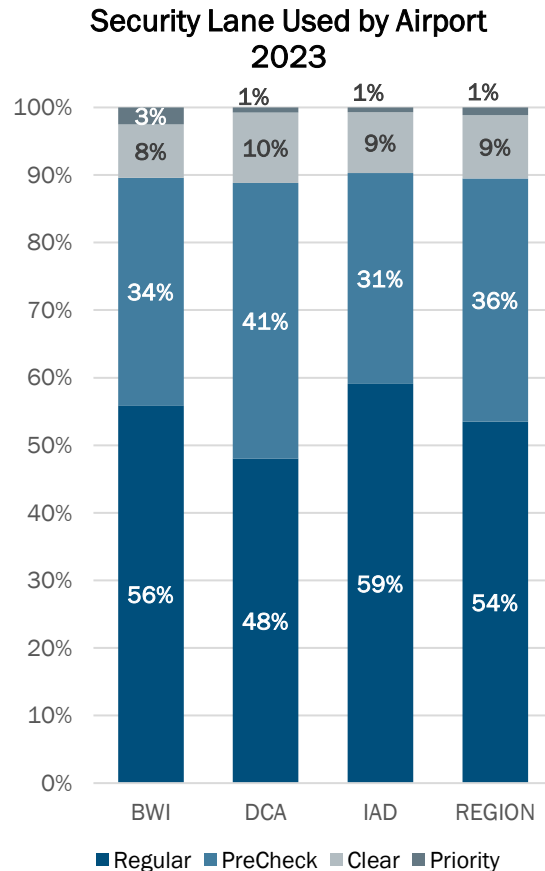


Figure 24. Security Lane Used by Airport - 2023

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

Table 24. Security Lane Used by Airport - 2023

Security Lane Used		BWI	DCA	IAD	REGION
Regular	N	2,659	4,431	4,156	11,245
	%	56%	48%	59%	54%
PreCheck	N	1,600	3,762	2,194	7,557
	%	34%	41%	31%	36%
CLEAR	N	3,77	964	634	1,975
	%	8%	10%	9%	9%
Priority	N	119	69	49	237
	%	3%	1%	1%	1%
TOTAL	N	4,755	9,226	7,034	21,014
	%	100%	100%	100%	100%

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

BOARDING PASS

Passengers were asked the following options on obtaining their boarding pass for the flight: 1) mobile boarding pass from cell phone or tablet; 2) printed boarding pass at kiosk; 3) printed boarding pass from airport ticket counter; 4) printed boarding pass at home; and 5) "other".

As shown in Figure 25, most passengers obtained their boarding pass from their cell phone or tablet, accounting for 66 percent for all airports in the region (63 percent at BWI, 72 percent at DCA, and 59 percent at IAD). This was followed by those who obtained their boarding pass from a kiosk or ticket counter.

Printed boarding pass at kiosks accounted for 16 percent of the boarding passes obtained in the region (19 percent at BWI, 15 percent at DCA, and 16 percent at IAD).

Printed boarding pass from airport ticket counters accounted for 14 percent in the region (13 percent at BWI, 9 percent at DCA, and 21 percent at IAD). BWI and DCA had a higher share of boarding passes obtained from kiosks than ticket counters, while IAD had a higher number of boarding passes obtained from ticket counters compared to kiosks. This is likely because a larger number of international carriers and flights at IAD often require tickets to be obtained from a ticket counter after presenting a valid passport.

Only 3 percent of the boarding passes were printed at home in the region, and 1 percent chose "Other". For more information, refer to Table 25.

Method of Obtaining Boarding Pass - 2023

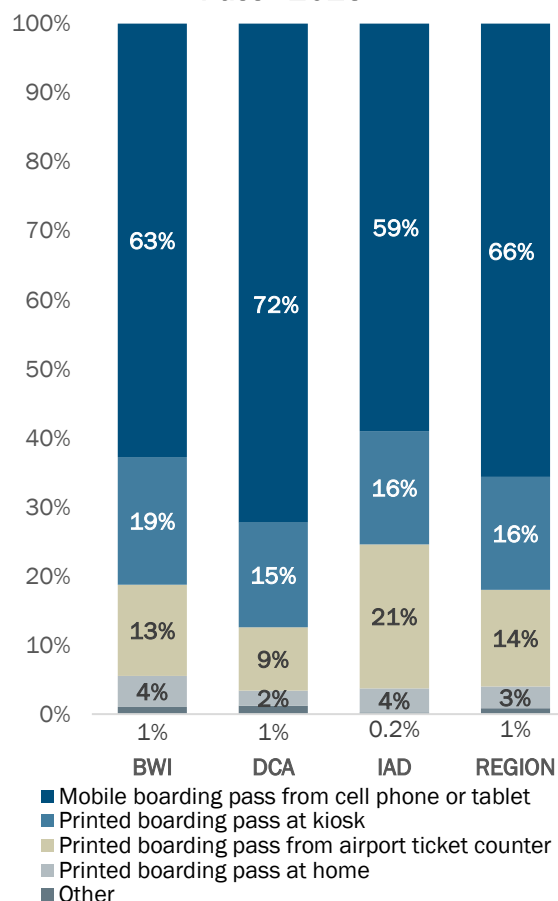


Figure 25. Method of Obtaining Boarding Pass - 2023

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

Table 25. Method of Obtaining Boarding Pass - 2023

Method of Obtaining Boarding Pass		BWI	DCA	IAD	REGION
Mobile boarding pass from cell phone or tablet	N	2,999	6,665	4,160	13,825
	%	63%	72%	59%	66%
Printed boarding pass at kiosk	N	884	1,398	1,159	3,441
	%	19%	15%	16%	16%
Printed boarding pass from airport ticket counter	N	631	844	1,469	2,944
	%	13%	9%	21%	14%
Printed boarding pass at home	N	214	202	248	664
	%	4%	2%	4%	3%
Other	N	51	113	17	180
	%	1%	1%	0.2%	1%
TOTAL	N	4,779	9,222	7,052	21,054
	%	100%	100%	100%	100%

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

BAGGAGE CHECK-IN

Passengers were asked the following options on baggage check-in: 1) curbside; 2) kiosk; 3) ticket counter agent; 4) gate agent; and 5) did not check baggage.

For all airports in the region, 46 percent of passengers did not check their baggage, while 30 percent checked in with the ticket counter agent, 16 percent at the kiosk, and 4 percent each at curbside and with a gate agent.

As shown in Table 26 and Figure 26, DCA had the highest share of passengers who did not check in their baggage and the lowest share who checked in with a ticket counter agent. Conversely, IAD had the lowest share of passengers who did not check their baggage and the highest share who checked in with a ticket counter agent.

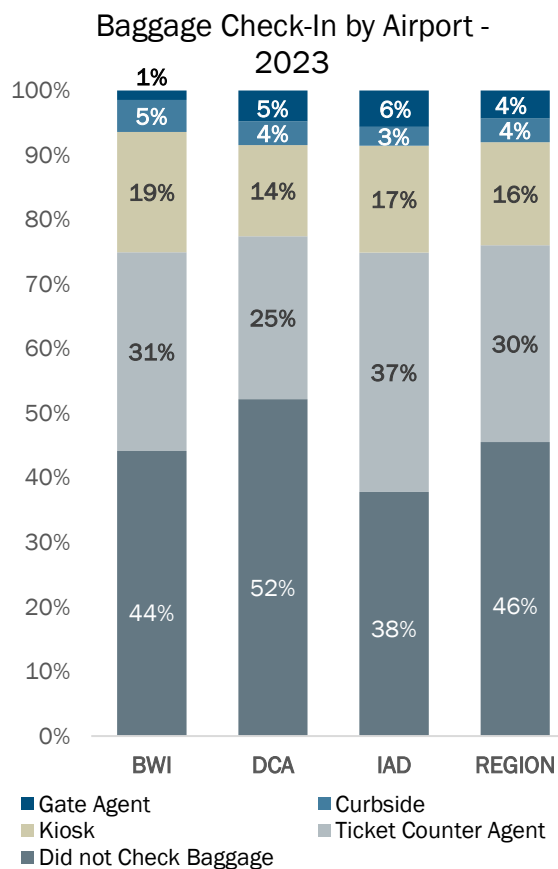


Figure 26. Baggage Check-In by Airport - 2023

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

Table 26. Baggage Check-In by Airport - 2023

Baggage Check-In		BWI	DCA	IAD	REGION
Did not check baggage	N	2,101	4,809	2,650	9,560
	%	44%	52%	38%	46%
Ticket counter agent	N	1,466	2,322	2,601	6,389
	%	31%	25%	37%	30%
Kiosk	N	887	1,304	1,160	3,350
	%	19%	14%	17%	16%
Curbside	N	236	335	205	776
	%	5%	4%	3%	4%
Gate agent	N	70	443	396	908
	%	1%	5%	6%	4%
TOTAL	N	4,759	9,213	7,011	20,983
	%	100%	100%	100%	100%

Source: 2023 Washington-Baltimore Regional Air Passenger Survey

SUMMARY AND NEXT STEPS

The 2023 Washington-Baltimore Regional Air Passenger Survey incorporated several methodological changes from previous air passenger surveys. Most notable among these changes include the implementation of electronic data collection using a web-based survey instrument, a more robust and streamlined sampling approach that reduced the number of sampling strata and consequently, the number of flights that needed to be surveyed, and a pretest that was administered prior to the main survey effort to ensure that these changes were implemented effectively.

