



# IndyGo On-Board Transit Survey Final Report

March 2023

Prepared by Lochmueller Group and ETC Institute

*IndyGo*<sup>SM</sup>



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# 2022 INDYGO

## ON-BOARD SURVEY



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## CHAPTER 1

### EXECUTIVE SUMMARY

### BACKGROUND

ETC Institute, supported by Lochmueller Group, conducted a system-wide on board survey of ridership for the Indianapolis Public Transportation Corporation (IndyGo). In total 2,711 usable surveys were collected between both weekday and weekend surveys. The objective of the survey is to analyze travel patterns, transit use and determine the makeup of IndyGo's ridership.

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#### **Language Access**

If information is needed in another language, contact 317-327-5136. Si se necesita información en otro idioma, comuníquese con 317-327-5136.

#### **INDOT/FHWA**

This plan was prepared in cooperation with the State of Indiana, the Indiana Department of Transportation, and the Federal Highway Administration. This financial assistance notwithstanding, the contents of this document do not necessarily reflect the official view or policies of the funding agencies.

#### **Background**

This survey was conducted between September 6 and October 3, 2022. The previous on-board survey of IndyGo riders was administered in October and November of 2016. This Executive Summary contains key comparison of the findings of these two surveys. The Red Line was not in operation during the 2016 survey.

The analysis conducted was two-fold:



Examine the **travel behavior characteristics** of IndyGo riders.



Examine **demographic characteristics** of IndyGo riders.

The survey data used for this analysis were weighted and expanded to be representative of IndyGo's ridership.

# KEY FINDINGS



of IndyGo riders can be considered “frequent riders” and use IndyGo 3 or more times per week.



of IndyGo riders reported that there is no vehicle available to their household, while about 17% reported having two or more vehicles available to their household.



of IndyGo riders would not have made their trip if IndyGo service was not available.



of IndyGo riders are employed, including 17% that work part-time.

