

Origin-Destination Surveys for Express Bus Services

Work Order # GPC IV-16

FINAL REPORT: Survey Implementation and Summary of Raw Data.



The preparation of this report has been financed in part from the U.S. Department of Transportation (USDOT) through the Federal Highway Administration (FHWA) and/or the Federal Transit Administration (FTA), the State Planning and Research Program (Section 505 of Title 23, U.S. Code) and Miami-Dade County, Florida. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation



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Survey Implementation and Summary of Raw Data Report

March 12, 2012

Prepared by

HNTB

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1. Introduction

The Miami-Dade County Metropolitan Planning Organization (MPO) has a goal to develop a data collection program that meets the Federal Transit Administration (FTA) guidelines and that supports the transit modeling efforts in areas which anticipate seeking federal support for transit capital projects. This project, Origin-Destination Surveys for Express Bus Services (Survey), focused on two express bus routes, Route 95 and Route 195, operated by Miami-Dade Transit (MDT) and two express bus routes, Routes 107 and 108, operated by Broward County Transit (BCT).

This survey effort is a part of the MPO's on-going data collection effort to help support the Southeast Florida Regional Planning Model (SERPM) validation efforts. This Survey obtained ridership characteristics such as: origin-destination patterns, trip purpose and mode of access and egress that will support the SERPM validation efforts.

The effort was also to provide data to support MDT's plans for expansion of bus service in the urbanized Miami-Dade County. For years there has been a question about the willingness of commuters to drive beyond a certain distance to access a park and ride facility and switch modes. The results of this survey will help determine access modes of express bus riders and their willingness to travel to reach the express bus stops.

1.1. Express Bus Routes

The surveyed routes operate on managed lanes along Interstate 95 during morning and evening peak periods, generally 6 AM to 9 AM and 3 PM to 6PM. The managed lane part of the I-95 facility, branded as 95 Express, are separated from regular traffic lanes along I-95, have limited access points, and generally operate at 50 miles per hour. The minimum speed along the express lanes is maintained by variable-priced toll that adjusts to congestion levels. Express buses, motorcycles and, registered carpool, vanpool, and hybrid vehicles are allowed free access. Express buses along 95 Express generally operate from just north of I-395/SR-836 to the Golden Glades Interchange area, just north of NW 151 Street. Routes 195, 107, and 108 are primarily served by hybrid 60-ft articulated buses with seating capacity of up to 63 passengers. Route 95 is primarily served by standard 40ft buses with seating capacity of up to 43 passengers. Some of the surveyed routes had more than one alignments or patterns. A description of route patterns, route lengths, and headways is included in Table 1.

1.2. Scope of the Effort

This effort focused on survey design, survey implementation, and database development. The final product is a database that contains the collected data. While this report summarizes raw data, it is expected that a full analysis will be conducted at a later date to make this effort useful for the SERPM model validation and transit service planning. A preliminary geocoding effort was done based on the raw data. It is expected that with more useful data will become available once the dataset is fully edited and processed. The summary of raw data included in this report does not include corrections for biases, if any, or conversion of origin-destination format to production and attraction format.

Table 1: Express Bus Route Characteristics

Operator	Route #	Direction or Travel	From	To	Length (in miles)	Headway (in mins)
MDT	195	NB	NW 8 St & NW 1 Ave	Fort Lauderdale Tri-Rail	27.3	15
		SB	Fort Lauderdale Tri-Rail	NW 8 St & NW 1 Ave	25.8	15-20
MDT	195	NB	NW 8 St & NW 1 Ave	Sheridan Tri-Rail	21.3	15
		SB	Sheridan Tri-Rail	NW 8 St & NW 1 Ave	19.4	15-20
MDT	195	NB	SE 1 St & SE 1 Ave	Fort Lauderdale Tri-Rail	26.9	15
		SB	Fort Lauderdale Tri-Rail	SE 1 St & SE 1 Ave	25.4	15
MDT	95	NB	8th St & Brickell	Golden Glades East	12.9	35-55
		SB	Golden Glades East	8th St & Brickell	12.2	n/a
MDT	95	NB	Civic Center	Aventura Mall	18.2	20-50
		SB	Aventura Mall	Civic Center	18.1	30
MDT	95	NB	Brickell	Golden Glades East	12.9	10-45
		SB	Golden Glades East	Brickell	12.2	15-30
MDT	95	NB	Brickell Plaza	Golden Glades East	12.8	40
		SB	Golden Glades East	Brickell Plaza	12.1	10-45
MDT	95	NB	Civic Center	Golden Glades East	10.2	10-25
		SB	Golden Glades East	Civic Center	11.3	5-15
MDT	95	NB	Court House	Golden Glades East	12.6	n/a
MDT	95	NB	NE 36 St & 87 Ave	Golden Glades East	16.2	n/a
		SB	Golden Glades East	NW 36 St & 87 Ave	16.2	n/a
MDT	95	NB	NE 36 St & Bisc Blvd	Golden Glades East	14.5	2-30
		SB	Golden Glades East	NE 36 St & Bisc Blvd	9.3	3-30
MDT	195	NB	SE 1 St & SE 1 Ave	Sheridan Tri-Rail	20.8	15
		SB	Sheridan Tri-Rail	SE 1 St & SE 1 Ave	18.9	15
BCT	107	NB	SW 1 St & S Miami Ave	CB Smith Parking Lot	27.3	30
		SB	CB Smith Parking Lot	SW 1 St & Miami Ave	27.3	30
BCT	107	NB	NW 8 St & NW 1 Ave	CB Smith Parking Lot	27.9	30
		SB	CB Smith Parking Lot	NW 8 St & NW 1 Ave	26.6	35
BCT	108	NB	SW 1 St & Miami Ave	Miramar Town Center	19.9	Approx 30
		SB	Miramar Town Center	SW 1 St & Miami Ave	19.9	25-30
BCT	108	NB	NW 8 St & NW 1 Ave	Miramar Town Center	22.0	25-35
		SB	Miramar Town Center	NW 8 St & NW 1 Ave	19.8	25-35

2. Survey Design

2.1. Sampling Plan

The Survey was conducted over four weekdays (Table 2). The survey included all express bus trips made during morning and evening peak hours, in both northbound and southbound directions when the vehicles were in revenue service.

Table 2: Survey Dates

Route #	Operator	Survey Date	Day
195	MDT	September 27, 2011	Tuesday
107, 108	BCT	September 28, 2011	Wednesday
95	MDT	October 4 and 5, 2011	Tuesday, Wednesday

2.2. Survey Questionnaire

The survey instrument, **Appendix A**, printed in color on 8.5" x 11" cardstock, was designed as a self-completion questionnaire with mainly self-coded questions. The instrument was in two languages, English and Spanish, printed on the front and back. To ensure ease of distribution, they were printed as gummed pads of 50 each with a solid cardboard backing. Each questionnaire was pre-printed with a unique serial number, which linked each questionnaire to distribution to a specific route, run, and trip number.

The instrument consisted of 26 questions and was designed to obtain the following information:

1. Travel pattern (origin and destination);
2. Trip purpose;
3. Mode of access and egress; and,
4. Recent travel behavior
5. Passenger demographics (age, race, ethnicity, household size, vehicle availability)

The survey instrument was reviewed by the MPO, MDT, BCT, Florida Department of Transportation (FDOT), and by FTA. Their comments were incorporated into the survey instrument.

2.3. Methodology

The survey data collection focused on two parts: (1) passenger door counts; and, (2) a survey. The passenger door counts were taken by stop location or by segment inside the vehicle for all trips in revenue service. Surveyors offered survey questionnaires to everyone entering the bus after they paid the fare. Each vehicle included at least two surveyors; one was primarily responsible for passenger door counts and the other one primarily responsible for survey distribution, collection, and assistance. The second surveyor assisted with passenger counts at the time of

alighting when two or three, as in the case of articulated buses, doors were being used by passengers to alight. When the vehicle was in motion, both surveyors encouraged people to fill out the survey and provided assistance as necessary and as time permitted. Some trips, especially those made by Routes 195, 107, and 108 had three surveyors per bus. These routes are primarily served by articulated buses that have larger passenger seating capacity and therefore additional support staff was provided. Each vehicle had at least one professional from consultant firms, MPO, MDT, and South Florida Commuter Service (SFCS). Most vehicles included two or three professionals. Temporary employees, staffed by Express Personnel, were hired to assist professionals. Surveyors were assigned to different runs. For the purpose of this survey, a bus run was defined as a collection of trips that a bus makes when it is in service. A run may consist one just one trip or up to five trips during peak periods. Each team of surveyors left and returned with buses from garages. The portion from a garage to the first stop, when the bus was not in revenue service, is not reflected in arrivals and departure times.

The counts were conducted by stations or by segments. The surveyor responsible for counting was given a pair of mechanical counters to assist in the accuracy of their counts. They were instructed to count the passenger boardings and alightings (on/off). A form was developed to record the door counts (**Appendix B**).

Surveys were collected in a survey return envelope at the end of each trip. This provided a mechanism to check where each passenger began their express bus trip and a way to verify direction and time of day. Professional staff collected surveys, placed them in return envelopes at the end of each trip, and returned to a designated person at respective garages. A list of garages is included in Table 3.

Table 3: Garage Location by Route

Route #	Operator	Survey Date	Garage Name	Garage Location
195	MDT	September 27, 2011	Northeast Garage	360 NE 185 St, Miami, FL 33179
107, 108	BCT	September 28, 2011	Ravenswood Garage	5440 Ravenswood Rd, Fort Lauderdale, FL 33312
95	MDT	October 4 and 5, 2011	Northeast and Central Garages	<i>Northeast Garage</i> - 360 NE 185 St, Miami, FL 33179 <i>Central Garage</i> - 3300 Northwest 32 Ave, Miami, FL 33142

3. Implementation

3.1. Training

It was of critical importance that the personnel tasked with distributing and collecting the survey instrument were trained to do more than simply hand out the survey. The temporary surveyors were pre-screened to have the following desirable characteristics: previous experience with similar surveys, well-groomed, able to stand for long periods of time, comfortable approaching strangers, attention to detail, persistence, and courteous. In addition, all surveyors were properly and adequately identifiable with official name tags.

All surveyors were required to attend a comprehensive one-hour training session conducted on September 26, 2011. The training consisted of the following:

- Survey overview – the purpose, design, and methodology of the survey
- Express bus routes - a brief description of the express bus routes
- Training – the detailed functions, duties, and responsibilities.
- Survey Instrument – questions and possible answers were explained and discussed to ensure that all surveyors understood the questions asked and the reason behind them. It was emphasized that returned surveys should be quickly reviewed, if time permitted.
- Logistics – the logistics arriving at the MDT and BCT garages, parking, and checking in and out were explained. The procedures for distributing and collecting the surveys and record keeping were carefully explained.
- A role-playing exercise – different trip patterns were given and surveyors were asked to complete the survey form.

3.2. Survey Implementation

The survey was conducted over two weeks on four weekdays. Survey Garage Supervisors arrived at their assigned garages by 4:00 AM on the day of the survey. Station Garage Supervisors signed in the surveyors and distributed their supplies which consisted of identification badge, surveys, survey return envelopes with the passenger count form pasted on top, pens, mechanical counters, and an apron to help store supplies.

Transit agency dispatchers at all garages instructed drivers to make the announcements at the time of their trip assignment. Surveyors reminded drivers to make announcements encouraging passengers to fill out the survey after the bus left the first stop. While on-board, surveyors offered a survey to everyone over the age of 12 entering the bus after they completed fare payment. Pens were offered to passengers to record their answers and as a token incentive for filling out the survey. Surveyors were trained to encourage all passengers to take and fill out the survey. After surveyors completed survey distribution, they offered assistance or conducted interviews of those who refused

or needed assistance. Many of the surveyors were bi-lingual, so they were able to provide assistance in English and Spanish. Surveyors were trained to quickly check accuracy of completed questions while collecting the survey. Surveys were collected as soon as they were completed or at the time of alighting. Each trip had an assigned survey return envelope which was used to securely store the returned surveys.

At the end of the survey day, the Garage Supervisor collected all survey return envelopes with count sheet on top, supplies, and noted any discrepancy.

A total of 265 in-service trips were surveyed (Table 4). Two trips, that were supposed to be dead-heads according to paddles provided by transit agencies, were found to be in-service. This occurred in non-peak directions which are northbound during morning peak period and southbound during evening peak period. There were up to three passengers on each of these trips. Survey instruments were distributed, collected, and compiled if the vehicle was in-service.

Table 4: Number of Trips by Route and Time of Day

Time of Day / Route Number	Route Number				Total
	95	107	108	195	
AM	78	11	9	40	138
PM	63	10	15	39	127
Number of Surveyed Trips	141	21	24	79	265

3.3. Data Input

The count data recorded on the count forms recording the on/off's for each trip was input into a Microsoft Excel spreadsheet. The data collected from the on-board counts were entered manually into a Microsoft Access database.

4. Minimization/Mitigation of Non-Response Bias

The Express Bus Survey was designed and implemented to maximize the response rate while minimizing non-response bias. A description of the strategies that were used to minimize non-response bias is included below:

4.1. Survey Instrument

The survey instrument is critically important when it comes to mitigation of non-response bias. Typically shorter survey instruments are more likely to be completed than longer ones. The complexity of the questions on the instrument was also an important consideration because respondents are less likely to complete the survey if it contains complicated language or concepts that are difficult for riders to understand. As previously mentioned, the survey instrument was analyzed and approved by various agencies in the region.

4.2. Implementation

The implementation methodology focused on two primary strategies to minimize non-response bias: 1) utilization of trained personnel, and 2) utilization of specific methods that are designed to encourage respondents to complete the survey.

- A pretest was conducted on four trips on September 9, 2011 to review how the questions were understood and answered by the rider. Based on the results of this pretest, the questionnaire was revised slightly prior to the survey.
- The survey was advertised in advance of implementation to give riders a “heads-up” that the survey would occur. Large color signs were posted at major stops such as two park-and-ride lots at Golden Glades Tri-Rail Station, Sheridan Tri-Rail Station, Broward Tri-Rail Station, C. B. Smith Park and Ride stop. These major stops were determined based on Automatic Passenger Count data obtained from transit agencies in preparation for the survey.
- Surveyors were trained to strongly encourage participation. The willingness of potential respondents to complete the survey cannot be controlled, but the number and quality of responses can be improved by training surveyors to be enthusiastic, knowledgeable (about the purpose of the survey), and diligent in the completed survey collection.
- The goal of the staffing plan was to maintain a diverse staff in each trip, increasing the odds that unlikely respondents that are non-English speaking have an opportunity to participate in the survey. The language proficiencies of all survey staff, both professional and temporary, were identified during the staffing plan.



With this information, the staff, wherever possible, was assigned to selected trips to maximize the language competencies.

- All survey staff was required to attend a comprehensive training. As mentioned in Section 4.1, they were trained to appropriately react to unexpected situations and properly explain the survey purpose.
- Each surveyor carried an approval letter provided by MDT and BCT. These letters helped establish legitimacy. Driver announcements also helped establish legitimacy of the effort.