For general findings pertaining to passenger characteristics, non-resident passengers continue to outnumber resident passengers, although the share of resident passengers has been gradually increasing across the region. Perhaps the most important finding is that business travel has declined while non-business (i.e., leisure/vacation and personal) travel has increased across the region and at all airports. The trend towards non-business travel has continued after the pandemic and suggests that the drop in business may be due to more business activities that are being conducted virtually.

For general findings pertaining to ground access, perhaps the most important key finding is the steady growth in TNC usage, which has steadily risen across all airports, accounting for a quarter of all airport trips. For business trips, TNC usage increased while rental car and taxi trips declined, while for non-business trips, TNC, transit, and rental car usage increased while private car and taxi trips declined. Additionally, private cars are the preferred travel mode for residents, while TNCs are the preferred mode choice for non-residents. Finally, the primary origins for air passengers are private residents, followed by hotel/motels, together comprising over 90 percent of all trip origins.

For general findings pertaining to preferences and behavior, there were several key findings. The largest share of air passengers chose their airport because it was the closest airport, and convenience was cited as the top reason for choosing mode of access in the region, followed by cost and reliability. The 2023 survey also found that nearly half of all passengers spent at least a modest amount (\$1-24) on airport concessions, while one-quarter did not engage in any airport spending. There were also several insights from the new questions focusing on typical modes of travel pre- and post-pandemic, airport security lanes, and check-in procedures. From pre- to post-pandemic, the share of passengers who typically traveled to the airport by private or rented car decreased slightly while the share of passengers who typically used taxi or ride-hail increased in the region. Additionally, nearly half of all passengers in the region used an expedited security lane; just over one-third used TSA PreCheck, followed by CLEAR and Priority.

In addition to this General Findings Report, COG/TPB staff will plan to develop enhanced visualizations and perform geographic analysis to produce the Geographic Findings report, which will provide ground trip information by Aviation Analysis Zones (AAZs) and used to prepare updated Ground Access Forecast Updates.

APPENDIX A – SURVEY DESIGN AND SAMPLING APPROACH

The survey was designed to provide current air traffic patterns and user characteristics for passengers departing from the region's three major commercial airports: Baltimore/Washington Thurgood Marshall International Airport (BWI), Ronald Reagan Washington National Airport (DCA), and Washington Dulles International Airport (IAD). It was designed to be compatible with the previous surveying efforts conducted in 1981/82, 1987, 1992, 1998, 2000, 2002, 2005, 2007, 2009, 2011, 2013, 2015, and 2019, so that comparative analysis could be performed.

The sample of flights for the APS has traditionally been a stratified cluster of flights. A stratum can be defined as a non-overlapping subgroup of flights within the entire universe of flights. Segmenting the flights into strata and drawing a random sample from each stratum ensures a statistically valid and representative sample of flights across the three airports. Since 2011, the APS has been stratified by airport, international/domestic flight, airline, and destination. Within each airport and domestic/international stratum, the flight sample was allocated based on the cumulative number of seats on the flights in the airline/destination strata. The 2019 APS included 399 domestic and international flight strata where flights were sampled. For the 2023 survey, the flight samples were regrouped and the number of flight strata were reduced to 93 domestic and 21 international flight strata compared with the 2019 survey in an effort to streamline the sampling approach.

One of the key recommendations following TPB's evaluation of APS survey methods was reducing the number of sampling strata to simplify the sampling process with equal weights within explicit strata and thereby reduce the number of flights that need to be surveyed. To revise the sampling approach, TPB staff reviewed the sampling plan of previous APS efforts in addition to reviewing the sampling plan and survey methodology for other recent airport surveys such as those conducted at Minneapolis-St. Paul Airport (MSP), Boston Logan International Airport (BOS), Los Angeles International Airport (LAX), San Francisco International Airport (SFO), Oakland International Airport (OAK), and Dallas/Fort Worth International Airport (DFW). Some key takeaways from reviewing the sampling plans of other airports are: 1) most airport surveys used a two-stage stratified or cluster sampling approach with probability proportional to seating capacity; 2) airline, destination, time period, flight distance/time, and seating capacity were considered in the sampling plan approaches.

TPB staff conducted descriptive analysis of the APS 2019 data files to evaluate potential stratifications, including the strata from the 2019 sampling plan, flight distance categories, airline type, geographic region, and the average annual employment of leisure/hospitality workers for MSA or County as reported by the Bureau of Labor Statistics (BLS). Additionally, response rates and ground access mode shares were examined for all three regional airports from the 2019 survey. Based on the review of this information, TPB staff developed a revised flight stratification approach for the 2023 survey, which were based on the following characteristics: 1) origin airport; 2) airline; 3) region; 4) location quotient of the leisure/hospitality sector as reported by BLS. Key data sources include the OAG flight data (e.g., origin/destination airport codes, airline, flight number, departure time, seat counts, operating days of a week, effective date, and discontinued date), and the BLS Quarterly Census of Employment and Wages (i.e., leisure/hospitality annual employment market share as measured by location quotients).

To determine the best approach for developing domestic and international regions, the regions from previous APS were examined and used as a starting point. The number of destinations was tabulated for each region and some regions were re-defined to ensure a more even distribution of destinations

for each region. For example, Florida, previously grouped with other Atlantic coast states, is treated as a separate region in the 2023 APS due to the large number of flights from the Washington-Baltimore region that fly to Florida destinations. Table 27 lists the domestic destination regions used in the 2023 APS. For international regions, destinations to North American cities outside of the United States were treated separately from destinations to Europe, Asia, and other continents since flights to Canada, Mexico, and the Caribbean are generally shorter than flights to Europe and Asia. Table 28 lists the international destination regions used in the 2023 APS. For future surveys beyond the 2023 APS, these destination region definitions may need to be recalibrated based on flight destinations to ensure that each region has enough sampled flights for analysis.

In addition to destination regions, the sampling approach also considered the location quotient of the leisure/hospitality sector as popular tourist destinations may have different passenger characteristics than non-tourist destinations. Table 29 lists the leisure/hospitality sector categories divided into low, medium, and high leisure/hospitality sector shares, and example destinations for each category. Location quotients were only applied to domestic destinations as data for international destinations are not available.

Table 27. Destination Regions for the 2023 APS – Domestic

Destination Region	Region Code	States
New England	D01	CT, MA, ME, NH, RI, VT
Mid-Atlantic	D02	DE, MD, NJ, NY, PA, VA, WV
South	D03	GA, NC, SC
Florida	D04	FL
Midwest	D05	IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WI
Southeast	D06	AL, KY, MS, TN
South Central	D07	AR, LA, OK, TX
Mountain	D08	AZ, CO, ID, MT, NV, NM, UT, WY
West	D09	AK, CA, HI, OR, WA

Source: COG/TPB

Table 28. Destination Regions for the 2023 APS – International

Destination Region	Region Code	Definition
North America	I11	All destinations in North America except for the United States
Europe	I12	All destinations in Europe
Asia	I13	All destinations in Asia (including the Middle East)
Other	I14	All destinations in Africa, Australia/Oceania, and South America

Source: COG/TPB

Table 29. Leisure/Hospitality Sector Categories for the 2023 APS - Domestic

Leisure/Hospitality Sector Category	LQ Code	Example Destinations
Low leisure/hospitality employment market share	L1	Hartford, CT Manchester, NH Memphis, TN
Moderate leisure/hospitality employment market share	L2	New York, NY Los Angeles, CA Chicago, IL
High leisure/hospitality employment market share	L3	Myrtle Beach, SC Las Vegas, NV Orlando, FL

Source: COG/TPB

SAMPLE SELECTION

The sample selection process started from the Official Airline Guide (OAG) data, which was provided by MAA/MWAA. The OAG data includes primary flight information such as origin, destination airport codes, flight departure time, and number of seats on the equipment assigned to the flights. Only the flights flying within the 2-week survey period were kept in the sample planning and drawing process. Additional variables such as destination city, state and countries were appended based on the airport data downloaded from Federal Aviation Administration.² Further based on the state name, destination regions and location leisure quotient (LQ) were assigned to each flight with the data sets obtained from the Bureau of Labor and Statistics.³ Airline group size was categorized into three groups depending on the percentage of total seats provided by the airline in each airport. Finally, a cluster name called stratum was generated by concatenating origin airport code, airline group, region code, and location and LQ level. In order to plan how many flights in a stratum should be selected, the proportional number of flights were calculated by a ratio of seats provided by the flights in the stratum over total seats available for the entire airport. With defined numbers of flights for each stratum, the drawing process started by selecting one flight within the stratum. It would keep randomly drawing until the defined number of flights were selected. The random drawing process prioritizes flights if the destination airport was never selected to allow flights to various destinations to be surveyed.

² Airport data from Federal Highway Administration. <https://www.transportation.gov/policy/aviation-policy/airport-codes-txt>

³ Leisure and Location Quotient from Bureau of Labor and Statistics. <https://www.bls.gov/cew/downloadable-data-files.htm>

APPENDIX B – PRINTED MATERIALS FOR DATA COLLECTORS

Appendix B-1: 2023 Washington-Baltimore Regional Air Passenger Survey Questionnaire

2023 Washington-Baltimore Regional Air Passenger Survey

Airline Passenger Survey Announcement

GATE AGENTS: PLEASE READ THE FOLLOWING ANNOUNCEMENT TWICE PRIOR TO THE INITIAL BOARDING ANNOUNCEMENT FOR THIS FLIGHT.