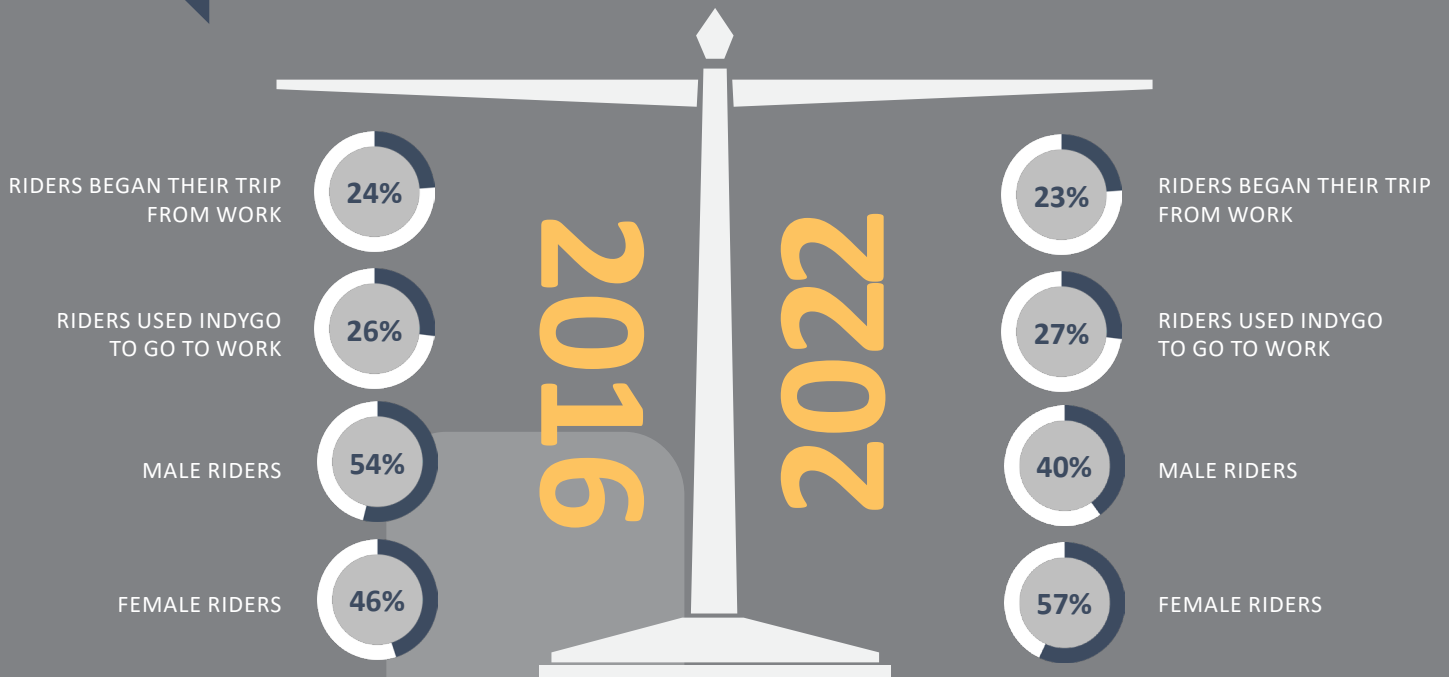


of IndyGo riders are from households that earn less than \$25,000 annually. About 8% come from households that earn at least \$60,000 annually.

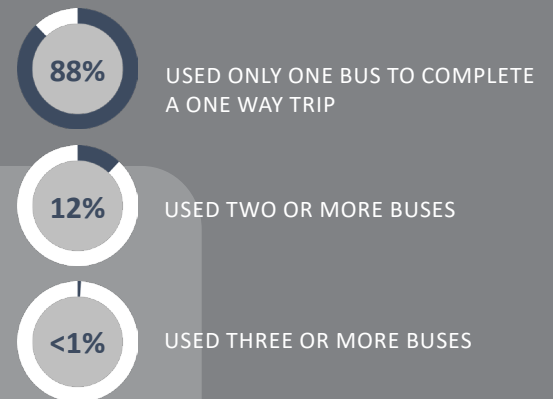


of IndyGo riders walk to/from the bus stop.

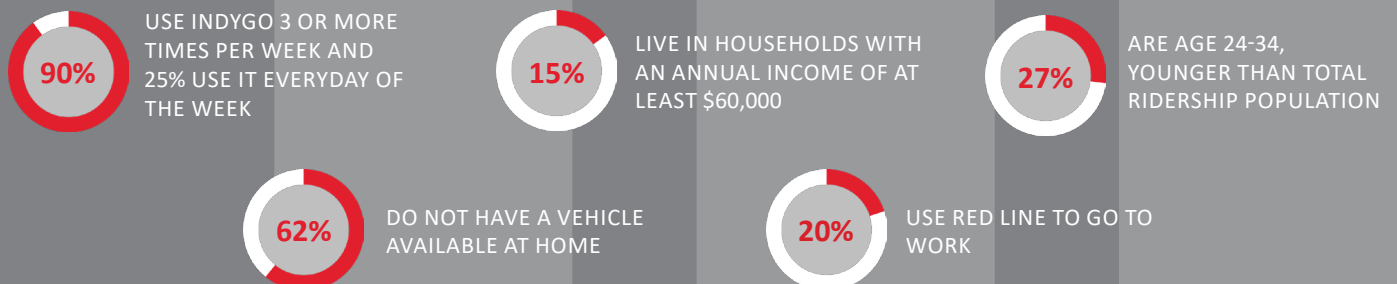
## Demographic Profile of 2016 & 2022 RIDERS



## BUS TRANSFERS



## IndyGo Red Line



# TYPICAL INDYGO RIDER



AFRICAN AMERICAN WOMAN (AFRICAN AMERICAN MAN IN 2016)

AGE 35-49

IS EMPLOYED BUT LIKELY HAS A HOUSEHOLD INCOME OF LESS THAN \$25,000 PER YEAR.

THERE IS NO VEHICLE AVAILABLE TO HER.

SHE USES CASH ON BUS AND WALKS LESS THAN 1/4 MILE TO AND FROM THE BUS STOP.

SHE ONLY TAKES ONE BUS TO ARRIVE AT HER DESTINATION.