It is recommended that the survey data be carefully analyzed to identify non-response bias.

5. Survey Response

5.1. Overall Response

On the survey days, a total of 4,811 passengers boarded the surveyed routes. The surveyors distributed 4,157 questionnaires and collected 4,096. The survey return rate was 99% based on the total number of surveys collected. The return rate is calculated as follows:

$$\text{Return Rate (\%)} = \frac{\text{Completed Questionnaires}}{\text{Distributed Questionnaires}} = \frac{4,096}{4,157} = 98.53\%$$

The overall response rate based on number of passengers counts was 85%. The response rate is calculated as follows:

$$\text{Reponse Rate (\%)} = \frac{\text{Completed Questionnaires}}{\text{Passenger Counts}} = \frac{4,096}{4,814} = 85.08\%$$

The 4,096 collected questionnaires make up the final dataset.

Table 5: Survey Distribution and Return Rate by Route and Time-of-Day

Time of Day / Route Number	Route Number					Total	Time of Day / Route Number	Route Number				
	95	107	108	195				95	107	108	195	Total
AM	1,052	180	392	610		2,234	AM	99%	99%	96%	99%	98%
PM	885	158	364	516		1,923	PM	97%	100%	100%	101%	99%
Total	1,937	338	756	1,126		4,157	Total	98%	100%	98%	100%	99%

5.2. Passenger Counts

A total of 4,814 passengers boarded an express bus on the day survey. A total of 4,801 alightings were recorded. For the purpose of the survey, number of boardings are used as passenger counts as they are believed to be more accurate than number of alightings. Boardings are more organized on buses as only one passenger boards at a time while at the time of alighting several passengers alight at the same time, in some cases from more than one door. Table 6 shows that passenger boardings by route and by time of day.

Table 6: Passenger Counts and Response Rate by Route and Time-of-Day

Time of Day / Route Number	Route Number					Time of Day / Route Number	Route Number				
	95	107	108	195	Total		95	107	108	195	Total
AM	1,327	184	394	658	2,563	AM	78%	97%	95%	92%	86%
PM	1,111	176	382	582	2,251	PM	77%	90%	96%	89%	84%
Total	2,438	360	776	1,240	4,814	Total	78%	94%	95%	91%	85%

6. Data Editing and Processing

The preliminary results rely on cursory examination of the dataset to correct obvious errors. A cursory examination of logic was also performed to eliminate inconsistent information. For instance, if a response indicated southbound travel on a northbound route, it was discarded. A thorough examination, editing, and processing will result in more useful data. The following questions were considered essential for the SERPM, which is a mode-choice model and surveys that were missing this information were discarded.

1. Q1 –Origin Location
2. Q3 – Access Mode
3. Q4 – Boarding Location
4. Q6 – Alighting Location
5. Q7 – Destination Location
6. Q8 - Egress Mode
7. Q21 – Number of Autos in the Household

Express bus routes mainly travel on I-95 and have fewer stops than local buses. The survey methodology allowed assigning direction and time of day to each route. Alignments of the express bus routes are known therefore, if a respondent indicated that they alighted at “Downtown” and the alignment has only two stops in the Downtown Miami, the response was considered valid. Similarly, if a respondent said “2nd Avenue and 2nd Street”, the quadrant was determined based on the route alignment. This process is not error-proof and therefore, more precise geocoding after thorough data editing and processing is recommended.

Some express bus alignments travel on local streets as well. For instance Route 95 to Doral has numerous stops on NW 36th Street. In such instance exact location in the form of intersections was determined to be necessary. Based on the above stated cursory examination, a certain number of surveys were discarded (Table7)

Table 7: Number of Surveys Discarded by Preliminary Cleanup

Description	Number
Total Number of Surveys Collected	4096
Less Surveys that could not assign to trips	2
Less Empty Records	54
Less Missing Origin Location (Q1)	32
Less Missing or Inconsistent Destination Location (Q7)	125
Less Missing or Inconsistent Boarding Location (Q4)	416
Less Missing Alighting Location (Q6)	577
Less Missing Auto Ownership Status (Q21)	130
Less Missing Access Mode (Q3)	7
Less Missing Egress Mode (Q9)	12
Less Same Origin and Destination Locations	430
Number of Remaining Records	2,311

7. Summary of Raw Data

Table 8: Q1: I originally began this one-way trip at:

Description	Frequency
Work	1,110
Home	1,096
Other	54
School (K-12)	25
College/University	15
Social/Recreational	6
Shopping	4
Pre-School/Child Daycare	1
Total	2,311

Key Facts

- An overwhelming majority of riders start their trips at home and work indicating that these express bus routes primarily serve Home-Based Work (HBW) trips.

Figure 1: Q1: I originally began this one-way trip at:

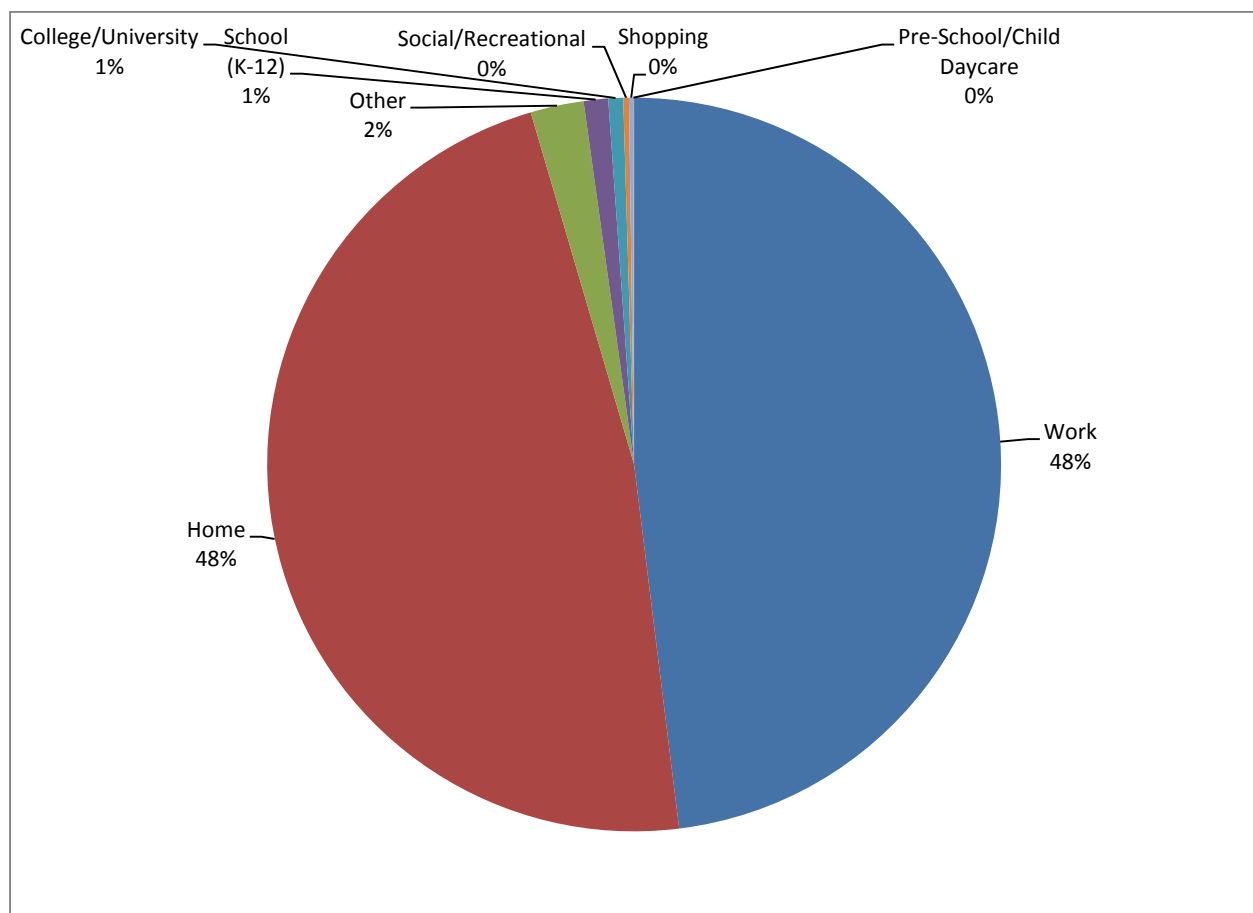


Table 9: Q3: How did you get to the Express bus stop for this one-way trip?

Description	Frequency
Walked	863
Drove alone & parked	797
Dropped off by car	212
Transfer from other bus	123
Metrorail	90
Metromover	88
Tri-Rail	45
Rode with someone who	28
Biked	10
Other	55
Total	2,311

Key Facts

- **Most Used Access Mode:**
Walk – 37%
- **Least Used Access Mode:**
Bike -1%

Figure 2: Q3: How did you get to the Express bus stop for this one-way trip?

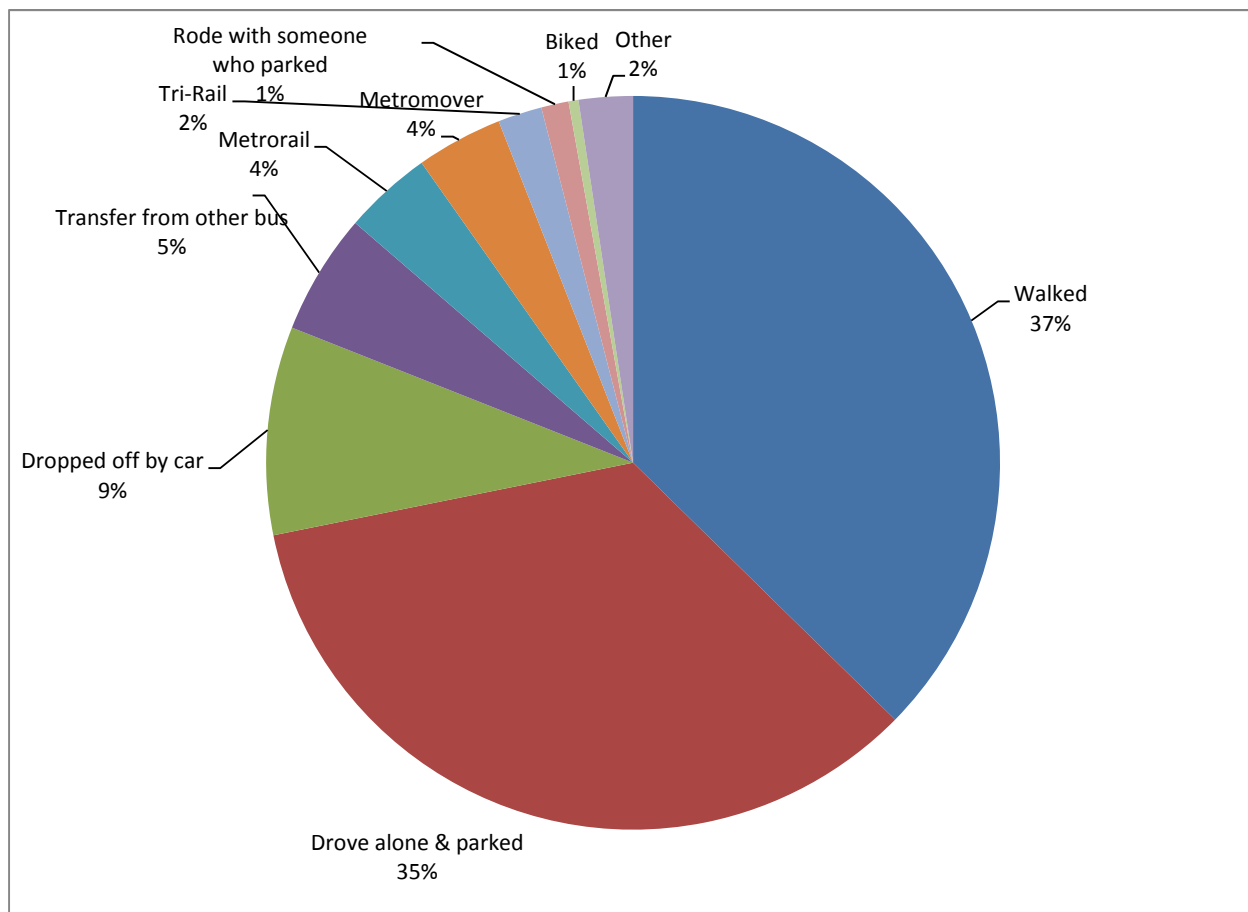


Table 10: Q5: How far did you travel from where you started this one-way trip to the Express bus stop?

Description	Frequency
Under 2 miles	1,131
2 to 5 miles	500
5 to 7 miles	320
Over 7 miles	305
(Missing)	55
Total	2,311

Key Facts

- Nearly half of respondents (49%) say that they travel more than two miles to access Express bus.

Figure 3: Q5: How far did you travel from where you started this one-way trip to the Express bus stop?

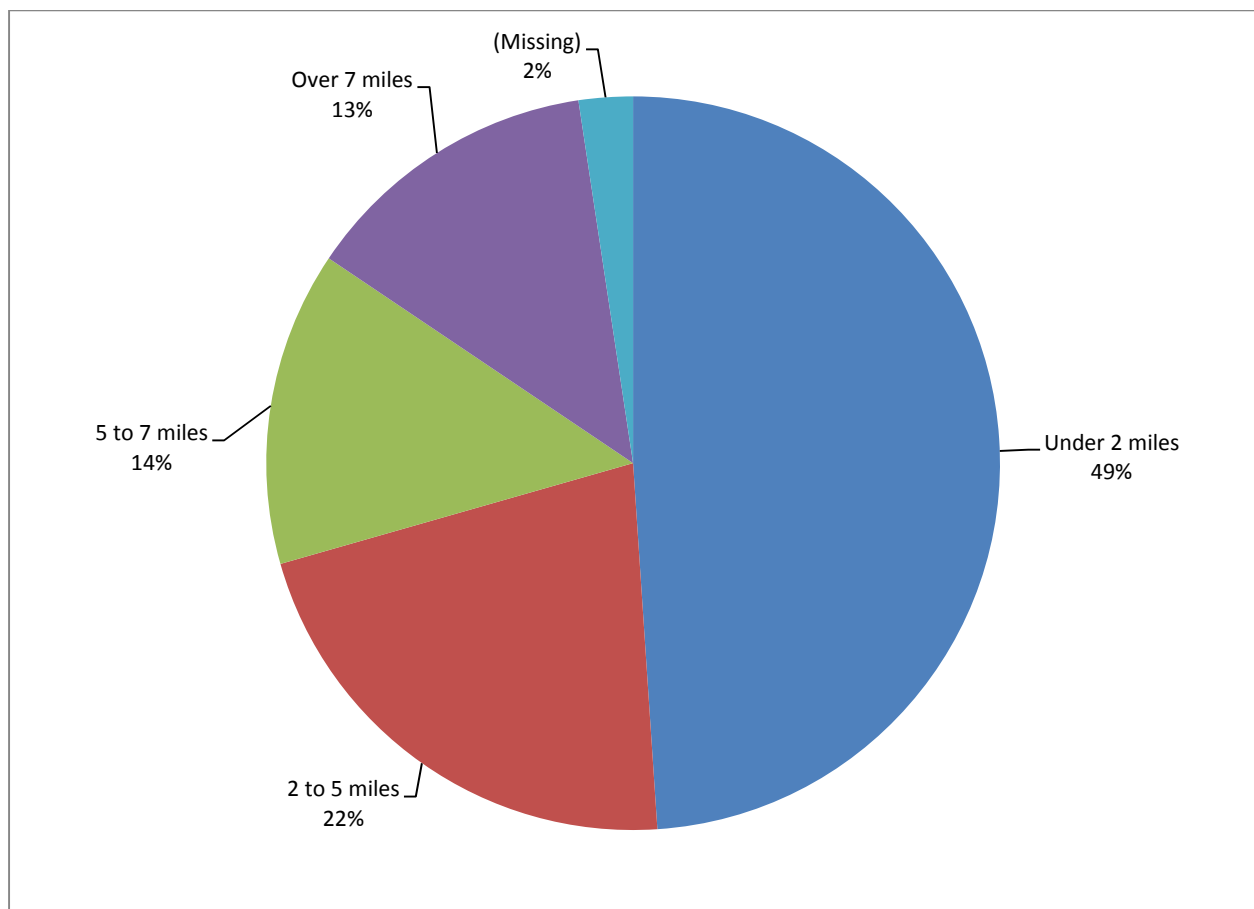


Table 11: Q7: I will end this one-way trip at:

Description	Frequency
Work	1,038
Home	1,012
Other	171
College/University	36
School (K-12)	27
Social/Recreational	15
Shopping	8
Pre-School/Child Daycare	4
Total	2,311

Key Facts

- An overwhelming majority of riders end their trips at home and work indicating that these express bus routes primarily serve Home-Based Work (HBW) trips.