ATTENTION PASSENGERS on [airline], flight number [##] to [Destination],

Your flight has been selected to participate in a regional air passenger survey. This survey is being conducted to gather information to help improve travel options to this airport. Your participation in this survey is completely voluntary; it will only take a few minutes to complete the questionnaire. You can also be entered into a raffle for a \$500 Amazon Gift Code by completing the survey. A survey representative is here to assist with the questionnaire. [Airline] and [Airport] would like to thank you for your cooperation.

Thank you so much for your assistance!

2023 Washington-Baltimore Regional Air Passenger Survey

Frequently Asked Questions

Who is conducting the survey?

This survey is being conducted in partnership between the Maryland Aviation Administration, the Metropolitan Washington Airports Authority, and the Metropolitan Washington Council of Governments.

What is this survey for?

This is a regional air passenger survey to help improve how people travel to the airport.

Do passengers have to take this survey?

Participation in this survey is completely voluntary. It will only take a few minutes will help us improve how people travel to the airport.

Is this a customer satisfaction survey?

No, this is not a customer satisfaction survey and only passengers on randomly selected flights are invited to participate. The responses from this survey are only used for airport planning and regional transportation planning purposes so that we can help improve how people get to the airport.

Who can I contact to verify the validity of the survey?

If you have any questions about the Washington-Baltimore Regional Air Passenger Survey, please email staff at the Metropolitan Washington Council of Governments at RegionalAirPassengerSurvey@mwkog.org.

Thank you so much for your assistance!

Appendix B-2 - Data Collector Script and Respondent FAQ Sheet

Data Collector Script and Respondent FAQ Sheet

Greeting: Hello, my name is [Name] [Display airport badge]. [Airport name] is conducting a brief survey about how people travel to this airport. Are you on [Airline] flight to [Destination City]? The survey will take approximately 10 minutes to complete, and you will be entered in a raffle for a \$500 gift card. I have the survey ready on my tablet if you would like to complete the survey on this device, but if you would prefer to use your own device you can follow this link or scan the QR code to complete the survey in a web browser [display the business card with QR code].

If Yes, using the Survey Tablet: Great, thank you! [Give the respondent the tablet and offer to remain nearby to assist]. I will be nearby if you have any questions or need assistance, feel free to flag me down and I'll be happy to assist!

If Yes, using Personal Device: Great, thank you! [Display business card to offer QR code, or hand respondent business card]. I will be nearby if you have any questions or need any assistance, feel free to flag me down and I'll be happy to assist!

If the flight is boarding and the respondent has not finished or is concerned about having enough time to complete: Let them know that they can complete online and provide them with the business card to take with them. Only offer this option when necessary so people won't use that as an excuse to not do the survey on the spot.

If No: No worries! If you just answer one quick question that would really help our efforts: How did you travel to the airport today? [Depending on their answer, complete the refusal instrument accordingly to indicate their mode of access and flight information] [If they do not wish to answer that question do not press them further].

If no (unwilling or unfriendly passenger): Thank you very much for your time, I hope you have a good flight!

APPENDIX C - SURVEY MATERIALS FOR BALTIMORE/WASHINGTON INTERNATIONAL THURGOOD MARSHALL AIRPORT (BWI)

C-1 - Business Card

C-2 - 2023 Washington-Baltimore Regional Air Passenger Survey Questionnaire (BWI)


***Note:** Questions that start with "R" indicate that the answer was required to participate in the raffle.

C-3 - MAA Letter of Support

C-4- MAA Tenant Information Advisory

Appendix C-1: Business Card

Baltimore/Washington International Thurgood Marshall Airport (BWI)

<p>2023 Washington-Baltimore Regional Air Passenger Survey Airport: BWI</p> <p>www.BWIAirSurvey.com</p> <p>We value your input! Your responses to this survey will help improve travel options to this airport. To complete the survey and be entered into a raffle for a \$500 Amazon Gift Code, please visit our URL or scan the QR Code.</p>  <p>Participation is voluntary and answers are confidential. Thank you for your participation. Safe travels!</p>	<p>2023 Washington-Baltimore Regional Air Passenger Survey Airport: BWI</p> <p>Who is conducting the survey? This survey is being conducted in partnership by the Metropolitan Washington Airports Authority, Maryland Aviation Administration, and the Metropolitan Washington Council of Governments.</p> <p>Is this a customer satisfaction survey? No. The purpose of this survey is to learn about and improve travel options to the Washington-Baltimore regional airports. Your flight was randomly selected to participate in this survey.</p> <p>How long will the survey take? The survey will only take 10 minutes.</p> <p>Participation is voluntary and answers are confidential. Thank you for your participation. Safe travels!</p>
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Appendix C-2: 2023 Washington-Baltimore Regional Air Passenger Survey Questionnaire

Baltimore/Washington International Thurgood Marshall Airport (BWI)

You and the other passengers on your flight are invited to participate in the 2023 Washington-Baltimore Regional Air Passenger Survey. Your responses to this survey will help improve travel options to this airport.

Your participation in this survey is completely voluntary and it will take about 10 minutes of your time. As a thank you for fully completing the survey, you may choose to enter a raffle to win a \$500 gift card. All responses will be compiled together and analyzed as a group to protect your confidentiality.

This survey is being conducted in partnership between the Maryland Aviation Administration, the Metropolitan Washington Airports Authority, and the Metropolitan Washington Council of Governments.

TITLE VI NONDISCRIMINATION POLICY

The Metropolitan Washington Council of Governments (COG) operates its programs without regard to race, color, and national origin and fully complies with Title VI of the Civil Rights Act of 1964 and related statutes and regulations prohibiting discrimination in all programs and activities. For more information, to file a Title VI related complaint, or to obtain information in another language, visit www.mwcog.org/nondiscrimination or call (202) 962-3300.

El Consejo de Gobiernos del Área Metropolitana de Washington (COG) opera sus programas sin tener en cuenta la raza, el color, y el origen nacional y cumple con el Título VI de la Ley de Derechos Civiles de 1964 y los estatutos y reglamentos relacionados que prohíben la discriminación en todos los programas y actividades. Para más información, presentar una queja relacionada con el Título VI, u obtener información en otro idioma, visite www.mwcog.org/nondiscrimination o llame al (202) 962-3300.

Direct general questions about the survey to RegionalAirPassengerSurvey@mwcog.org, and direct technical questions about this web-based interface to Nicholas.Book@icf.com
If you consent to participate, select, “yes, I consent” below.

- Yes, I consent _ Continue the survey
- No _ Finish the survey

AIRLINE AND FLIGHT

R-Q1. What airline are you taking today? _ DROP DOWN

1. Air Canada
2. Allegiant Air
3. American Airlines
4. Avelo Airlines
5. British Airways
6. Other airline

R-Q2. What is the flight number?

Option 1 _ DROP DOWN

1. 8681
2. 1395
3. 1036
4. 1213
5. 2750

Option 2: My flight is not listed _ TEXT BOX

What is your flight number? _ TEXT BOX

A. ABOUT YOUR TRIP TODAY

R-Q-A1. How did you get to Baltimore/Washington International Marshall Airport for this trip?

1. By GROUND TRANSPORTATION (e.g., car, taxi, ride-hailing, Metro, etc.) _ Continue the survey Q-A2
2. I was on this flight when it arrived at this airport. _ Finish the survey
3. I made a connection at this airport from a DOMESTIC FLIGHT. _ Finish the survey
 - a. With which airline did you fly in today? _ Finish the survey
4. I made a connection at this airport from an INTERNATIONAL FLIGHT. _ Finish the survey
 - a. With which airline did you fly in today? _ Finish the survey

R-Q-A2. What is the final destination for your travel (following air travel and any additional connections for ground transportation)? For countries outside of the United States, delete “United States” and begin typing for a drop down list of countries and select country. _ list all countries _

DROP DOWN

1. United States _ Continue the survey Q-A2a
2. Afghanistan _ Continue the survey Q-A3
3. Albania _ Continue the survey Q-A3
4. Algeria _ Continue the survey Q-A3
5. Andorra _ Continue the survey Q-A3

Q-A2a. State/Territory _ list all State/Territory of the US _ DROP DOWN

1. Alabama (AL)
2. Alaska (AK)
3. American Samoa (AS)

Q-A2b. City _ TEXT BOX

Q-A3. What is the primary purpose of your trip?

1. Business related to the federal government (including military)
2. Business related to state or local government
3. Business that is not related to government
4. Leisure, vacation, or holiday
5. Personal or family affairs
6. Student or school related
7. Other, please specify _ TEXT BOX

B. ABOUT YOUR GROUND TRIP TO BALTIMORE/WASHINGTON INTERNATIONAL MARSHALL AIRPORT

Q-B1. To help us understand your route to the airport and plan improvements, what is the approximate location of the place you started your ground trip to this airport?

1. My home
2. Someone else's home
3. Hotel/Motel
4. Short term rental (e.g., Airbnb, VRBO)
5. My regular place of employment
6. Another place of business
7. Other, please specify _ TEXT BOX

Q-B2. What is the location of the place you started your trip today? You can also drag and drop a pin in the general area of the location on the map.