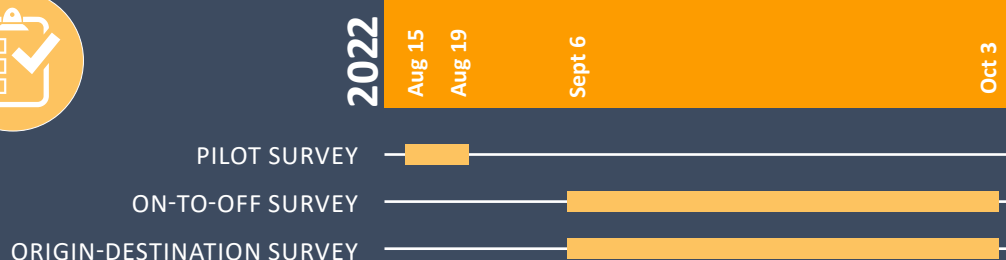
SHE USES THE BUS 5 DAYS A WEEK TO TRAVEL BETWEEN HOME AND WORK.

## SURVEY ELEMENTS AND PROJECT SCHEDULE

In total, **2,711** usable surveys were collected between both weekday and weekend surveys.

Key elements of the study include:

- Developing a survey instrument
- Developing sampling goals for each bus route
- Collecting and processing the surveys
- Weighting and expanding the data
- Analyzing survey results and reporting the results





## CHAPTER 2

# DATA ANALYSIS

### 2.1 DATA ANALYSIS

This section of the report provides detailed results of the On-Board Survey. The survey was administered to a sample of riders and then expanded to represent total ridership using linked and unlinked weight factors. Linked weight factors were used for system-wide tabulations of survey results; unlinked weight factors were used for tabulations for an individual route. The total estimated ridership based on the linked weight factor is about 15,000 for weekday results and 12,000 for weekend results. Throughout this chapter, N is shown and represents the estimated total ridership for a specific tabulation illustrated by the figures. For weekday results N refers to estimated daily ridership, while for weekend results N refers to estimated ridership for Saturday and Sunday combined. In all cases, N provides context to the overall number of riders detailed by a specific tabulation.

Unless otherwise indicated, results are shown for weekday riders. Where applicable and appropriate, a comparison between weekday and weekend riders is shown.

#### Typical IndyGo Rider

IndyGo's typical passenger is an African American woman between the age of 35 and 49. She uses the bus 5 times a week to travel between home and work. The typical rider is employed but likely has a household income of less than \$25,000 per year. She does not have another vehicle available to use and most likely walks to and from the bus stop and only needs one bus to reach her destination.

#### Travel Characteristics

Of all trips, the greatest number start from home and end at work or a work related location. IndyGo riders use public transit service to go to a wide variety of destinations including school, shopping, recreation, and medical.

#### IndyGo Red Line

The IndyGo Red Line is a bus rapid transit (BRT) line running 13 miles north-south through downtown Indianapolis. The Red Line began service September 2019 and connects neighborhoods with downtown's large concentration of employers. Its all electric bus fleet is zero emission and provides convenient, fast, and reliable service every 10 to 20 minutes.



QUESTION 1

Question 1: What type of place are you coming from now?

About half of weekday IndyGo riders begin their trips from home. Approximately 22% of passengers start from work or a work related location. Although the majority of riders begin their trips from home or work, a substantial portion (about 30%) of passengers start from other locations such as the doctor’s office, school or shopping. This shows the variety of trip origins served by IndyGo.