Figure 4: Q7: I will end this one-way trip at:

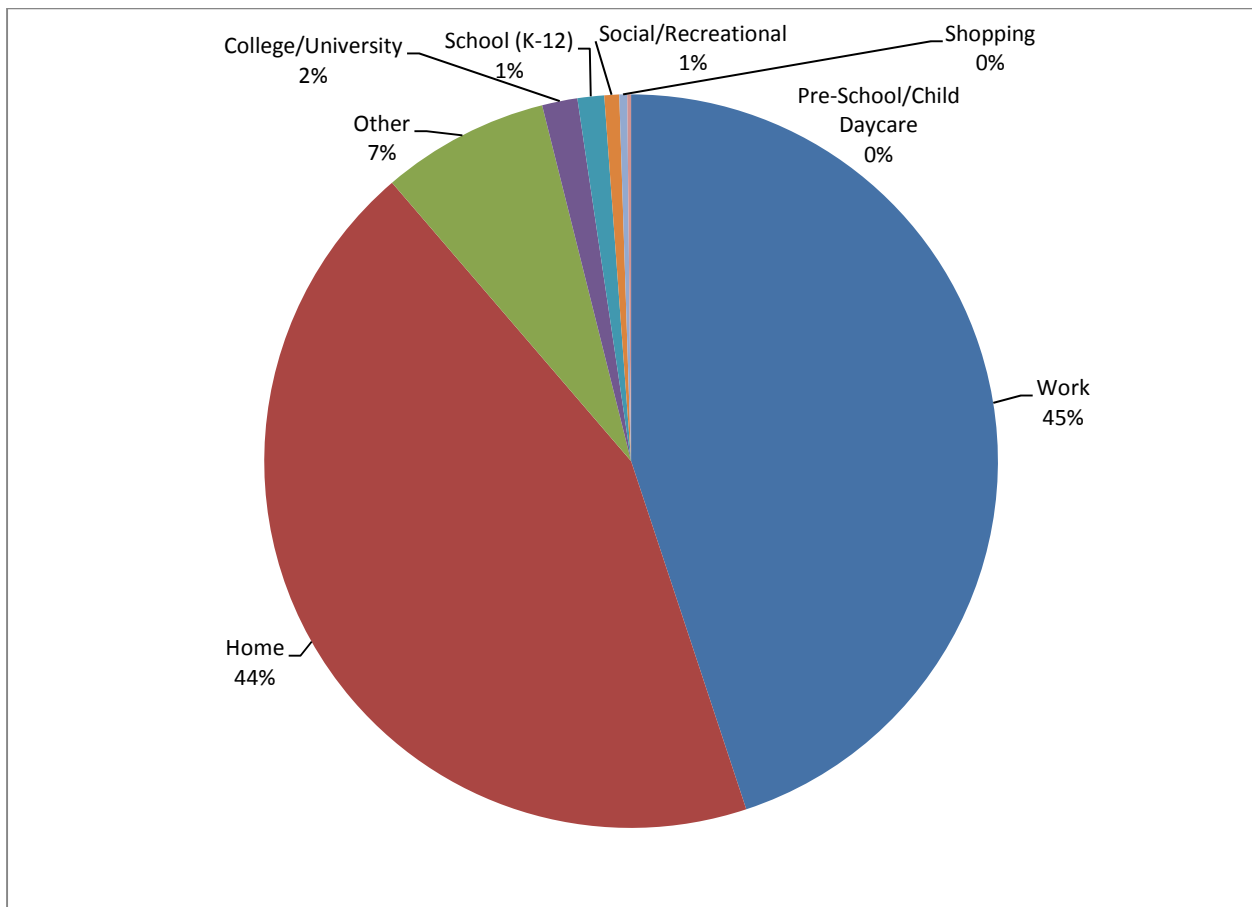


Table 12: Q9: How will you get from your express bus stop to your final destination after this one-way bus trip?

Description	Frequency
Drive alone in parked car	828
Walk	822
Pick up by car	193
Metrorail	123
Transfer to other bus	121
Metromover	106
Other	47
Tri-Rail	28
Ride with someone who is	20
Bike	6
Total	2,311

Key Facts

- **Most Used Access Mode:**
Drive – 36%
- **Least Used Access Mode:**
Bike -0%

Figure 5: Q9: How will you get from your express bus stop to your final destination after this one-way bus trip?

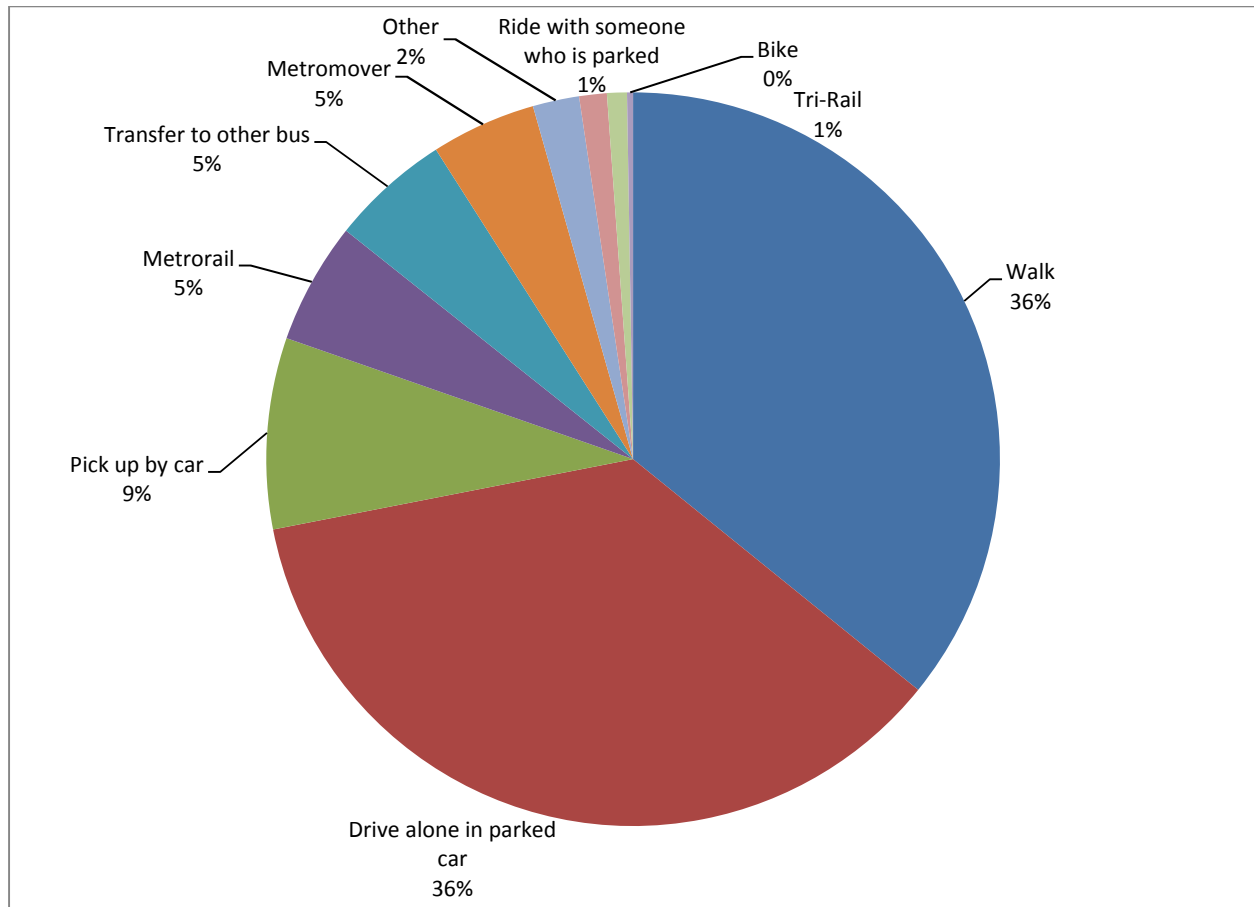


Table 13: Q10: The fare type I used for this one-way trip was:

Description	Frequency
Monthly Pass	1,389
Cash	428
10-Ride Premium Bus Pass	197
Day Pass	92
(Missing or Multiple Responses)	61
Reduced Fare Permit	41
Golden/Patriot Passport	37
Tri-Rail Transfer	23
Bus Transfer	10
Total	2,311

Key Facts

- Six in every ten riders used a monthly pass to make their trip indicating regular usage.

Figure 6: Q10: The fare type I used for this one-way trip was:

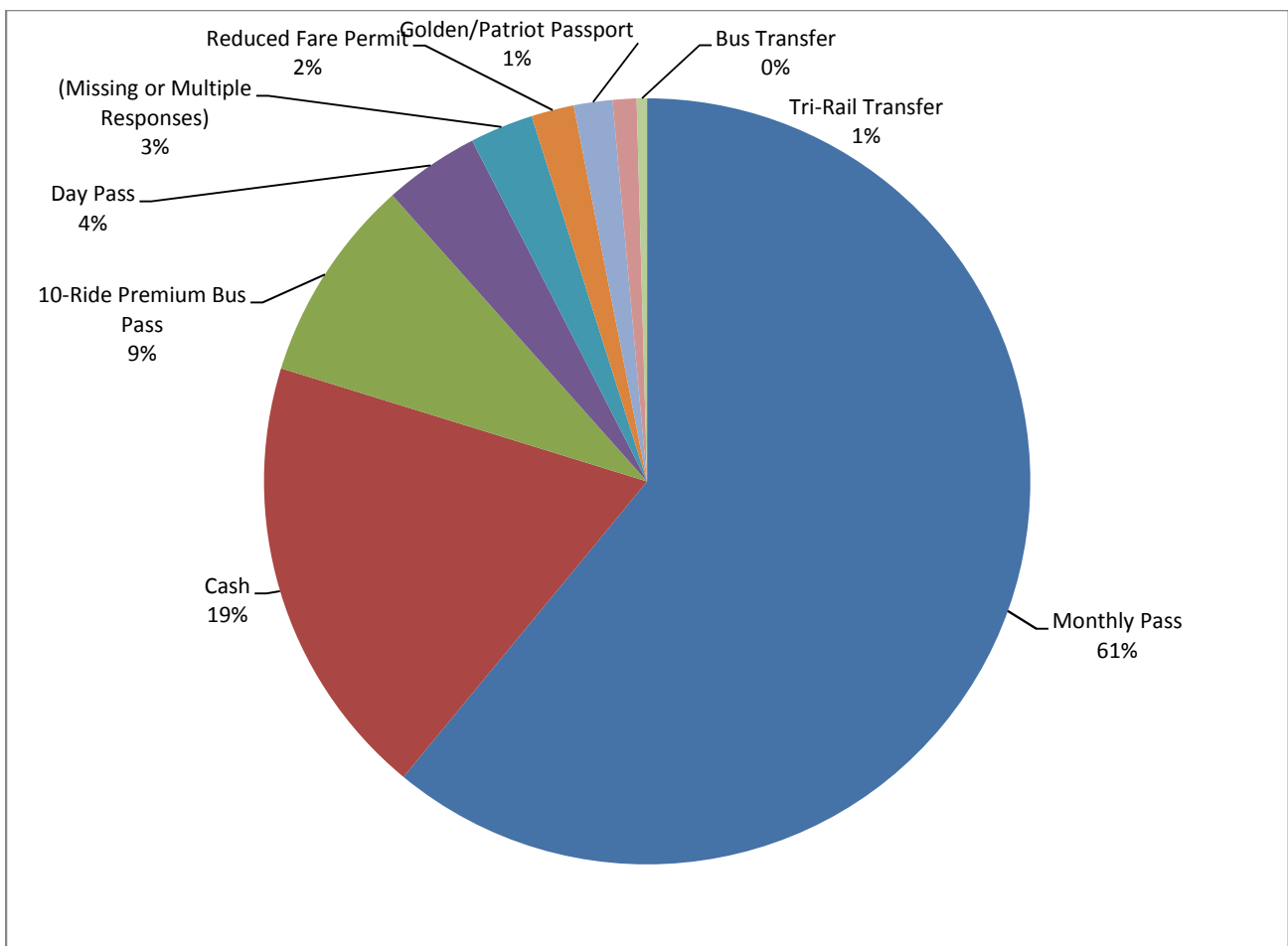


Table 14: Q11: Does your employer pay any / all of your bus fare?

Description	Frequency
No	1,492
Yes	801
(Missing)	18
Total	2,311

Key Facts

- A majority of riders do not receive fare assistance from their employers.

Figure 7: Q11: Does your employer pay any / all of your bus fare?