Option to search the address on google maps. _ TEXT BOX

Q-B3. What time did you begin your trip to the airport today? _ DROP DOWN

1. 12:00 AM
2. 12:15 AM
3. 12:30 AM
4. 12:45 AM

Q-B4. What time did you arrive at the airport today? _ DROP DOWN

1. 12:00 AM
2. 12:15 AM
3. 12:30 AM
4. 12:45 AM

R-Q-B5. INCLUDING YOURSELF, how many people who came to the airport with you are on your flight today? _ DROP DOWN

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8 or more. Type a number between 8 and 99. _ TEXT BOX

R-Q-B6. What was your primary mode of travel to this airport today?

1. Private Car _ Continue the survey Q-B6a, Q-B6b, Q-B6c, and Q-B6d
2. Rented Car _ Continue the survey Q-B6a
3. Taxi _ Continue the survey Q-B6a
4. Ride-hailing (e.g., Uber, Lyft) _ Continue the survey Q-B6a
5. Airport van/limo (e.g., SuperShuttle)
6. Hotel/Motel courtesy bus
7. Amtrak/MARC
8. Light Rail
9. Metrobus/MTA Bus/RTA Bus
10. Walked from place where your trip started today
11. Biked from place where your trip started today
12. Other, please specify _ TEXT BOX

Q-B6a. Did you carpool with someone else?

1. Yes
2. No

Q-B6b. Were you dropped off at the terminal curbside?

1. Yes
2. No

Q-B6c. Where was that vehicle parked (after drop-off)?

1. It was not parked
2. Hourly garage
3. Express parking
4. Daily garage
5. Long term parking lot A or B
6. BWI Rail Station garage
7. Valet parking
8. Off-airport private parking
9. Other, please specify _ TEXT BOX

Q-B6d. Did you plug into an Electric Vehicle (EV) charging station?

1. Yes
2. No

Q-B7. What was your MAIN reason for choosing your mode of GROUND transportation to this airport TODAY?

1. Cost
2. Reliability
3. Travel Time
4. Convenience
5. Comfort
6. Other, please specify _ TEXT BOX

C. ABOUT YOUR AIRPORT CHOICE

Q-C1. Rank the three most important reasons for choosing Baltimore/Washington International Marshall Airport for your flight today. Please drag your top 3 choices into the empty box to indicate your answers.

1. Closest airport
2. Easy road access
3. Easy access by Metrorail or public transit
4. Convenient van/limo or shuttle bus service
5. Good parking facilities
6. More convenient flight times
7. Less expensive airfare
8. Only airport with non-stop flights
9. Only airport that serves my destination
10. Frequent flyer/airline loyalty program
11. Other _ Continue the survey Q-C1a

Q-C1a. Please specify any other reasons for choosing Baltimore/Washington International Marshall Airport for your flight today. _ TEXT BOX

Q-C2. Rank the region's airports in your order of preference. Please drag your top 3 choices into the empty box to indicate your answers.

1. Washington Dulles International (IAD)
2. Reagan Washington National (DCA)
3. Baltimore/Washington International Marshall (BWI)

D. ABOUT YOURSELF

We have a few additional questions to ask which will help us improve transportation options to this airport. **It will be treated with strict confidentiality.**

Q-D1. Are you visiting the local area or do you live here?

1. Visiting the Washington-Baltimore area _ Continue the survey Q-D1a

Q-D1a. How many nights did you stay in the area? Type "0" if you arrived today. _ TEXT BOX

2. Live in the Washington-Baltimore area _ Continue the survey Q-D1b

Q-D1b. How many nights will you be away? Type "0" if you will return today. _ TEXT BOX

R-Q-D2. What is the location of your current residence? For countries outside of the United States, delete "United States" and begin typing for a drop down list of countries and select country. Country: _ list all countries _ DROP DOWN

1. United States _ Continue the survey Q-D2a, Q-D2b, Q-D2c
2. Afghanistan _ Continue the survey Q-D3
3. Albania _ Continue the survey Q-D3
4. Algeria _ Continue the survey Q-D3
5. Andorra _ Continue the survey Q-D3

Q-D2a. State/Territory _ list all State/Territory of the US _ DROP DOWN

1. Alabama (AL)
2. Alaska (AK)
3. American Samoa (AS)

Q-D2b. City _ TEXT BOX

Q-D2c. Zip Code _ TEXT BOX

These last few questions about yourself will help us improve transportation options to this airport and your answers will be de-identified and kept strictly confidential.

Q-D3. How many people live in your household, including yourself? _ DROP DOWN

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8 or more

Q-D4. Select your age group:

1. Under 18 years old _ Finish the survey
2. 18 – 24 years old
3. 25 – 34 years old
4. 35 – 44 years old
5. 45 – 54 years old
6. 55 – 64 years old
7. 65 years or older

Q-D5. What is your household's total annual income?

1. Less than \$25,000
2. \$25,000–\$49,999
3. \$50,000–\$99,999
4. \$100,000–\$149,999
5. \$150,000–\$199,999
6. \$200,000 or more

Describe your typical mode of travel to this airport:

Q-D6. Before the COVID-19 pandemic (i.e., before March 2020)?

1. Drive by yourself or with a family member, friend, etc.
2. Taxi or ride-hail (e.g., Uber, Lyft)
3. Public transit
4. Other, please specify _ TEXT BOX
5. Not applicable/do not live in the region.

Q-D7. Now and in the future?

1. Drive by yourself or with a family member, friend, etc.
2. Taxi or ride-hail (e.g., Uber, Lyft)
3. Public transit
4. Other, please specify _ TEXT BOX

Q-D8. Why has your mode of travel changed? _ TEXT BOX

E. YOUR EXPERIENCE AT THE AIRPORT

Q-E1. Which TSA security lane did you use?

1. Regular
2. TSA PreCheck
3. CLEAR
4. Priority

Q-E2. Where did you check your baggage?

1. Curbside
2. Kiosk
3. Ticket counter agent
4. Gate agent
5. Did not check baggage

Q-E3. Where did you obtain your boarding pass for your flight?

1. Mobile boarding pass from cell phone or tablet
2. Printed boarding pass at kiosk
3. Printed boarding pass from airport ticket counter
4. Printed boarding pass at home
5. Other, please specify _ TEXT BOX

Q-E4. How much did you spend on airport concessions during your visit? (Include expenses only within the airport terminal area such as food, souvenirs, spa visit, etc. Do not include expenses outside of the airport terminal area such as parking.)

1. \$0
2. \$1–\$24
3. \$25–\$49
4. \$50–\$99
5. \$100 or more

F. RAFFLE

Q-F1. Do you wish to provide contact information to be included in the raffle for the gift card?

1. Yes
2. No _ Finish the survey

Please answer the following questions to participate in the raffle.

R-Q-F2. What is the primary purpose of your trip?

1. Business related to the federal government (including military)
2. Business related to state or local government
3. Business that is not related to government
4. Leisure, vacation, or holiday
5. Personal or family affairs
6. Student or school related
7. Other, please specify _ TEXT BOX

R-Q-F3. To help us understand your route to the Airport and plan improvements, what is the approximate location of the place you started your ground trip to this airport?

1. My home
2. Someone else's home
3. Hotel/Motel
4. Short term rental (e.g., Airbnb, VRBO)
5. My regular place of employment
6. Another place of business
7. Other, please specify _ TEXT BOX

R-Q-F4. What is the location of the place you started your trip today? You can also drag and drop a pin in the general area of the location on the map.

Option to search the address on google maps. _ TEXT BOX

R-Q-F5. What time did you begin your trip to the airport today? _ DROP DOWN

1. 12:00 AM
2. 12:15 AM
3. 12:30 AM

R-Q-F6. What time did you arrive at the airport today? _ DROP DOWN

1. 12:00 AM
2. 12:15 AM
3. 12:30 AM

If you wish to be entered into the raffle drawing, please provide contact information below:

R-Q-F7. First and Last Name _ TEXT BOX

R-Q-F8. Email _ TEXT BOX

R-Q-F9. Phone (10-digit US numbers only, no dashes or spaces) _ TEXT BOX

R-Q-F10. Please write any comments you would like to share. _ TEXT BOX

Appendix C-3: MAA Letter of Support

Baltimore/Washington International Thurgood Marshall Airport (BWI)



Wes Moore
Governor
Aruna Miller
Lieutenant Governor
Paul J. Wiedefeld
Acting Secretary
Ricky D. Smith, Sr.
Executive Director

September 26, 2023

Dear BWI Marshall Gate Agent:

The 2023 Baltimore-Washington Regional Air Passenger Survey is being conducted in partnership between the Maryland Aviation Administration (MAA), the Metropolitan Washington Airports Authority, and the Metropolitan Washington Council of Governments (MWCOG). The purpose of this survey is to help improve how people travel to/from the airports in Baltimore-Washington metropolitan area.

- The MWCOG survey will be conducted at various gates throughout the Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall) the *entire month of October 2023*.

Trained survey staff will approach passengers at selected gates to invite them to participate in a survey using a handheld tablet or a personal mobile device using a QR code. The survey will take passengers about ten minutes to complete. Participation in the survey is voluntary and the responses from the survey will be only used for airport planning and regional transportation planning purposes. Passengers who do not have enough time to complete the survey before their flight will be handed a business card with the QR code.

Survey staff will arrive at the gate about 1 to 1.5 hours prior to the scheduled departure time of the flight. They will introduce themselves to the gate agents and ask them to read an announcement twice before the pre-board announcements. Survey staff will be required to complete a full day of orientation and training to ensure that proper protocols are being followed so that it is not disruptive to gate agents and passengers.