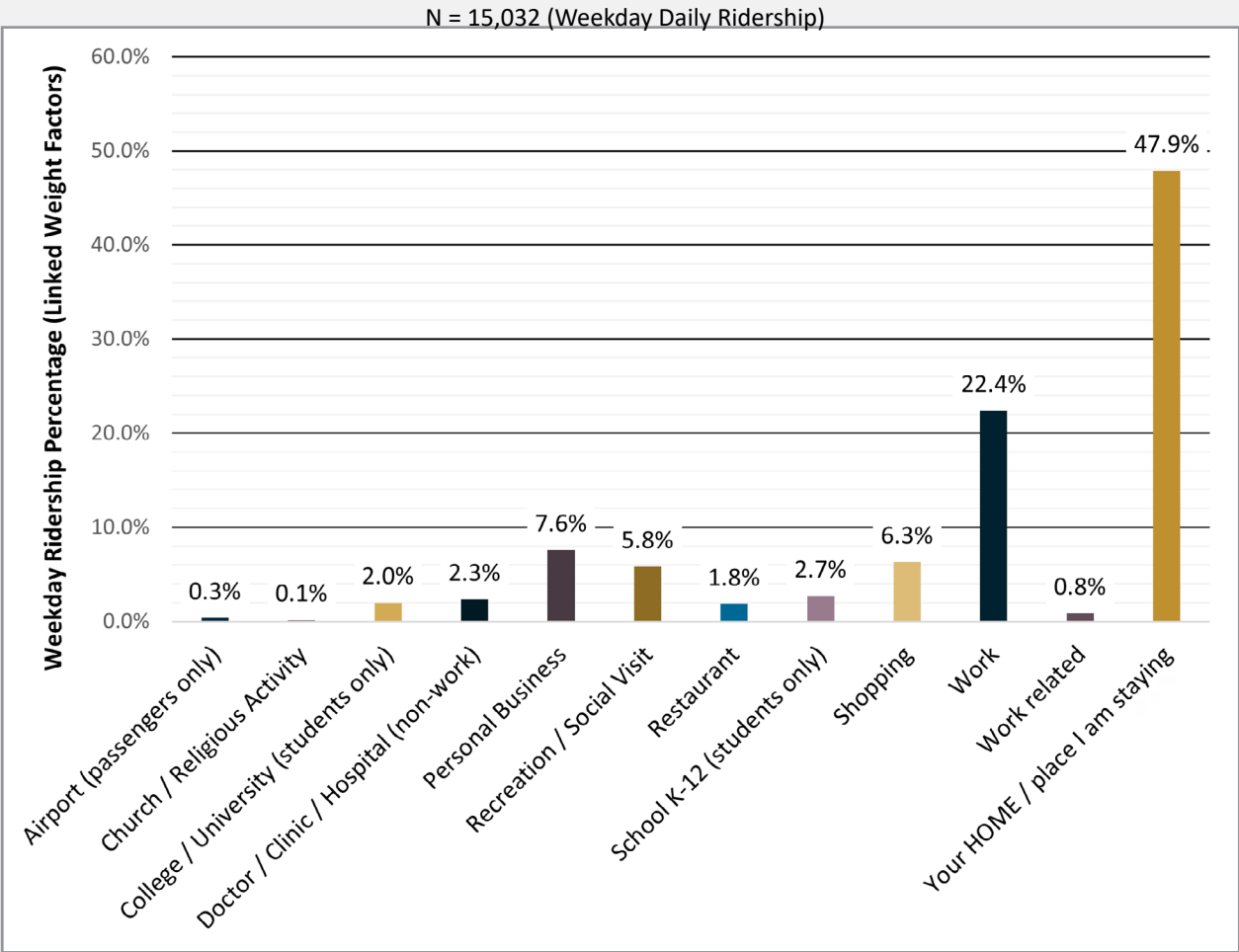


Figure 2-1: What type of places do weekday IndyGo riders begin their trip?



# QUESTION 1

For weekend IndyGo riders, 42% of riders begin their trips from home and only approximately 14% start their trips from work. Sizable portions of riders start their trips from shopping (15%) or recreation/social visit (13%). IndyGo serves a greater variety of trip origins on weekends.