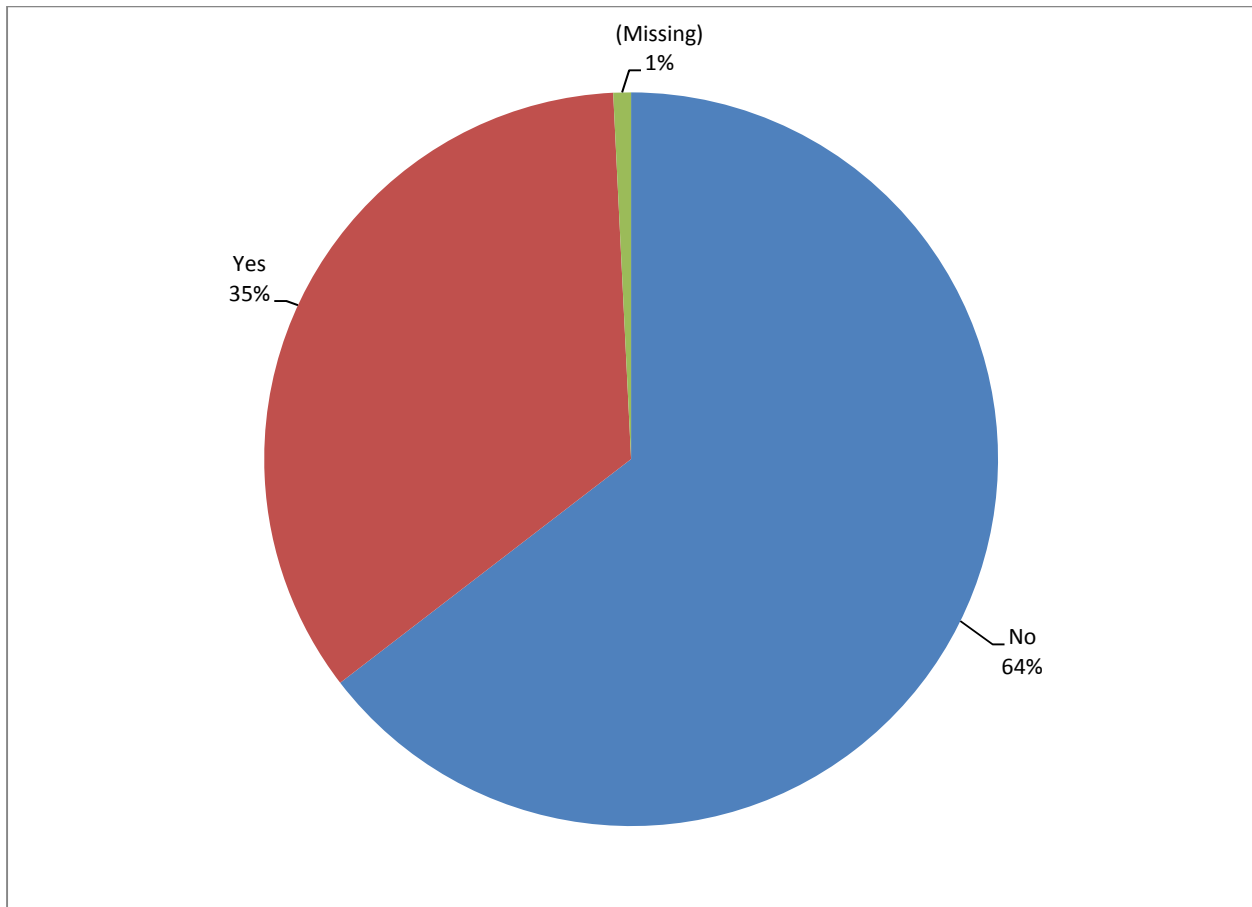


Table 15: Q12: Did you have a car / motor vehicle available for this trip?

Description	Frequency
Yes	1,794
No	494
(Missing)	23
Total	2,311

Key Facts

- An overwhelming majority of riders appear to be choice-riders – those who choose to use Express bus.

Figure 8: Q12: Did you have a car / motor vehicle available for this trip?

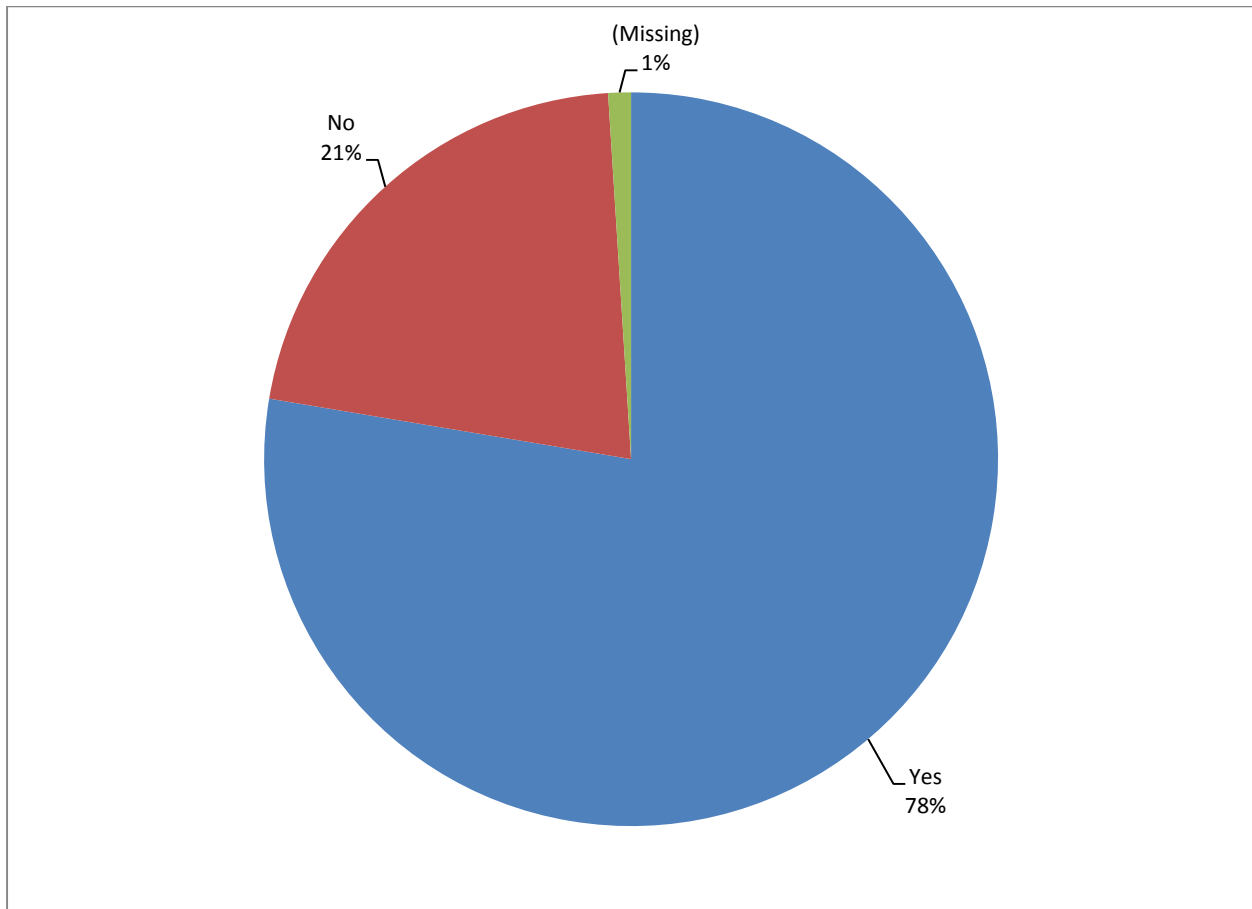


Table 16: Q13: Is this journey part of a round trip that you will be making today?

Description	Frequency
Yes	2,079
No	137
(Missing)	95
Total	2,311

Key Facts

- Eight in every ten Express bus riders say that their trip is part of a round-trip.

Figure 9: Q13: Is this journey part of a round trip that you will be making today?

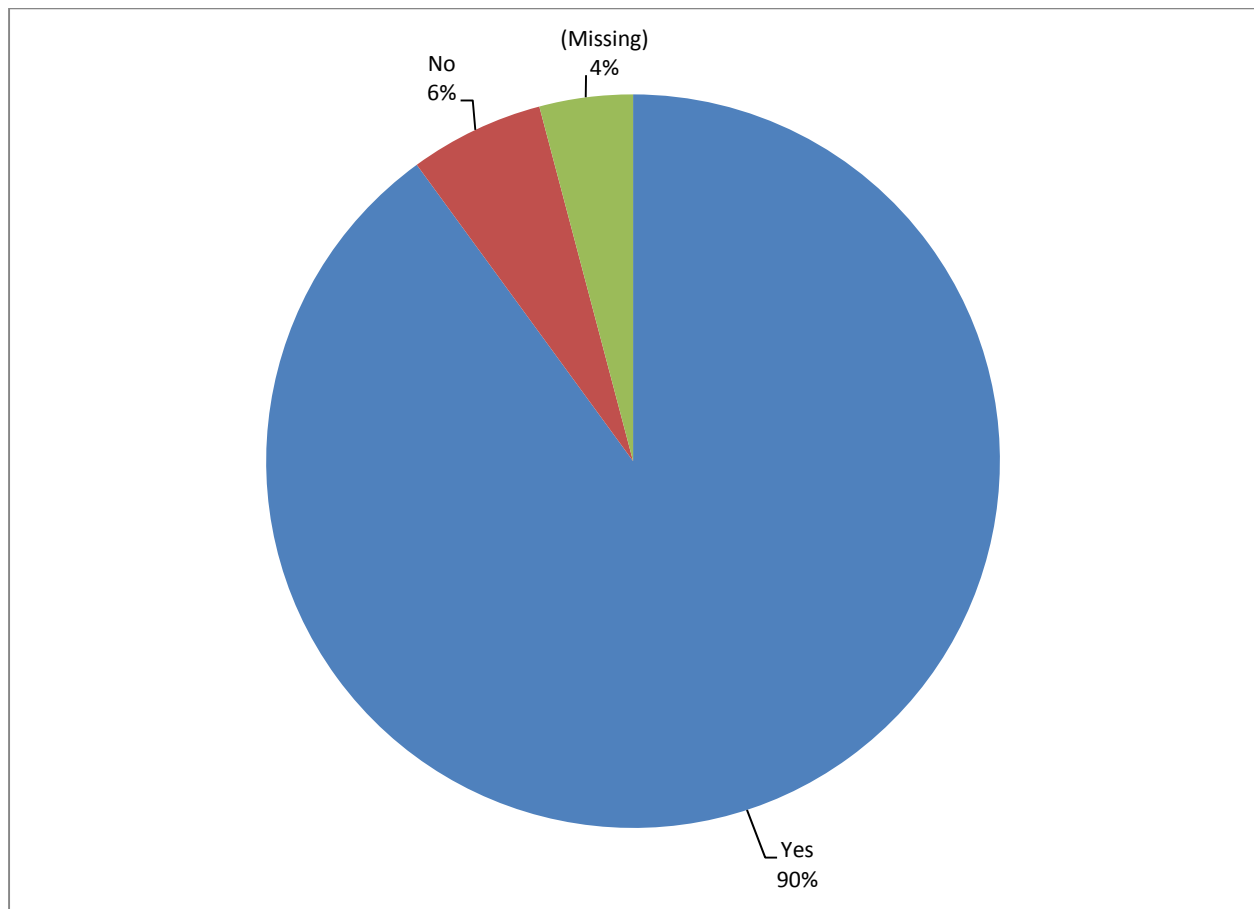


Table 17: Q13-subquestion: If yes (in response to Q13), check all services that you will use for the return leg of your trip.

Description	Frequency
This is my return trip	973*
Express Bus	715
(Missing)	199
Express Bus + One Other Mode	167
Other or Multiple Modes	89
Local Bus	60
Metrorail	43
Metromover	26
Metrorail, Tri-Rail	16
Express Bus, Local Bus,	11
Tri-Rail	11
Total	2,311

Key Facts

- Seven in every ten respondents either use or intend to use Express bus for their return trip.

*Further data processing is especially needed to better understand this number

Figure 10: Q13-subquestion: If yes (in response to Q13), check all services that you will use for the return leg of your trip.

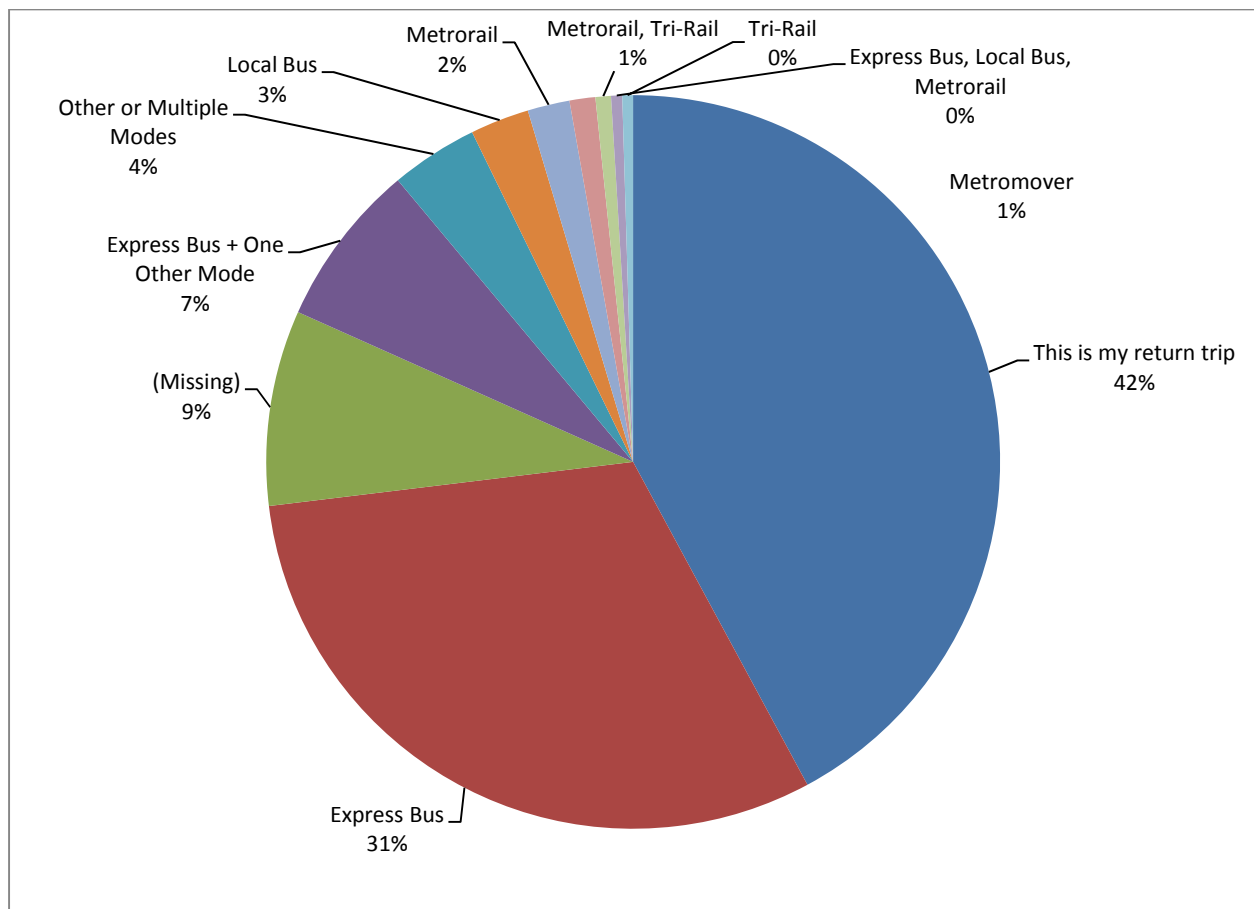


Table 18: Q14: Consider the average time it takes to make your entire one-way trip from door to door. What is your typical total travel time in minutes?