The MAA requests your cooperation in allowing survey staff to approach passengers at the gates prior to boarding for the survey period, beginning October 1st. Questions or concerns about the Regional Air Passenger Survey should be directed to the MWCOG at RegionalAirPassengerSurvey@mwkog.org. If you have any questions or need additional information, please contact me directly at sames@bwiairport.com or 410-859-7089.

Sincerely,

Shawn P. Ames, C.M.
Deputy Director, Office of Planning & Environmental Services

Enclosures

Appendix C-4: MAA Tenant Information Advisory

Baltimore/Washington International Thurgood Marshall Airport (BWI)



TENANT INFORMATION ADVISORY

Retention: November 17, 2023

September 26, 2023

23-040

AIRLINE BOARDING AREA PASSENGER SURVEYS

Beginning October 1 through October 31, the Metropolitan Washington Council of Governments (MWCOC) will survey passengers in boarding areas at BWI Marshall Airport. The Regional Air Passenger Survey is sponsored by the region's three airports (BWI, DCA, and IAD) and FAA. The surveys are performed by MWCOC staff and contract personnel. The survey effort will collect information on passenger profiles relative to local origination and mode of access. This detail is essential for airport and regional planners in monitoring trends and planning for proactive ground transportation solutions.

During the survey period MWCOC surveyors will approach agents at gates to request assistance with the following:

- Reading survey announcement over the sound system
- Reporting revenue passenger counts

Surveyors will approach passengers before the boarding process commences to conduct passenger surveys. An email will be sent this week to station managers with the desired boarding announcement.

All survey team members will be badged, but they are not expected to be wearing any vests. The point of contact is Olga Perez Pelaez at 202-962-3265. Alternatively, you may contact Shawn Ames, MAA Office of Planning, at 410-859-7089 or 410-404-3059.

**ELECTRONIC COPY
ORIGINAL ON FILE IN
AIRPORT OPERATIONS**

Gregory W. Solek
Director
Office of Airport Operations

DISTRIBUTION: B

MARYLAND AVIATION ADMINISTRATION
P. O. Box 8786, Baltimore/Washington International Airport, Maryland 21240

APPENDIX D - SURVEY MATERIALS FOR RONALD REAGAN WASHINGTON NATIONAL AIRPORT (DCA)

D-1 - Business Card

D-2 - 2023 Washington-Baltimore Regional Air Passenger Survey Questionnaire (DCA)

***Note:** Questions that start with "R" indicate that the answer was required to participate in the raffle.

D-3 - MWA Letter of Support

D-4- MWA Staff Bulletins

Appendix D-1: Business Card

Ronald Reagan Washington National Airport (DCA)

2023 Washington-Baltimore Regional Air Passenger Survey

Airport: DCA

www.DCAAirSurvey.com

We value your input!
Your responses to this survey will help improve travel options to this airport. To complete the survey and be entered into a raffle for a \$500 Amazon Gift Code, please visit our URL or scan the QR Code.



Participation is voluntary and answers are confidential.
Thank you for your participation. Safe travels!

2023 Washington-Baltimore Regional Air Passenger Survey

Airport: DCA

Who is conducting the survey?

This survey is being conducted in partnership by the Metropolitan Washington Airports Authority, Maryland Aviation Administration, and the Metropolitan Washington Council of Governments.

Is this a customer satisfaction survey?

No. The purpose of this survey is to learn about and improve travel options to the Washington-Baltimore regional airports. Your flight was randomly selected to participate in this survey.

How long will the survey take?

The survey will only take 10 minutes.

Participation is voluntary and answers are confidential.
Thank you for your participation. Safe travels!

Appendix D-2: 2023 Washington-Baltimore Regional Air Passenger Survey Questionnaire

Ronald Reagan Washington National Airport (DCA)

You and the other passengers on your flight are invited to participate in the 2023 Washington-Baltimore Regional Air Passenger Survey. Your responses to this survey will help improve travel options to this airport.

Your participation in this survey is completely voluntary and it will take about 10 minutes of your time. As a thank you for fully completing the survey, you may choose to enter a raffle to win a \$500 gift card. All responses will be compiled together and analyzed as a group to protect your confidentiality.

This survey is being conducted in partnership between the Maryland Aviation Administration, the Metropolitan Washington Airports Authority, and the Metropolitan Washington Council of Governments.

TITLE VI NONDISCRIMINATION POLICY

The Metropolitan Washington Council of Governments (COG) operates its programs without regard to race, color, and national origin and fully complies with Title VI of the Civil Rights Act of 1964 and related statutes and regulations prohibiting discrimination in all programs and activities. For more information, to file a Title VI related complaint, or to obtain information in another language, visit www.mwcog.org/nondiscrimination or call (202) 962-3300.

El Consejo de Gobiernos del Área Metropolitana de Washington (COG) opera sus programas sin tener en cuenta la raza, el color, y el origen nacional y cumple con el Título VI de la Ley de Derechos Civiles de 1964 y los estatutos y reglamentos relacionados que prohíben la discriminación en todos los programas y actividades. Para más información, presentar una queja relacionada con el Título VI, u obtener información en otro idioma, visite www.mwcog.org/nondiscrimination o llame al (202) 962-3300.

Direct general questions about the survey to RegionalAirPassengerSurvey@mwkog.org, and direct technical questions about this web-based interface to Nicholas.Book@icf.com

If you consent to participate, select, “yes, I consent” below.

Yes, I consent _ Continue the survey

No _ Finish the survey

AIRLINE AND FLIGHT

R-Q1. What airline are you taking today? _ DROP DOWN

1. Air Canada
2. Alaska Airlines
3. American Airlines
4. Delta Air Lines
5. Frontier Airlines
6. Jetblue

R-Q2. What is the flight number?

Option 1 _ DROP DOWN

1. 8785
2. 8822
3. 8870
4. 5
5. 7

Option 2: My flight is not listed _ TEXT BOX

What is your flight number? _ TEXT BOX

A. ABOUT YOUR TRIP TODAY

R-Q-A1. How did you get to Ronald Reagan Washington National Airport for this trip?

1. By GROUND TRANSPORTATION (e.g., car, taxi, ride-hailing, Metro, etc.) _ Continue the survey
Q-A2
2. I was on this flight when it arrived at this airport. _ Finish the survey

3. I made a connection at this airport from a DOMESTIC FLIGHT. _ Finish the survey
 - a. With which airline did you fly in today? _ Finish the survey
4. I made a connection at this airport from an INTERNATIONAL FLIGHT. _ Finish the survey
 - a. With which airline did you fly in today? _ Finish the survey

R-Q-A2. What is the final destination for your travel (following air travel and any additional connections for ground transportation)? For countries outside of the United States, delete “United States” and begin typing for a drop down list of countries and select country. _ list all countries _
 DROP DOWN

1. United States _ Continue the survey Q-A2a
 2. Afghanistan _ Continue the survey Q-A3
 3. Albania _ Continue the survey Q-A3
 4. Algeria _ Continue the survey Q-A3
 5. Andorra _ Continue the survey Q-A3
- Q-A2a.** State/Territory _ list all State/Territory of the US _ DROP DOWN
1. Alabama (AL)
 2. Alaska (AK)
 3. American Samoa (AS)
- Q-A2b.** City _ TEXT BOX

- Q-A3.** What is the primary purpose of your trip?
1. Business related to the federal government (including military)
 2. Business related to state or local government
 3. Business that is not related to government
 4. Leisure, vacation, or holiday
 5. Personal or family affairs
 6. Student or school related
 7. Other, please specify _ TEXT BOX

B. ABOUT YOUR GROUND TRIP TO RONALD REAGAN WASHINGTON NATIONAL AIRPORT

Q-B1. To help us understand your route to the airport and plan improvements, what is the approximate location of the place you started your ground trip to this airport?

1. My home
2. Someone else’s home
3. Hotel/Motel
4. Short term rental (e.g., Airbnb, VRBO)
5. My regular place of employment
6. Another place of business
7. Other, please specify _ TEXT BOX

Q-B2. What is the location of the place you started your trip today? You can also drag and drop a pin in the general area of the location on the map.

Option to search the address on google maps. _ TEXT BOX

Q-B3. What time did you begin your trip to the airport today? _ DROP DOWN

1. 12:00 AM
2. 12:15 AM
3. 12:30 AM
4. 12:45 AM

Q-B4. What time did you arrive at the airport today? _ DROP DOWN 12:00 AM

1. 12:15 AM
2. 12:30 AM
3. 12:45 AM

R-Q-B5. INCLUDING YOURSELF, how many people who came to the airport with you are on your flight today? _ DROP DOWN

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8 or more. Type a number between 8 and 99. _ TEXT BOX

R-Q-B6. What was your primary mode of travel to this airport today?

1. Private Car _ Continue the survey Q-B6a, Q-B6b, Q-B6c, and Q-B6d
2. Rented Car _ Continue the survey Q-B6a
3. Taxi _ Continue the survey Q-B6a
4. Ride-hailing (e.g., Uber, Lyft) _ Continue the survey Q-B6a
5. Airport van/limo (e.g., SuperShuttle)
6. Hotel/Motel courtesy bus
7. Metrorail
8. VRE
9. Metrobus
10. Walked from place where your trip started today
11. Biked from place where your trip started today
12. Other, please specify _ TEXT BOX

Q-B6a. Did you carpool with someone else?