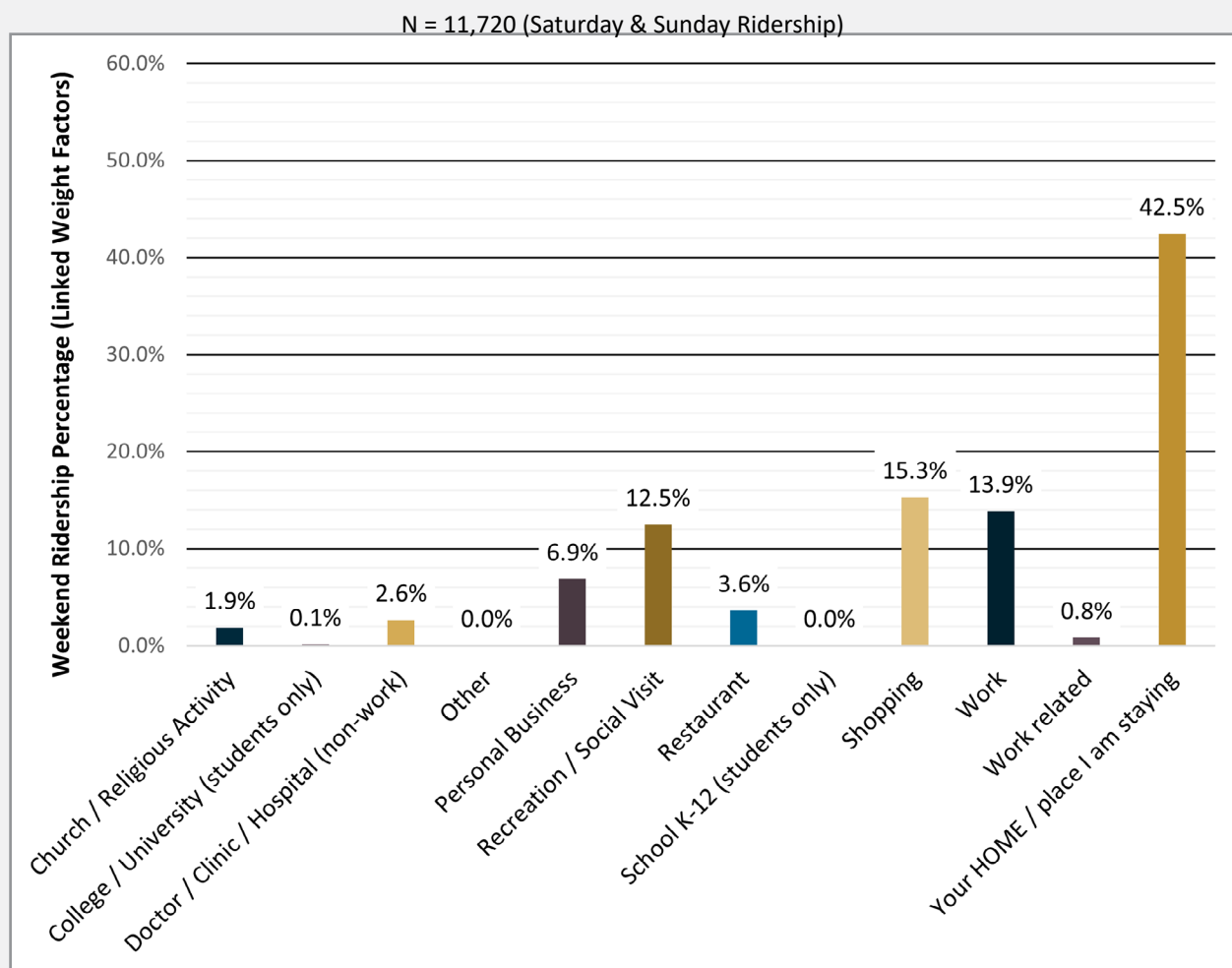


Figure 2-2: What type of places do weekend IndyGo riders begin their trip?



QUESTION 1

The percentage of riders starting trips from school or college/university is more prevalent among younger age categories while older age categories tend to have more trips starting at a doctor/clinic/hospital. The percentage of riders starting at work increases with the age but begins to decline for riders 50 and older.