Statistics	
Responses	2193
(Missing)	118
Average	69 minutes
Standard Deviation	62 minutes
Median	53 minutes
Minimum	1 minute
Maximum	300 minutes
Total	2,311

Key Facts

- An average rider states that they spend 69 minutes for a one-way trip. The standard deviation is high and should be further examined.
- More than half of the respondents state that they spend more than 50 minutes.

Figure 11: Q14: Consider the average time it takes to make your entire one-way trip from door to door. What is your typical total travel time in minutes?

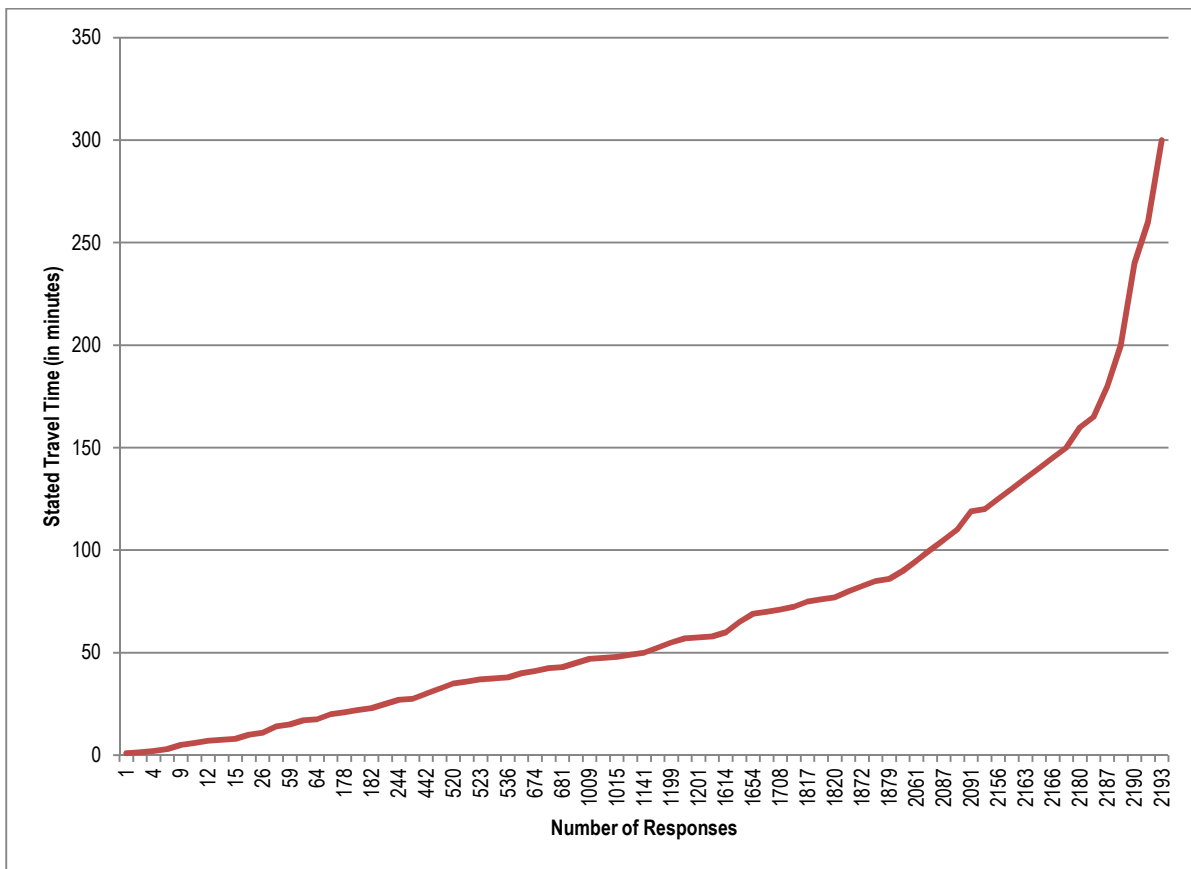


Table 19: Q15: How many days per week do you use the Express bus?

Description	Frequency
Occasionally	6
1 day/per week	7
2 days/per week	23
3 days/per week	98
4 days/per week	171
5 days/per week	1,777
6 days/per week	5
7 days/per week	14
(Missing or Invalid)	210
Total	2,311

Key Facts

- More than three-fourth of the riders (77%) use Express bus on all weekdays.

Figure 12: Q15: How many days per week do you use the Express bus?

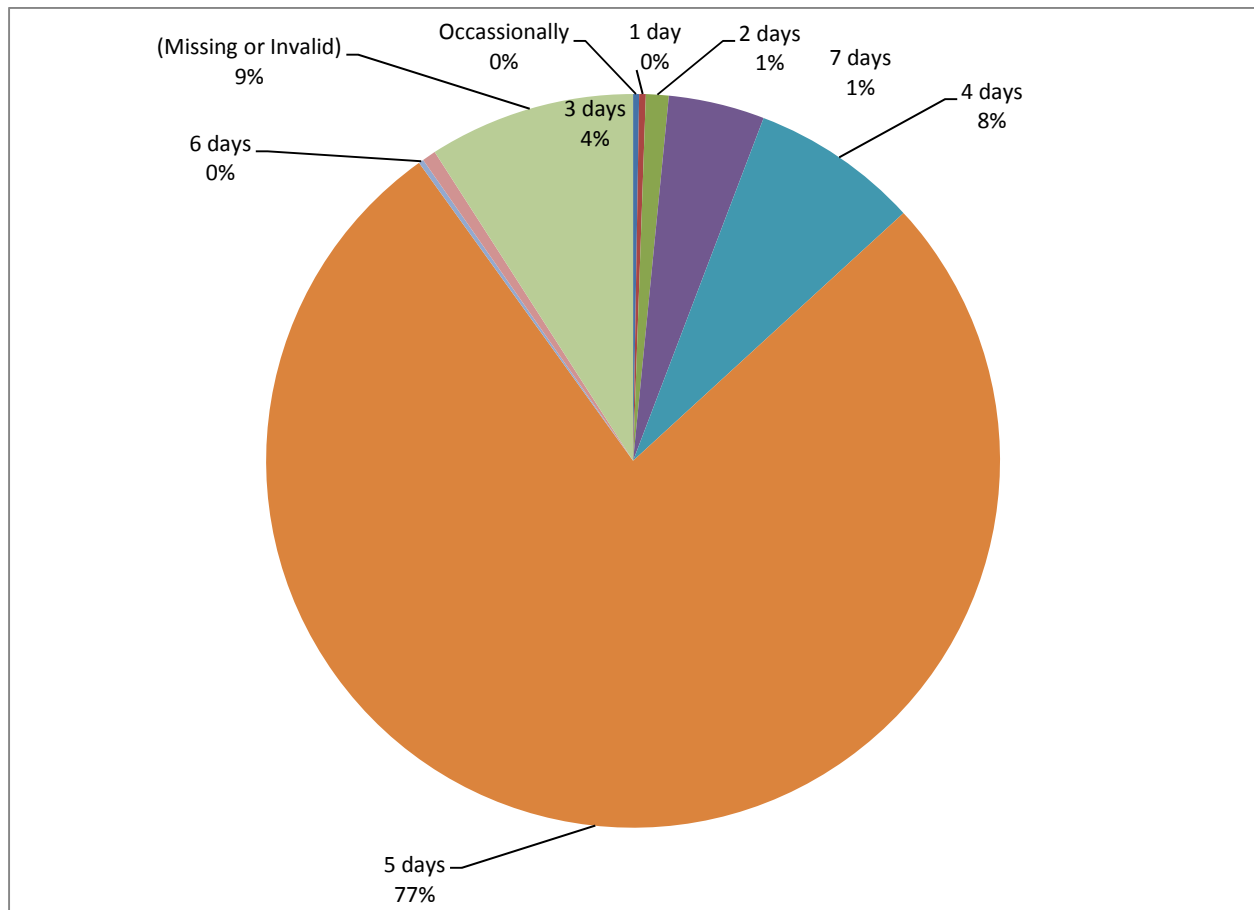


Table 20: Q17: Are you female or male?

Description	Frequency
Female	1501
Male	740
(Missing)	70
Total	2,311

Key Facts

- Express bus riders are overwhelmingly females.

Figure 13: Q17: Are you female or male?

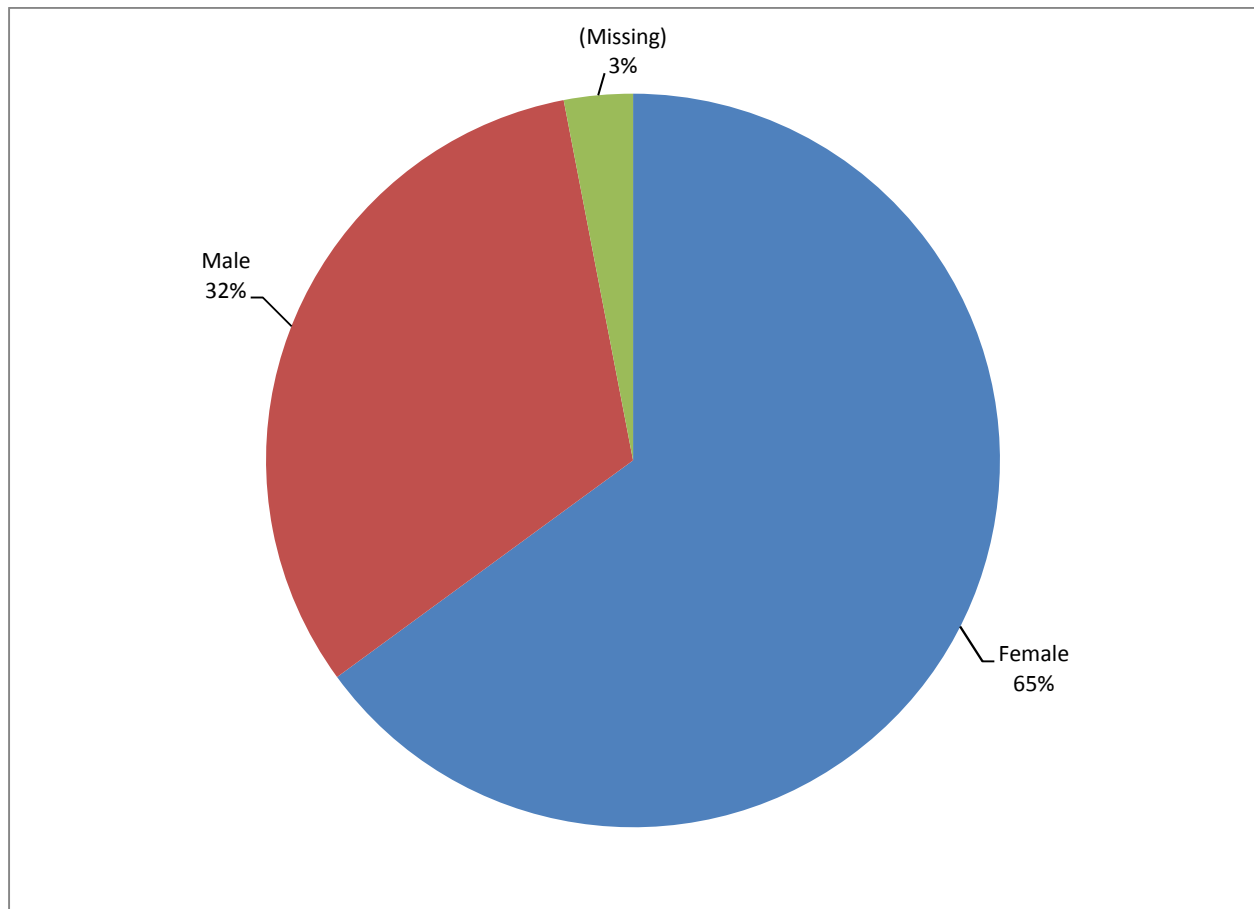


Table 21: Q18: How old are you?

Description	Frequency
under 16	25
16-24	104
25-34	398
35-44	514
45-54	686
55-64	498
65 or over	63
(Missing)	23
Total	2,311

Key Facts

- Nearly three-fourth of the riders (74%) are between ages 35 and 65.

Figure 14: Q18: How old are you?

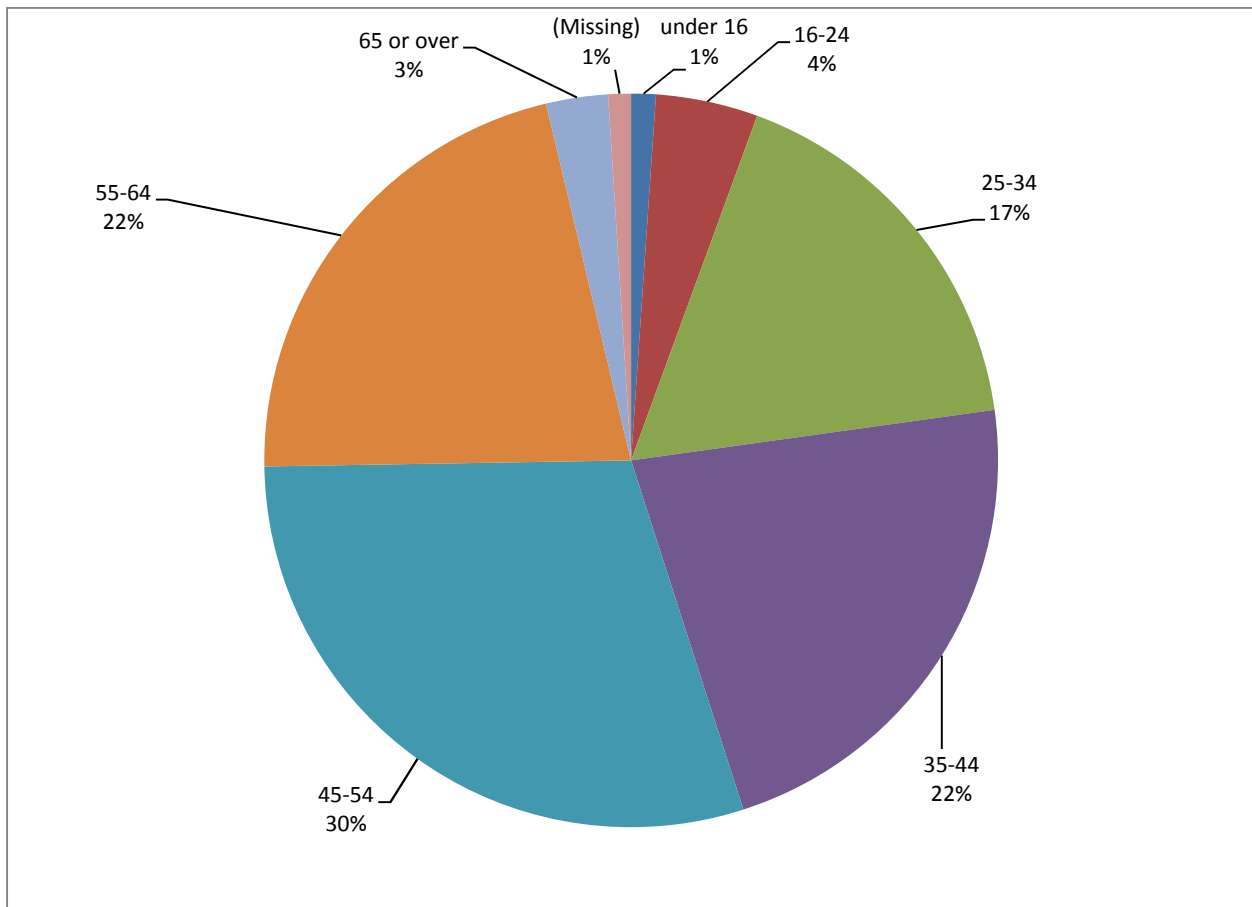


Table 22: Q19: My race is best described as:

Description	Frequency
Black/African American	974
Spanish/Hispanic/Latino	569
White	484
Other	115
Asian	99
(Missing)	53
American Indian	17
Total	2,311

Key Facts

- Four in every ten Express bus riders describe themselves as Black or African American.