1. Yes
2. No

Q-B6b. Were you dropped off at the terminal curbside?

1. Yes
2. No

Q-B6c. Where was that vehicle parked (after drop-off)?

1. It was not parked
2. Short term/hourly parking lot
3. Long term/daily parking garage
4. Long term/economy parking lot
5. Valet parking
6. Off-airport private parking
7. Other, please specify _ TEXT BOX

Q-B6d. Did you plug into an Electric Vehicle (EV) charging station?

1. Yes
2. No

Q-B7. What was your MAIN reason for choosing your mode of GROUND transportation to this airport TODAY?

1. Cost
2. Reliability
3. Travel Time
4. Convenience
5. Comfort
6. Other, please specify _ TEXT BOX

C. ABOUT YOUR AIRPORT CHOICE

Q-C1. Rank the three most important reasons for choosing Ronald Reagan Washington National Airport for your flight today. Please drag your top 3 choices into the empty box to indicate your answers.

1. Closest airport
2. Easy road access
3. Easy access by Metrorail or public transit
4. Convenient van/limo or shuttle bus service
5. Good parking facilities
6. More convenient flight times
7. Less expensive airfare
8. Only airport with non-stop flights
9. Only airport that serves my destination
10. Frequent flyer/airline loyalty program
11. Other _ Continue the survey Q-C1a

Q-C1a. Please specify any other reasons for choosing Ronald Reagan Washington National Airport for your flight today. _ TEXT BOX

Q-C2. Rank the region's airports in your order of preference. Please drag your top 3 choices into the empty box to indicate your answers.

1. Washington Dulles International (IAD)
2. Reagan Washington National (DCA)
3. Baltimore/Washington International Marshall (BWI)

D. ABOUT YOURSELF

We have a few additional questions to ask which will help us improve transportation options to this airport. **It will be treated with strict confidentiality.**

Q-D1. Are you visiting the local area or do you live here?

1. Visiting the Washington-Baltimore area _ Continue the survey Q-D1a

Q-D1a. How many nights did you stay in the area? Type "0" if you arrived today. _ TEXT BOX

2. Live in the Washington-Baltimore area _ Continue the survey Q-D1b

Q-D1b. How many nights will you be away? Type "0" if you will return today. _ TEXT BOX

R-Q-D2. What is the location of your current residence? For countries outside of the United States, delete "United States" and begin typing for a drop down list of countries and select country. Country:

_ list all countries _ DROP DOWN

1. United States _ Continue the survey Q-D2a, Q-D2b, Q-D2c
2. Afghanistan _ Continue the survey Q-D3
3. Albania _ Continue the survey Q-D3
4. Algeria _ Continue the survey Q-D3
5. Andorra _ Continue the survey Q-D3

Q-D2a. State/Territory _ list all State/Territory of the US _ DROP DOWN

1. Alabama (AL)
2. Alaska (AK)
3. American Samoa (AS)

Q-D2b. City _ TEXT BOX

Q-D2c. Zip Code _ TEXT BOX

These last few questions about yourself will help us improve transportation options to this airport and your answers will be de-identified and kept strictly confidential.

Q-D3. How many people live in your household, including yourself? _ DROP DOWN

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8 or more

Q-D4. Select your age group:

1. Under 18 years old _ Finish the survey
2. 18 – 24 years old
3. 25 – 34 years old
4. 35 – 44 years old
5. 45 – 54 years old
6. 55 – 64 years old
7. 65 years or older

Q-D5. What is your household's total annual income?

1. Less than \$25,000
2. \$25,000--\$49,999
3. \$50,000--\$99,999
4. \$100,000--\$149,999
5. \$150,000--\$199,999
6. \$200,000 or more

Describe your typical mode of travel to this airport:

Q-D6. Before the COVID-19 pandemic (i.e., before March 2020)?

1. Drive by yourself or with a family member, friend, etc.
2. Taxi or ride-hail (e.g., Uber, Lyft)
3. Public transit
4. Other, please specify _ TEXT BOX
5. Not applicable/do not live in the region.

Q-D7. Now and in the future?

1. Drive by yourself or with a family member, friend, etc.
2. Taxi or ride-hail (e.g., Uber, Lyft)
3. Public transit
4. Other, please specify _ TEXT BOX

Q-D8. Why has your mode of travel changed? _ TEXT BOX

E. YOUR EXPERIENCE AT THE AIRPORT

Q-E1. Which TSA security lane did you use?

1. Regular
2. TSA PreCheck
3. CLEAR
4. Priority

Q-E2. Where did you check your baggage?

1. Curbside
2. Kiosk
3. Ticket counter agent
4. Gate agent
5. Did not check baggage

Q-E3. Where did you obtain your boarding pass for your flight?

1. Mobile boarding pass from cell phone or tablet
2. Printed boarding pass at kiosk
3. Printed boarding pass from airport ticket counter
4. Printed boarding pass at home
5. Other, please specify _ TEXT BOX

Q-E4. How much did you spend on airport concessions during your visit? (Include expenses only within the airport terminal area such as food, souvenirs, spa visit, etc. Do not include expenses outside of the airport terminal area such as parking.)

1. \$0
2. \$1–\$24
3. \$25–\$49
4. \$50–\$99
5. \$100 or more

F. RAFFLE

Q-F1. Do you wish to provide contact information to be included in the raffle for the gift card?

1. Yes
2. No _ Finish the survey

Please answer the following questions to participate in the raffle.

R-Q-F2. What is the primary purpose of your trip?

1. Business related to the federal government (including military)
2. Business related to state or local government
3. Business that is not related to government
4. Leisure, vacation, or holiday
5. Personal or family affairs
6. Student or school related
7. Other, please specify _ TEXT BOX

R-Q-F3. To help us understand your route to the Airport and plan improvements, what is the approximate location of the place you started your ground trip to this airport?

1. My home
2. Someone else's home
3. Hotel/Motel
4. Short term rental (e.g., Airbnb, VRBO)
5. My regular place of employment
6. Another place of business
7. Other, please specify _ TEXT BOX

R-Q-F4. What is the location of the place you started your trip today? You can also drag and drop a pin in the general area of the location on the map.

Option to search the address on google maps. _ TEXT BOX

R-Q-F5. What time did you begin your trip to the airport today? _ DROP DOWN

1. 12:00 AM
2. 12:15 AM
3. 12:30 AM

R-Q-F6. What time did you arrive at the airport today? _ DROP DOWN

1. 12:00 AM
2. 12:15 AM
3. 12:30 AM

If you wish to be entered into the raffle drawing, please provide contact information below:

R-Q-F7. First and Last Name _ TEXT BOX

R-Q-F8. Email _ TEXT BOX

R-Q-F9. Phone (10-digit US numbers only, no dashes or spaces) _ TEXT BOX

R-Q-F10. Please write any comments you would like to share. _ TEXT BOX

Appendix D-3: MWAA Letter of Support

Ronald Reagan Washington National Airport (DCA)

Metropolitan Washington
Airports Authority
1 Aviation Circle
Washington, DC 20001-6000



October 1, 2023

Dear DCA Gate Agent,

The 2023 Washington-Baltimore Regional Air Passenger Survey is being conducted in partnership between the Maryland Aviation Administration, the Metropolitan Washington Airports Authority, and the Metropolitan Washington Council of Governments. The purpose of this survey is to help improve how people travel to the airport.

- The pretest survey was conducted at Dulles International Airport (IAD) in April 2023
- The full-scale survey will be conducted at Dulles International Airport (IAD) and Reagan National Airport (DCA) during the entire month of October 2023

Trained survey staff will approach passengers at selected gates to invite them to participate in a survey using a handheld tablet or a personal mobile device using a QR code. The survey will take passengers about ten minutes to complete. Participation in the survey is voluntary and the responses from the survey will be only used for airport planning and regional transportation planning purposes. Passengers who do not have enough time to complete the survey before their flight will be handed a business card with the QR code.

Survey staff will arrive at the gate about 1 to 2.5 hours prior to the scheduled departure time of the flight. They will introduce themselves to the gate agents and ask them to read an announcement twice before the pre-board announcements. Survey staff will be required to complete a full day of orientation and training to ensure that proper protocols are being followed so that it is not disruptive to gate agents and passengers.

MWAA requests your cooperation in allowing survey staff to approach passengers at the gates prior to boarding for the full-scale survey period. Questions or concerns about the Regional Air Passenger Survey should be directed to the Metropolitan Washington Council of Governments at RegionalAirPassengerSurvey@mwkog.org.

If you have any questions or need additional information, please contact me at MWAA-Planning Department at 703-572-0264 or directly via Mobile at 703-981-6244.

Sincerely,

A handwritten signature in black ink, appearing to read "Glen Warren".