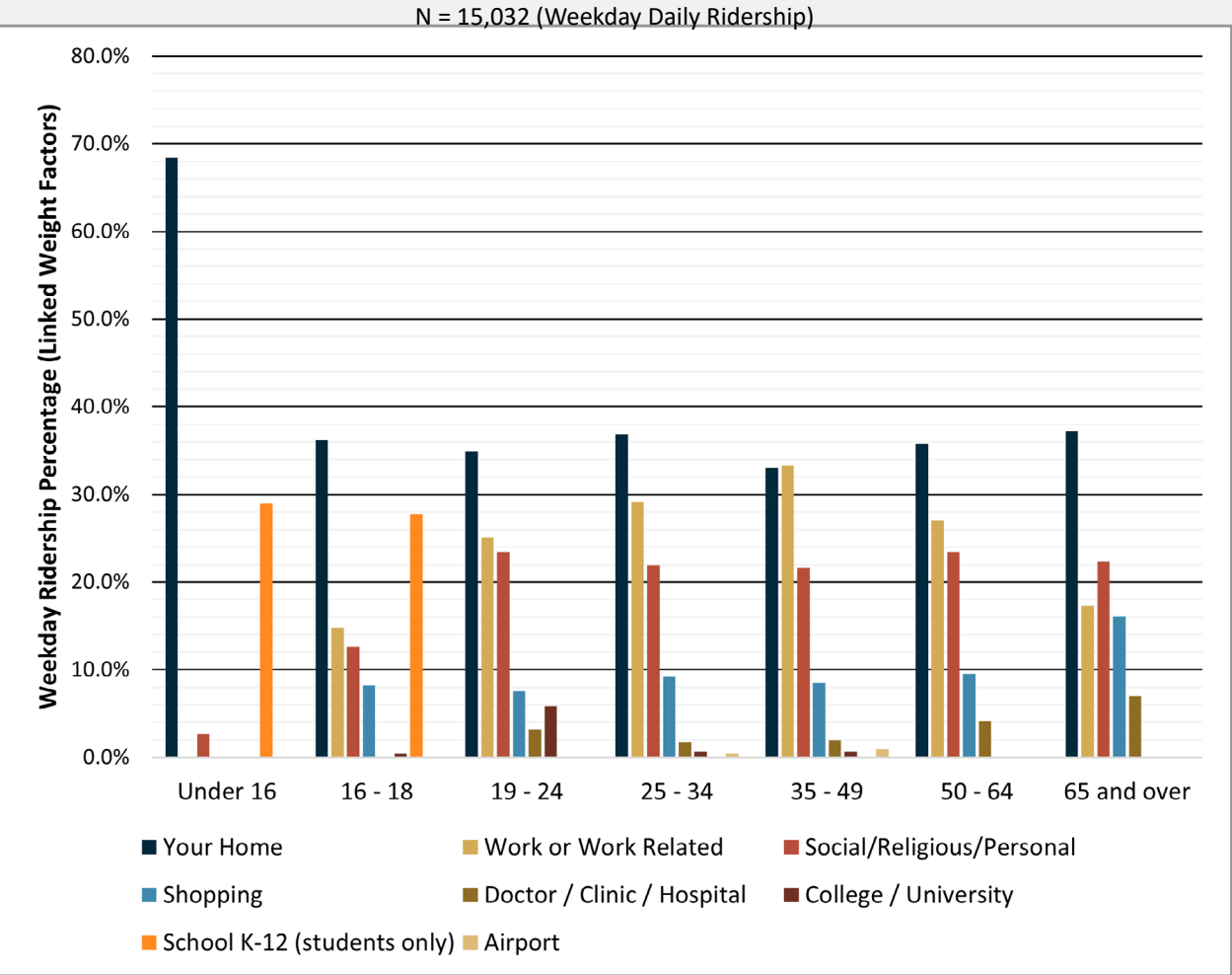


Figure 2-3: What type of places do weekday IndyGo riders begin their trip based on age?

AGE GROUP	YOUR HOME	WORK	SOCIAL/RELIGIOUS/PERSONAL	SHOPPING	MEDICAL	COLLEGE / UNIVERSITY	SCHOOL K-12	AIRPORT
Under 16	68.4%	-	2.6%	-	-	-	29.0%	-
16-18	36.2%	14.8%	12.6%	8.2%	-	0.4%	27.8%	-
19-24	34.9%	25.1%	23.4%	7.5%	3.2%	5.9%	-	-
25-34	36.9%	29.2%	21.9%	9.2%	1.7%	0.7%	-	0.4%
35-49	33.0%	33.3%	21.6%	8.5%	2.0%	0.6%	-	1.0%
50-64	35.8%	27.1%	23.5%	9.6%	4.1%	-	-	-
65+	37.2%	17.3%	22.3%	16.1%	7.0%	-	-	-

Table 2-1: What type of place do weekday IndyGo riders begin their trip based on age?





# QUESTION 1

For weekend riders, fewer trips start at college/university or K-12 schools for riders 24 and under. Across all age groups, more weekend trips start at shopping or social/religious/personal locations compared to weekday trips.