Figure 15: Q19: My race is best described as:

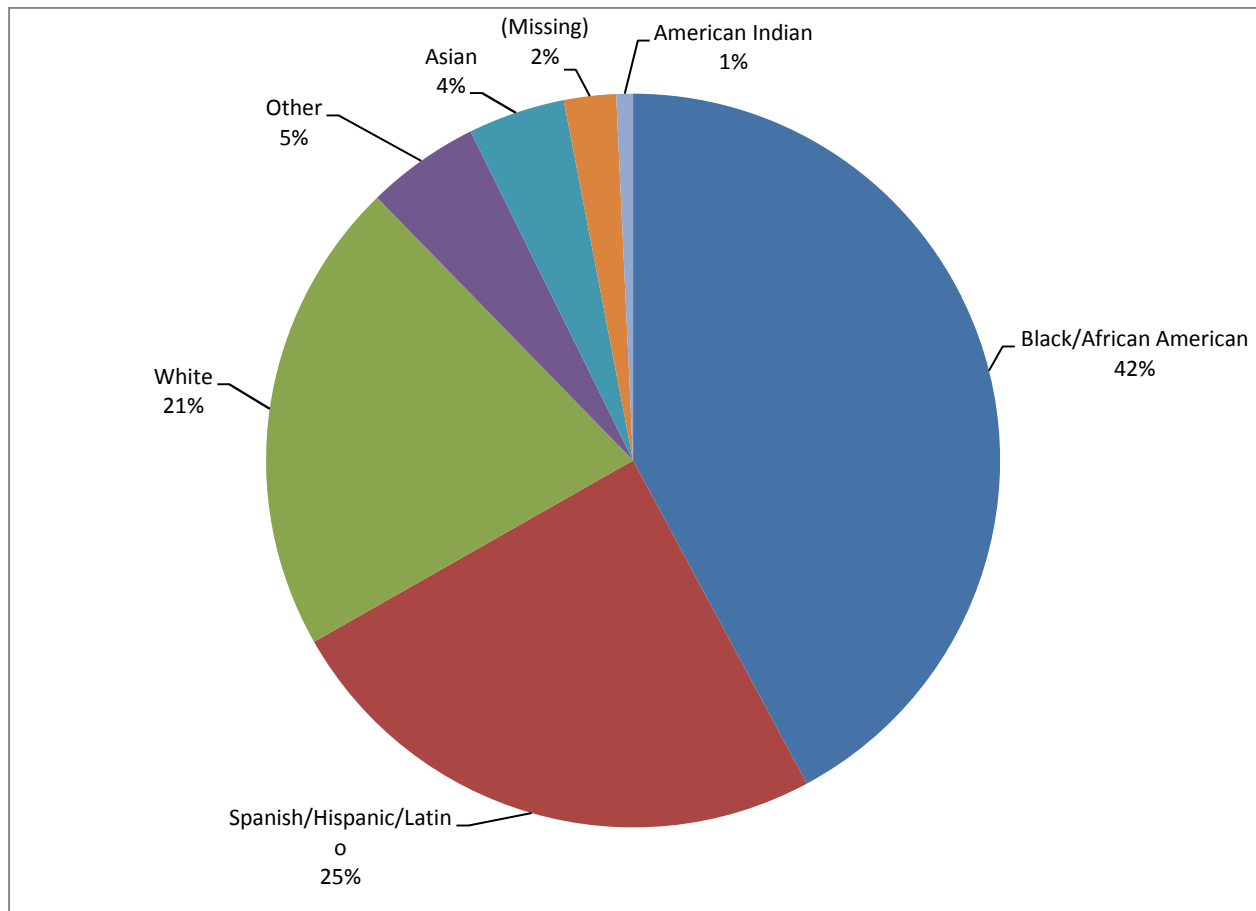


Table 23: Q20: What is your household's approximately total annual income?

Description	Frequency
Less than \$16500	80
\$16500-\$22000	61
\$22000-\$28000	102
\$28000-\$33500	127
\$33500-\$39500	179
\$39500-\$45000	173
\$45000-\$75000	673
More than \$75000	731
(Missing)	185
Total	2,311

Key Facts

- Six in every ten Express bus riders have annual income above \$45,000 per annum.
- Nearly 6% state that their annual income is less than \$22,000

Figure 16: Q20: What is your household's approximately total annual income?

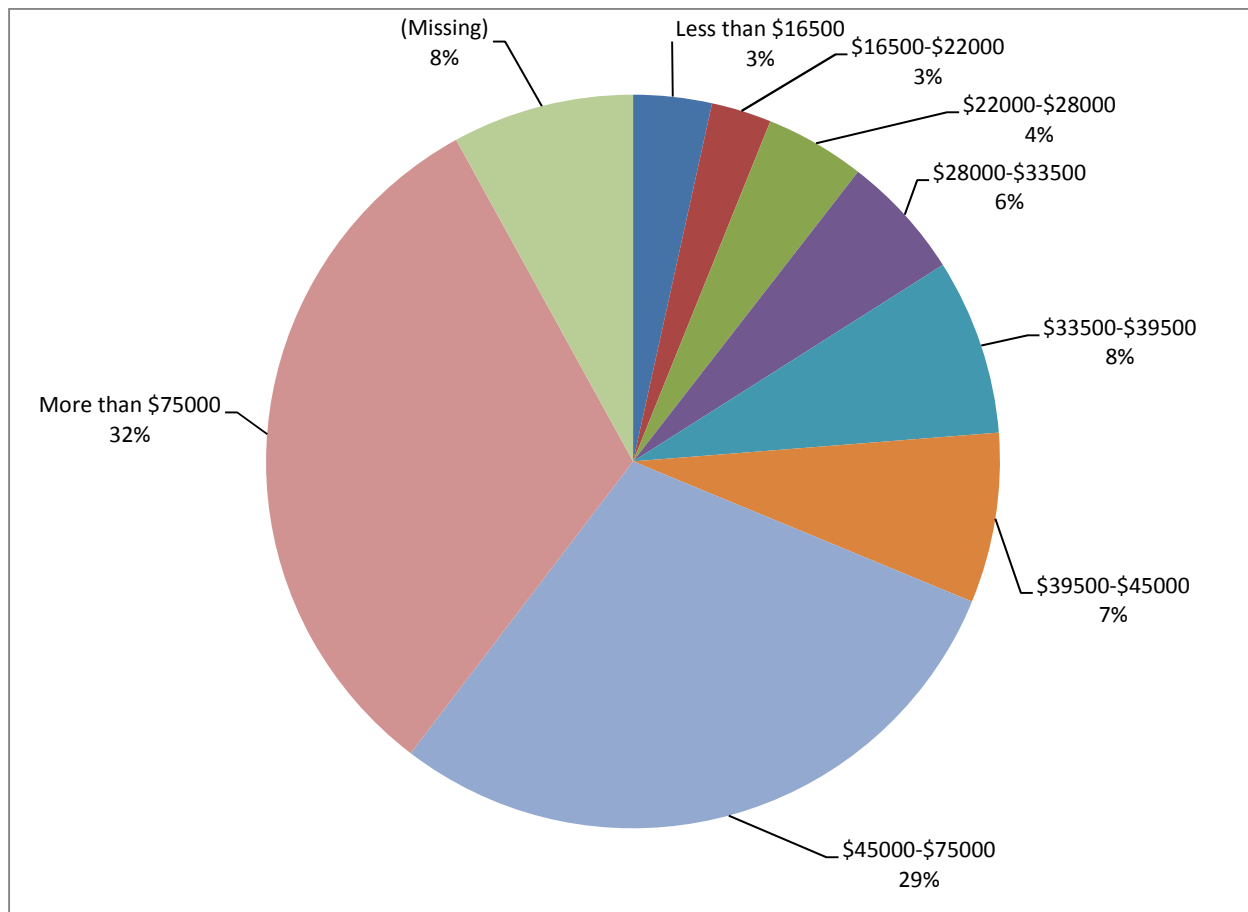


Table 24: Q21: What is the total number of cars and other motor vehicles owned or leased by your household?

Description	Frequency
No vehicle	129
1 vehicle	769
2 vehicles	988
3 vehicles	315
4 vehicles	103
5 or more	7
Total	2,311

Key Facts

- Six in every ten Express bus riders have two or more vehicles in their households.
- Nearly 6% have no vehicle in their household.

Figure 17: Q21: What is the total number of cars and other motor vehicles owned or leased by your household?

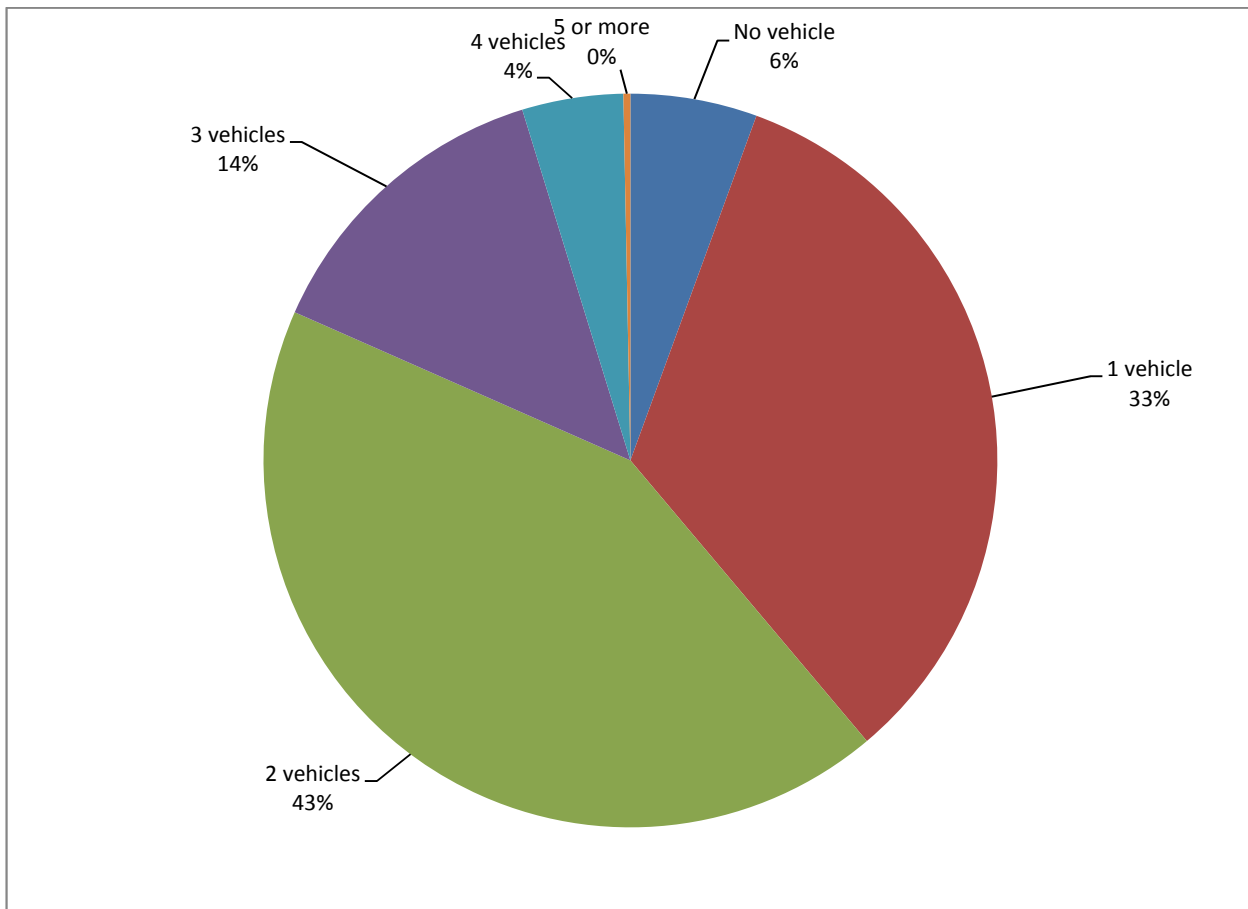


Table 25: Q22: I have a valid driver's license:

Description	Frequency
Yes	1810
No	134
(Missing)	367
Total	2,311

Key Facts

- Nearly 80% of the Express bus riders have a driver's license.