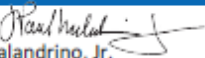
Glen Warren, PE
Airport-Landside Planner
MWAA-Planning Department

Dulles International | Reagan National | Dulles Toll Road
mwaa.com



Appendix D-4: MWA Airport Bulletin

Ronald Reagan Washington National Airport (DCA)

AIRPORT BULLETIN			
 REAGAN NATIONAL			
2023 Baltimore – Washington Regional Air Passenger Survey			
<p>On select days between Sunday, October 8th, through Sunday, October 29th, the 2023 Baltimore – Washington Regional Air Passenger Survey is being conducted to help improve how people travel to the airport. Trained survey staff will obtain and wear a DCA badge for easy identification. They will approach passengers at selected aircraft gates to invite them to participate in a survey using a handheld tablet or a personal mobile device with a QR code.</p> <p>Participation in the survey is voluntary and the responses from the survey will be only used for airport planning and regional transportation planning purposes. Passengers who do not have enough time to complete the survey before their flight will be handed a business card with the QR code.</p> <p>The Metropolitan Washington Airports Authority requests your cooperation in allowing survey staff to approach passengers at the gates prior to boarding.</p>			
<small>Please ensure that your employees are aware of this activity. If you have questions or need additional information, please contact the originator as indicated or the Airport Manager's Office at 703-417-8003.</small>			
APPROVAL:  J. Paul Malandrino, Jr. Vice President and Airport Manager	PHONE: 703-417-8003	BULLETIN #: 2023-09-28	DATE: September 28, 2023

APPENDIX E - SURVEY MATERIALS FOR WASHINGTON DULLES INTERNATIONAL AIRPORT (IAD)

E-1 - Business Card

E-2 - 2023 Washington-Baltimore Regional Air Passenger Survey Questionnaire (IAD)

***Note:** Questions that start with "R" indicate that the answer was required to participate in the raffle.

E-3 - MWA Letter of Support

E-4- MWA Staff Bulletins

Appendix E-1: Business Card

Washington Dulles International Airport (IAD)

<p>2023 Washington-Baltimore Regional Air Passenger Survey Airport: IAD</p> <p>www.IADAirSurvey.com</p> <p>We value your input! Your responses to this survey will help improve travel options to this airport. To complete the survey and be entered into a raffle for a \$500 Amazon Gift Code, please visit our URL or scan the QR Code.</p>  <p>Participation is voluntary and answers are confidential. Thank you for your participation. Safe travels!</p>	<p>2023 Washington-Baltimore Regional Air Passenger Survey Airport: IAD</p> <p>Who is conducting the survey? This survey is being conducted in partnership by the Metropolitan Washington Airports Authority, Maryland Aviation Administration, and the Metropolitan Washington Council of Governments.</p> <p>Is this a customer satisfaction survey? No. The purpose of this survey is to learn about and improve travel options to the Washington-Baltimore regional airports. Your flight was randomly selected to participate in this survey.</p> <p>How long will the survey take? The survey will only take 10 minutes.</p> <p>Participation is voluntary and answers are confidential. Thank you for your participation. Safe travels!</p>
--	---

Appendix E-2: 2023 Washington-Baltimore Regional Air Passenger Survey Questionnaire

Washington Dulles International Airport (IAD)

You and the other passengers on your flight are invited to participate in the 2023 Washington-Baltimore Regional Air Passenger Survey. Your responses to this survey will help improve travel options to this airport.

Your participation in this survey is completely voluntary and it will take about 10 minutes of your time. As a thank you for fully completing the survey, you may choose to enter a raffle to win a \$500 gift card. All responses will be compiled together and analyzed as a group to protect your confidentiality.

This survey is being conducted in partnership between the Maryland Aviation Administration, the Metropolitan Washington Airports Authority, and the Metropolitan Washington Council of Governments.

TITLE VI NONDISCRIMINATION POLICY

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El Consejo de Gobiernos del Área Metropolitana de Washington (COG) opera sus programas sin tener en cuenta la raza, el color, y el origen nacional y cumple con el Título VI de la Ley de Derechos Civiles de 1964 y los estatutos y reglamentos relacionados que prohíben la discriminación en todos los programas y actividades. Para más información, presentar una queja relacionada con el Título VI, u obtener información en otro idioma, visite www.mwcog.org/nondiscrimination o llame al (202) 962-3300.

Direct general questions about the survey to RegionalAirPassengerSurvey@mwcog.org, and direct technical questions about this web-based interface to Nicholas.Book@icf.com

If you consent to participate, select, “yes, I consent” below.

Yes, I consent _ Continue the survey

No _ Finish the survey

AIRLINE AND FLIGHT

R-Q1. What airline are you taking today? _ DROP DOWN

1. Aer Lingus
2. Air Canada
3. Air France
4. Alaska Airlines
5. Allegiant Air

Other airline _ TEXT BOX

R-Q2. What is the flight number?

Option 1 _ DROP DOWN

1. 116
2. 247
3. 853
4. 8617
5. 8724

Option 2: My flight is not listed _ TEXT BOX

What is your flight number? _ TEXT BOX

A. ABOUT YOUR TRIP TODAY

R-Q-A1. How did you get to Washington Dulles International Airport for this trip?

1. By GROUND TRANSPORTATION (e.g., car, taxi, ride-hailing, Metro, etc.) _ Continue the survey Q-A2
2. I was on this flight when it arrived at this airport. _ Finish the survey
3. I made a connection at this airport from a DOMESTIC FLIGHT. _ Finish the survey
 - a. With which airline did you fly in today? _ Finish the survey
4. I made a connection at this airport from an INTERNATIONAL FLIGHT. _ Finish the survey
 - a. With which airline did you fly in today? _ Finish the survey

R-Q-A2. What is the final destination for your travel (following air travel and any additional connections for ground transportation)? For countries outside of the United States, delete “United States” and begin typing for a drop down list of countries and select country. _ list all countries _

DROP DOWN

1. United States _ Continue the survey Q-A2a
 2. Afghanistan _ Continue the survey Q-A3
 3. Albania _ Continue the survey Q-A3
 4. Algeria _ Continue the survey Q-A3
 5. Andorra _ Continue the survey Q-A3
- Q-A2a.** State/Territory _ list all State/Territory of the US _ DROP DOWN
1. Alabama (AL)
 2. Alaska (AK)
 3. American Samoa (AS)
- Q-A2b.** City _ TEXT BOX

Q-A3. What is the primary purpose of your trip?

1. Business related to the federal government (including military)
2. Business related to state or local government
3. Business that is not related to government
4. Leisure, vacation, or holiday
5. Personal or family affairs
6. Student or school related
7. Other, please specify _ TEXT BOX

B. ABOUT YOUR GROUND TRIP TO WASHINGTON DULLES INTERNATIONAL AIRPORT

Q-B1. To help us understand your route to the airport and plan improvements, what is the approximate location of the place you started your ground trip to this airport?

1. My home
2. Someone else's home
3. Hotel/Motel
4. Short term rental (e.g., Airbnb, VRBO)
5. My regular place of employment
6. Another place of business
7. Other, please specify

Q-B2. What is the location of the place you started your trip today? You can also drag and drop a pin in the general area of the location on the map. Please select "Lookup Address" or your answer will not be saved.

Option to search the address on google maps.

Q-B3. What time did you begin your trip to the airport today?

1. 12:00 AM
2. 12:15 AM
3. 12:30 AM
4. 12:45 AM

Q-B4. What time did you arrive at the airport today?

1. 12:00 AM
2. 12:15 AM
3. 12:30 AM
4. 12:45 AM

R-Q-B5. INCLUDING YOURSELF, how many people who came to the airport with you are on your flight today?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8 or more. Type a number between 8 and 99.

R-Q-B6. What was your primary mode of travel to this airport today?

1. Private Car _ Continue the survey Q-B6a, Q-B6b, Q-B6c, and Q-B6d
2. Rented Car _ Continue the survey Q-B6a
3. Taxi _ Continue the survey Q-B6a
4. Ride-hailing (e.g., Uber, Lyft) _ Continue the survey Q-B6a
5. Airport van/limo (e.g., SuperShuttle)
6. Hotel/Motel courtesy bus
7. Metrorail (Silver Line)
8. Metrobus/Fairfax Connector
9. Walked from place where your trip started today
10. Biked from place where your trip started today
11. Other, please specify _ TEXT BOX

R-Q-B6. What was your primary mode of travel to this airport today?

1. Private Car _ Continue the survey Q-B6a, Q-B6b, Q-B6c, and Q-B6d
2. Rented Car _ Continue the survey Q-B6a
3. Taxi _ Continue the survey Q-B6a
4. Ride-hailing (e.g., Uber, Lyft) _ Continue the survey Q-B6a
5. Airport van/limo (e.g., SuperShuttle)
6. Hotel/Motel courtesy bus
7. Metrorail (Silver Line)
8. Metrobus/Fairfax Connector
9. Walked from place where your trip started today
10. Biked from place where your trip started today
11. Other, please specify _ TEXT BOX

Q-B6a. Did you carpool with someone else?

1. Yes
2. No

Q-B6b. Were you dropped off at the terminal curbside?

1. Yes
2. No

Q-B6c. Where was that vehicle parked (after drop-off)?

1. It was not parked
2. Short term/hourly parking lot
3. Long term/daily parking garage
4. Long term/economy parking lot
5. Valet parking
6. Off-airport private parking
7. Other, please specify _ TEXT BOX

Q-B6d. Did you plug into an Electric Vehicle (EV) charging station?

1. Yes
2. No

Q-B7. What was your MAIN reason for choosing your mode of GROUND transportation to this airport TODAY?

1. Cost
2. Reliability
3. Travel Time
4. Convenience
5. Comfort
6. Other, please specify _ TEXT BOX

C. ABOUT YOUR AIRPORT CHOICE

Q-C1. Rank the three most important reasons for choosing Washington Dulles International Airport for your flight today. Please drag your top 3 choices into the empty box to indicate your answers.