Figure 18: Q22: I have a valid driver's license:

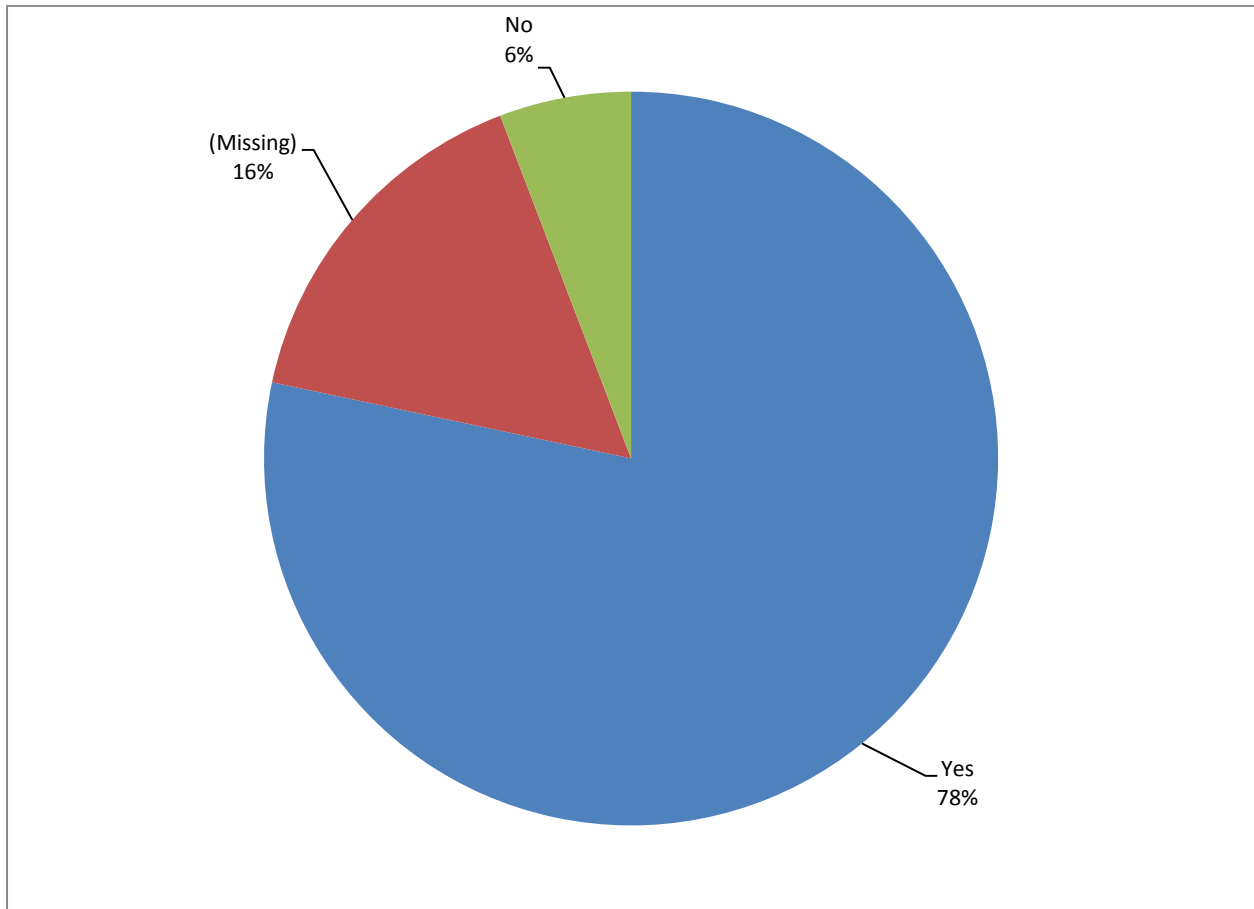


Table 26: Q23: Including you, (# of people) live in my home and of those:

Description	Frequency
1 member	300
2 members	651
3 members	456
4 members	337
5 members	175
6 members	63
7 members	20
8 members	15
9 members	2
10 members	1
11 members	1
(Missing or Invalid)	290
Total	2,311

Key Facts

- An overwhelming majority (63%) have four or fewer members in their household.

Figure 19: Q23: Including you, (# of people) live in my home and of those:

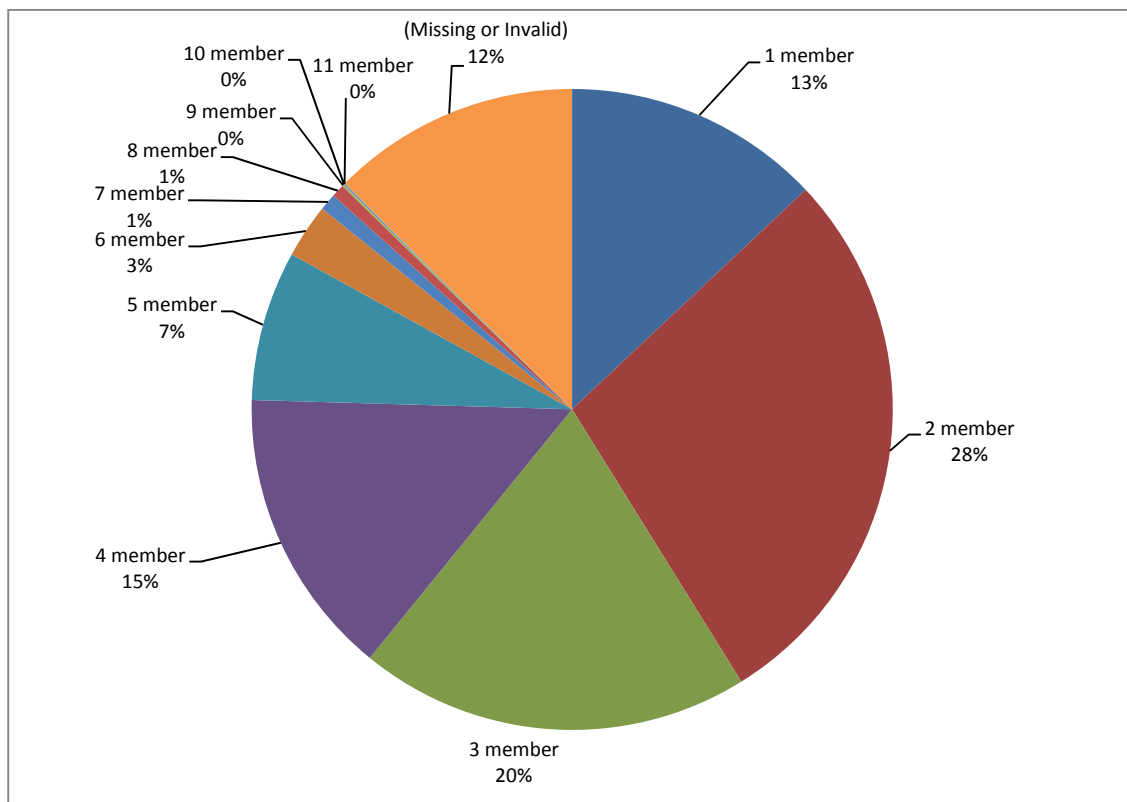


Table 27: Q24: Are you disabled?

Description	Frequency
Yes	52
No	2,187
(Missing)	72
Total	2,311

Key Facts

- Nearly 2 percent of all Express bus riders described themselves as disabled.

Figure 20: Q24: Are you disabled?

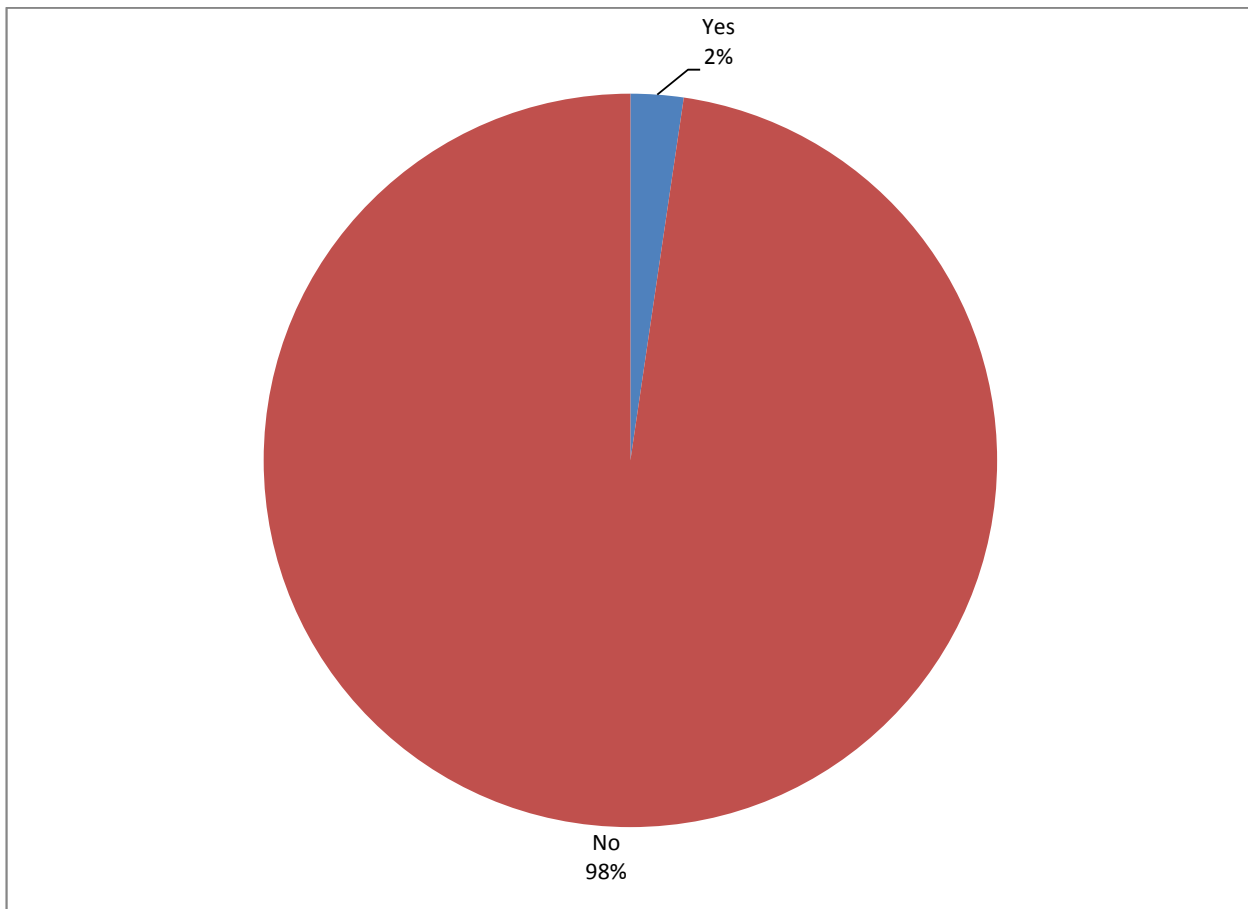


Table 28: Q25: What is the highest level of education you have completed?

Description	Frequency
Grade School	8
Middle/Junior High School	38
High School/GED	316
Vocational/Technical School	207
College/University-	971
College/University-Graduate	739
(Missing)	32
Total	2,311

Key Facts

- Nearly three-fourths of all the Express bus riders (74%) have a college education.
- Nearly 16% have high school or grade school education.

Figure 21: Q25: What is the highest level of education you have completed?

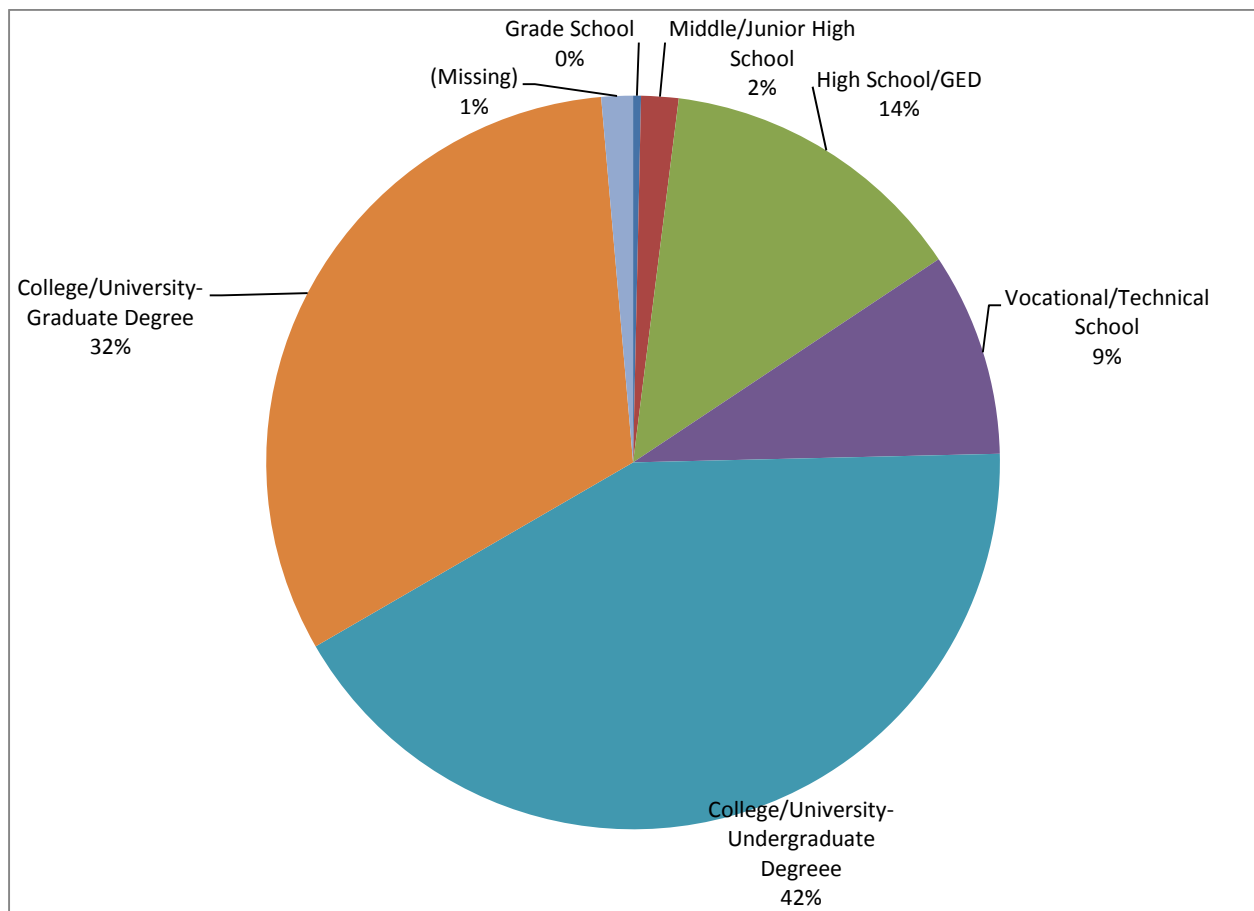


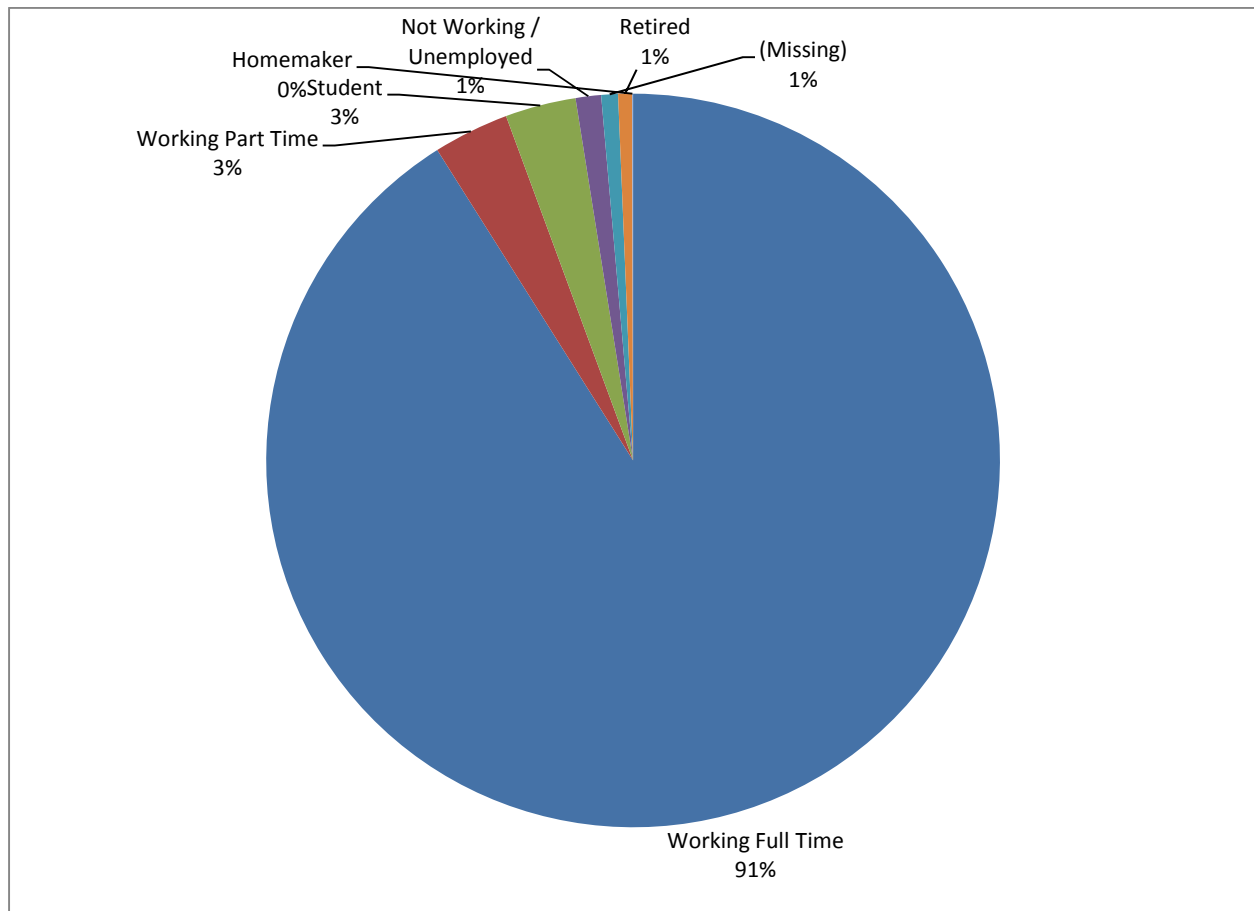
Table 29: Q26: What is your current employment status?

Description	Frequency
Working Full Time	2104
Working Part Time	77
Student	72
Not Working / Unemployed	26
(Missing)	17
Retired	14
Homemaker	1
Total	2,311

Key Facts

- Nine in every ten Express bus rider (91%) is working full-time.

Figure 22: Q26: What is your current employment status?



Appendix A: Survey Instrument



EXPRESS BUS SURVEY

Serial #:

Please help us improve transit service. If you receive another survey today, please fill it out each time you ride.

1. I originally **BEGAN** this one-way trip at: (Check ONE only)

- Work
- Home
- Shopping
- Social / Recreational
- Pre-school / Child Daycare
- School (K - 12)
- College / University
- Other (Airport, Hotel, Doctor's office, etc.)

2. Please provide the nearest cross-streets / intersection or zip code of where you **BEGAN** this one-way trip. (Please be specific - business name, location of home, work, school, etc.)

3. How did you get to the Express bus stop for this one-way bus trip? (Check ALL that apply)

- Walked (# blocks)_____
- Biked
- Drove alone & parked
- Dropped off by car
- Rode with someone who parked
- Transfer from other bus (Route #)_____
- Tri-Rail
- Metrorail
- Metromover
- Other _____

4. What is the nearest cross-streets / intersection of the stop you got **ON** for this one-way trip?

(Please be specific)

5. How far did you travel from where you started this one-way trip to the Express bus stop?

- under 2 miles
- 2 to 5 miles
- 5 to 7 miles
- If over 7 miles, how far?_____

6. What is the nearest cross-streets / intersection you are getting **OFF** for this one-way trip?

(Please be specific)

7. I will **END** this one-way trip at: (Check ONE only)

- Work
- Home
- Shopping
- Social / Recreational
- Pre-school / Child Daycare
- School (K - 12)
- College / University
- Other (Airport, Hotel, Doctor's office, etc.)

8. Please provide the nearest cross-streets / intersection or zip code of your **FINAL DESTINATION** on this one-way trip. (Please be specific - business name, location of home, work, school, etc.)

9. How will you get from your Express bus stop to your **FINAL DESTINATION** after this one-way bus trip? (Check ALL that apply)

- Walk (# blocks)_____
- Bike
- Drive alone in my parked car
- Pick up by car
- Ride with someone who is parked
- Transfer to other bus (Route #)_____
- Tri-Rail
- Metrorail
- Metromover
- Other _____

10. The fare type I used for this one-way trip was:

- Cash
- Reduced Fare Permit
- Golden / Patriot Passport
- Day Pass
- Monthly Pass
- Bus Transfer
- Tri-Rail Transfer
- 10-Ride Premium Bus Pass

11. Does your employer pay any / all of your bus fare? Yes No

12. Did you have a car / motor vehicle available for this trip? Yes No

13. Is this journey part of a **ROUND** trip that you will make today? Yes No
If YES, please check all services that you will use for the return leg of your trip.

- This is my return trip
- Tri-Rail
- Local Bus (Route #_____)
- Metrorail
- Metromover
- Other _____
- Express Bus

14. Consider the average time it takes to make your entire one-way trip from door to door. What is your typical total travel time in minutes? _____ mins

15. How many days per week do you use the Express bus? _____ days

PLEASE TELL US A LITTLE ABOUT YOURSELF. (Strictly Confidential)

16. What is your home zip code? _____

17. Are you female or male? Female Male

18. How old are you?
 under 16 16 - 24 25 - 34 35 - 44 45 - 54 55 - 64 65 or over

19. My race is best described as:

- American Indian
- Asian
- Black / African American
- White
- Spanish / Hispanic / Latino
- Other _____

20. What is your household's approximate total annual income?

- less than \$16,500
- \$16,500 to \$22,000
- \$22,000 to \$28,000
- \$28,000 to \$33,500
- \$33,500 to \$39,500
- \$39,500 to \$45,000
- \$45,000 to \$75,000
- more than \$75,000

21. What is the total number of cars or other motor vehicles owned or leased by your household?

- 0 (none)
- 1
- 2
- 3
- 4
- 5 or more

22. I have a valid Driver's License. Yes No

23. Including you, (# of people)_____ live in my home and of those:

- (# of people)_____ have a drivers license
- (# of people)_____ are under 16 years old
- (# of people)_____ are 65 and over
- (# of people)_____ work outside of our home

24. Are you disabled? Yes No

25. What is the **HIGHEST** level of education you have completed?

- Grade School
- Middle / Junior High School
- High School / GED
- Vocational / Technical School
- College / University - Undergraduate Degree
- College / University - Graduate Degree

26. What is your current **EMPLOYMENT** status? (Check ONE only)

- Working Full Time
- Working Part Time
- Not Working / Unemployed
- Student
- Homemaker
- Retired

THANK YOU! PLEASE LEAVE COMPLETED SURVEY ON YOUR SEAT OR RETURN TO SURVEYOR.



ENCUESTA DEL SERVICIO EXPRESO DE AUTOBUSES

Por favor ayúdenos a mejorar el servicio público de autobuses. Por favor complete esta encuesta cada vez que usted use este servicio de autobus.

1. **COMENCÉ** este trayecto / viaje de ida (o regreso) en: (marque solamente una opción)

- Trabajo
- Lugar de Residencia
- Almacén / Centro Comercial
- Centro social o Recreacional
- Pre-escolar / Guardería
- Escuela Secundaria (K-12)
- Universidad o College
- Otro (ej. Aeropuerto, Hotel, Oficina de Medico, etc)

2. Por favor escriba la intersección o código postal (Zip Code) **DONDE EMPEZÓ** este viaje de ida (o regreso): (por ejemplo: el lugar de su residencia, trabajo, escuela, etc)

3. ¿Cómo llegó a la parada de autobus para iniciar este viaje? (marque TODAS las opciones que apliquen)

- Caminando (# de cuadras) _____
- Bicicleta
- Vino solo en su vehículo (y lo estacionó)
- Lo dejó otra persona en carro
- Vino en el vehículo de otra persona (que estacionó) Otro _____
- Transferencia desde otra ruta (# de ruta) _____
- Tri-Rail
- Metrorail
- Metromover

4. ¿En cuál parada de autobus se subió para este trayecto / viaje de ida (o regreso)? (nombre de las calles o intersección)

_____ (Sea Detallado)

5. ¿Qué tan lejos viajó para iniciar este trayecto / viaje de ida (o regreso) hasta la parada de autobus donde se montó?

- Menos de 2 millas
- 2 a 5 millas
- 5 a 7 millas
- Si es más de 7 millas, ¿cuántas? _____

6. En cuál parada de este trayecto se bajará? (nombre de las calles o intersección)

_____ (Sea Detallado)

7. **TERMINARÉ** este trayecto / viaje de ida (o regreso) en: (marque solo una opción)

- Trabajo
- Lugar de Residencia
- Almacén / Centro Comercial
- Centro social o Recreacional
- Pre-escolar / Guardería
- Escuela Secundaria (K-12)
- Universidad o College
- Otro (ej. Aeropuerto, Hotel, Oficina de Medico, etc)

8. Por favor escriba la intersección o código postal (Zip Code) **DONDE TERMINARÁ** este viaje de ida (o regreso): (por ejemplo: el lugar de su residencia, trabajo, escuela, etc.)

9. ¿Cómo llegará al **DESTINO FINAL** de este trayecto / viaje de ida (o regreso)? (marque TODAS las opciones que apliquen)

- Caminando (# de cuadras) _____
- Bicicleta
- En su vehículo (estacionado)
- Lo recogera otra persona en carro
- En el vehículo de otra persona (estacionado) Otro _____
- Transferencia desde otra ruta (# de ruta) _____
- Tri-Rail
- Metrorail
- Metromover

10. Pagué el costo de este trayecto / viaje en autobus usando:

- Dinero en efectivo
- Pase de tarifa reducida
- Pasaporte Golden / Patriot
- Pase de un día
- Pase Mensual
- Transferencia desde otra ruta
- Transferencia desde Tri-Rail
- Pase de bus de 10 viajes

- 11. Su empleador pagó parte o la totalidad del costo de éste trayecto / viaje en autobus? Si No
 - 12. ¿Tuvo usted disponible un automóvil u otro vehículo motorizado para hacer este trayecto / viaje? Si No
 - 13. ¿Este trayecto es parte de un viaje de IDA y VUELTA que usted completará hoy? Si No
- Si la respuesta es sí, qué modo de transporte va usar en su trayecto/viaje de regreso?
- Este es mi viaje de regreso
 - Ruta Local (Ruta # _____)
 - Servicio Expreso
 - Tri-Rail
 - Metrorail
 - Metromover
 - Otro _____
14. En promedio, cuánto tiempo se tarda en completar este trayecto / viaje de puerta-a-puerta? _____ mins
15. ¿Cuántos días a la semana utiliza usted este servicio de Autobus Expreso? _____ días

POR FAVOR, CUENTENOS ACERCA DE USTED (Confidencial)

- 16. ¿Cuál es el código postal (zip code) de su casa? _____
- 17. Sexo: Femenino Masculino
- 18. ¿Cuántos años tiene?
 - Menos de 16
 - 16 - 24
 - 25 - 34
 - 35 - 44
 - 45 - 54
 - 55 - 64
 - 65 ó más
- 19. Mi raza se puede describir como:
 - Nativo Norteamericano
 - Asiático
 - Negro / Afroamericano
 - Blanco
 - Hispano / Latino
 - Otra _____
- 20. Aproximadamente, cuanto son los ingresos anuales de su hogar?
 - Menos de \$16,500
 - \$16,500 to \$22,000
 - \$22,000 to \$28,000
 - \$28,000 to \$33,500
 - \$33,500 to \$39,500
 - \$39,500 to \$45,000
 - \$45,000 to \$75,000
 - Mas de \$75,000
- 21. ¿Cuál es número total de automóviles o otros vehículos en su hogar, ya sean propios o de alquiler (lease)?
 - 0 (ninguno)
 - 1
 - 2
 - 3
 - 4
 - 5 ó más
- 22. ¿Tiene licencia de conducir vigente? Si No
- 23. Incluyéndolo a usted, ¿Cuántas personas viven en su casa? _____
Y de esas personas por favor indique:
 (# de personas) _____ tienen licencia de conducir vigente
 (# de personas) _____ tienen menos de 16 años de edad
 (# de personas) _____ tienen más de 65 años de edad
 (# de personas) _____ trabajan fuera de la casa
- 24. ¿Es usted discapacitado? Si No
- 25. ¿Cuál es su nivel de educación?
 - Educación Elemental
 - Educación Intermedia
 - Bachillerato / GED
 - Educación Vocacional
 - Universidad
 - Posgrado o Doctorado
- 26. ¿Cuál es su **ESTADO LABORAL** actual? (marque TODAS las opciones que apliquen)
 - Trabaja tiempo completo
 - Trabaja medio tiempo
 - No trabajo / desempleado
 - Estudiante
 - Ama de Casa
 - Retirado / pensionado

GRACIAS, POR FAVOR ENTREGUE LA ENCUESTA AL ENCUESTADOR O DEJELA EN SU SILLA.

Appendix B: Passenger Count Form



95 EXPRESS BUS SURVEY

NAME:		DATE:	9/27/2011
REPORT TIME:	4:00 PM	END TIME:	7:42 PM
Report Location:	MDT Northeast Garage 360 NE 185th St, Miami, Miami-Dade, Florida 33179		

ROUTE #	195	RUN #	5230
---------	-----	-------	------

TRIP #	1	of TOTAL TRIPS:	3
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TRIP FIRST STOP:	NW 8 St & NW 1 Av	TRIP LAST STOP:	Fort Lauderdale Tri-Rail
------------------	-------------------	-----------------	--------------------------

TRIP START TIME: (Time bus leaves first stop)			
TRIP END TIME: (Time bus arrives at last stop)			

STOP NUMBER	ONs	OFFs	
NW 8 ST & NW 1 AV			
NW 1 AV & NW 5 ST			
NW 1 AV & NW 1 ST			
SW 1 ST & SW 1 AV			
SE 1ST & SE 1 AV			
BROWARD BLVD			
FORT LAUDERDALE TRI-RAIL			

START SERIAL # on PAD (yours and other surveyor's)			
---	--	--	--

END SERIAL # on PAD (yours and other surveyor's)			
---	--	--	--

COMMENT			
---------	--	--	--

Surveyor's Initials			
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Terminal Master's Initials			
----------------------------	--	--	--