1. Closest airport
2. Easy road access
3. Easy access by Metrorail or public transit
4. Convenient van/limo or shuttle bus service
5. Good parking facilities
6. More convenient flight times
7. Less expensive airfare
8. Only airport with non-stop flights
9. Only airport that serves my destination
10. Frequent flyer/airline loyalty program
11. Other _ Continue the survey Q-C1a

Q-C1a. Please specify any other reasons for choosing Washington Dulles International Airport for your flight today. _ TEXT BOX

Q-C2. Rank the region's airports in your order of preference. Please drag your top 3 choices into the empty box to indicate your answers.

1. Washington Dulles International (IAD)
2. Reagan Washington National (DCA)
3. Baltimore/Washington International Marshall (BWI)

D. ABOUT YOURSELF

We have a few additional questions to ask which will help us improve transportation options to this airport. **It will be treated with strict confidentiality.**

Q-D1. Are you visiting the local area or do you live here?

1. Visiting the Washington-Baltimore area _ Continue the survey Q-D1a
Q-D1a. How many nights did you stay in the area? Type "0" if you arrived today. _ TEXT BOX
2. Live in the Washington-Baltimore area _ Continue the survey Q-D1b
Q-D1b. How many nights will you be away? Type "0" if you will return today. _ TEXT BOX

R-Q-D2. What is the location of your current residence? For countries outside of the United States, delete “United States” and begin typing for a drop down list of countries and select country. Country:

_ list all countries _ DROP DOWN

1. United States _ Continue the survey Q-D2a, Q-D2b, Q-D2c
2. Afghanistan _ Continue the survey Q-D3
3. Albania _ Continue the survey Q-D3
4. Algeria _ Continue the survey Q-D3
5. Andorra _ Continue the survey Q-D3

Q-D2a. State/Territory _ list all State/Territory of the US _ DROP DOWN

1. Alabama (AL)
2. Alaska (AK)
3. American Samoa (AS)

Q-D2b. City _ TEXT BOX

Q-D2c. Zip Code _ TEXT BOX

These last few questions about yourself will help us improve transportation options to this airport and your answers will be de-identified and kept strictly confidential.

Q-D3. How many people live in your household, including yourself? _ DROP DOWN

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8 or more

Q-D4. Select your age group:

1. Under 18 years old _ Finish the survey
2. 18 – 24 years old
3. 25 – 34 years old
4. 35 – 44 years old
5. 45 – 54 years old
6. 55 – 64 years old
7. 65 years or older

Q-D5. What is your household’s total annual income?

1. Less than \$25,000
2. \$25,000--\$49,999
3. \$50,000--\$99,999
4. \$100,000--\$149,999
5. \$150,000--\$199,999
6. \$200,000 or more

Describe your typical mode of travel to this airport:

Q-D6. Before the COVID-19 pandemic (i.e., before March 2020)?

1. Drive by yourself or with a family member, friend, etc.
2. Taxi or ride-hail (e.g., Uber, Lyft)
3. Public transit
4. Other, please specify _ TEXT BOX
5. Not applicable/do not live in the region.

Q-D7. Now and in the future?

1. Drive by yourself or with a family member, friend, etc.
2. Taxi or ride-hail (e.g., Uber, Lyft)
3. Public transit
4. Other, please specify _ TEXT BOX

Q-D8. Why has your mode of travel changed? _ TEXT BOX

E. YOUR EXPERIENCE AT THE AIRPORT

Q-E1. Which TSA security lane did you use?

1. Regular
2. TSA PreCheck
3. CLEAR
4. Priority

Q-E2. Where did you check your baggage?

1. Curbside
2. Kiosk
3. Ticket counter agent
4. Gate agent
5. Did not check baggage

Q-E3. Where did you obtain your boarding pass for your flight?

1. Mobile boarding pass from cell phone or tablet
2. Printed boarding pass at kiosk
3. Printed boarding pass from airport ticket counter
4. Printed boarding pass at home
5. Other, please specify _ TEXT BOX

Q-E4. How much did you spend on airport concessions during your visit? (Include expenses only within the airport terminal area such as food, souvenirs, spa visit, etc. Do not include expenses outside of the airport terminal area such as parking.)

1. \$0
2. \$1–\$24
3. \$25–\$49
4. \$50–\$99
5. \$100 or more

F. RAFFLE

Q-F1. Do you wish to provide contact information to be included in the raffle for the gift card?

1. Yes
2. No _ Finish the survey

Please answer the following questions to participate in the raffle.

R-Q-F2. What is the primary purpose of your trip?

1. Business related to the federal government (including military)
2. Business related to state or local government
3. Business that is not related to government
4. Leisure, vacation, or holiday
5. Personal or family affairs
6. Student or school related
7. Other, please specify _ TEXT BOX

R-Q-F3. To help us understand your route to the Airport and plan improvements, what is the approximate location of the place you started your ground trip to this airport?

1. My home
2. Someone else's home
3. Hotel/Motel
4. Short term rental (e.g., Airbnb, VRBO)
5. My regular place of employment
6. Another place of business
7. Other, please specify _ TEXT BOX

R-Q-F4. What is the location of the place you started your trip today? You can also drag and drop a pin in the general area of the location on the map.

Option to search the address on google maps. _ TEXT BOX

R-Q-F5. What time did you begin your trip to the airport today? _ DROP DOWN

1. 12:00 AM
2. 12:15 AM
3. 12:30 AM

R-Q-F6. What time did you arrive at the airport today? _ DROP DOWN

1. 12:00 AM
2. 12:15 AM
3. 12:30 AM

If you wish to be entered into the raffle drawing, please provide contact information below:

R-Q-F7. First and Last Name _ TEXT BOX

R-Q-F8. Email _ TEXT BOX

R-Q-F9. Phone (10-digit US numbers only, no dashes or spaces) _ TEXT BOX

R-Q-F10. Please write any comments you would like to share. _ TEXT BOX

Appendix E-3: MWAA Letter of Support

Washington Dulles International Airport (IAD)

Metropolitan Washington
Airports Authority
1 Aviation Circle
Washington, DC 20001-6000



October 1, 2023

Dear IAD Gate Agent,

The 2023 Washington-Baltimore Regional Air Passenger Survey is being conducted in partnership between the Maryland Aviation Administration, the Metropolitan Washington Airports Authority, and the Metropolitan Washington Council of Governments. The purpose of this survey is to help improve how people travel to the airport.

- The pretest survey was conducted at Dulles International Airport (IAD) in April 2023
- **The full-scale survey will be conducted at Dulles International Airport (IAD) and Reagan National Airport (DCA) during the entire month of October 2023**

Trained survey staff will approach passengers at selected gates to invite them to participate in a survey using a handheld tablet or a personal mobile device using a QR code. The survey will take passengers about ten minutes to complete. Participation in the survey is voluntary and the responses from the survey will be only used for airport planning and regional transportation planning purposes. Passengers who do not have enough time to complete the survey before their flight will be handed a business card with the QR code.

Survey staff will arrive at the gate about 1 to 2.5 hours prior to the scheduled departure time of the flight. They will introduce themselves to the gate agents and ask them to read an announcement twice before the pre-board announcements. Survey staff will be required to complete a full day of orientation and training to ensure that proper protocols are being followed so that it is not disruptive to gate agents and passengers.

MWAA requests your cooperation in allowing survey staff to approach passengers at the gates prior to boarding for the pretest and full-scale survey periods. Questions or concerns about the Regional Air Passenger Survey should be directed to the Metropolitan Washington Council of Governments at RegionalAirPassengerSurvey@mwco.org.

If you have any questions or need additional information, please contact me at MWAA-Planning Department at 703-572-0264 or directly via Mobile at 703-981-6244.

Sincerely,

A handwritten signature in black ink, appearing to read "Glen Warren".

Glen Warren, PE
Airport-Landside Planner
MWAA-Planning Department

Dulles International | Reagan National | Dulles Toll Road
mwa.com



Appendix E-4: MWAA Airport Bulletin

Washington Dulles International Airport (IAD)

AIRPORT BULLETIN			
 DULLES INTERNATIONAL			
2023 Washington-Baltimore Regional Air Passenger Survey			
<p>On select days between Sunday, October 1, through Tuesday, October 31, the 2023 Washington-Baltimore Regional Air Passenger Survey is being conducted to help improve how people travel to the airport. Trained survey staff will approach passengers at selected aircraft gates to invite them to participate in a survey using a handheld tablet or a personal mobile device with a QR code.</p> <p>Participation in the survey is voluntary and the responses from the survey will be only used for airport planning and regional transportation planning purposes. Passengers who do not have enough time to complete the survey before their flight will be handed a business card with the QR code.</p> <p>The Metropolitan Washington Airports Authority requests your cooperation in allowing survey staff to approach passengers at the gates prior to boarding.</p>			
<small>Please ensure that your employees are aware of this activity. If you have questions or need additional information, please contact the originator as indicated or the Airport Operations Office at 703-572-2730.</small>			
APPROVAL: Richard Golinowski Vice President and Airport Manager	 PHONE: 703-572-2710	BULLETIN #: 10-05-2023	DATE: October 5, 2023



National Capital Region
Transportation Planning Board

Metropolitan Washington Council of Governments
777 North Capitol Street NE, Suite 300
Washington, DC 20002

mwcog.org/tpb