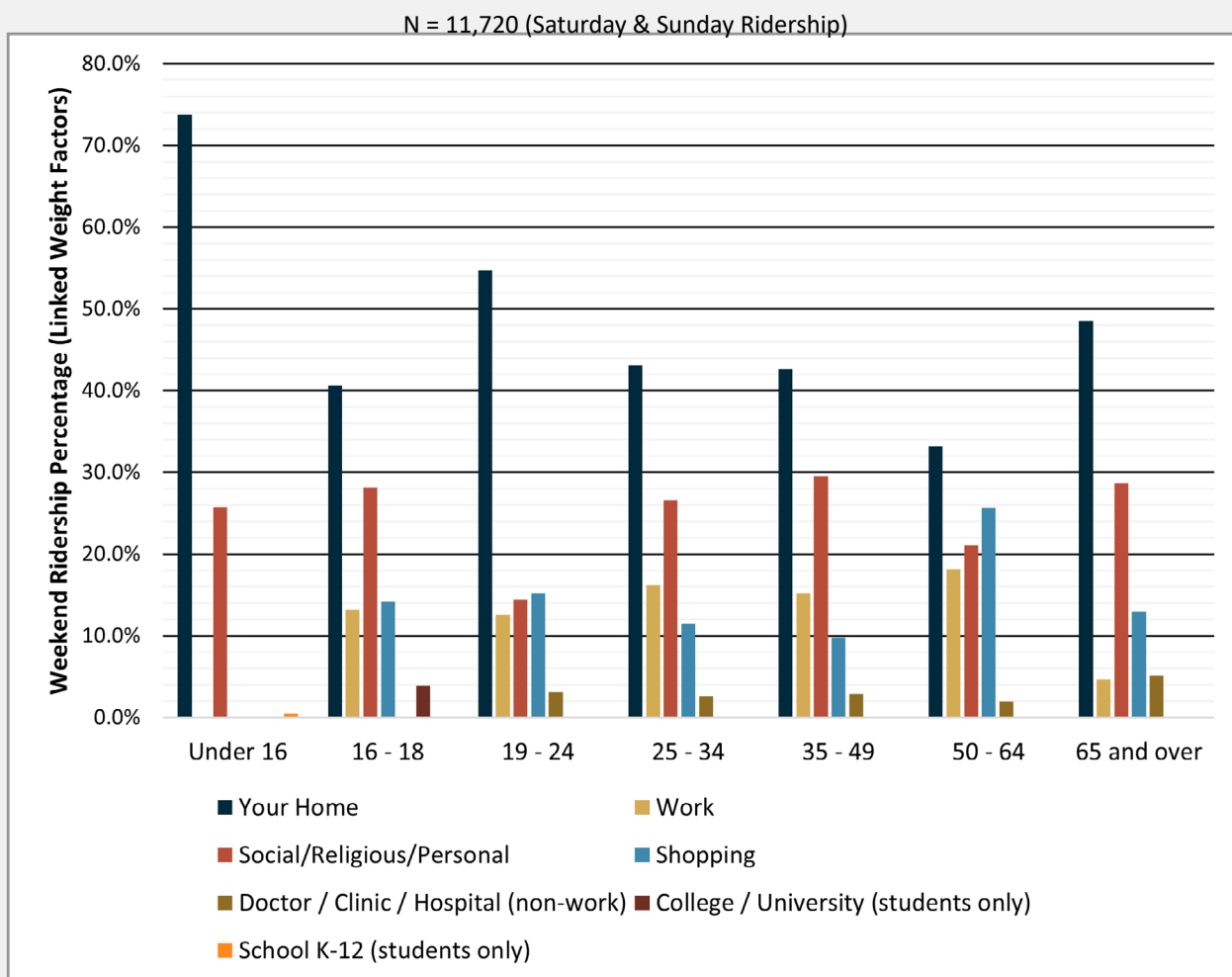


Figure 2-4: What type of places do weekend IndyGo riders begin their trip based on age?

AGE GROUP	YOUR HOME	WORK	SOCIAL/RELIGIOUS/PERSONAL	SHOPPING	MEDICAL	COLLEGE / UNIVERSITY	SCHOOL K-12
Under 16	73.8%	-	25.7%	-	-	-	0.5%
16-18	40.6%	13.2%	28.2%	14.2%	-	3.9%	-
19-24	54.7%	12.6%	14.4%	15.2%	3.1%	-	-
25-34	43.1%	16.2%	26.6%	11.5%	2.6%	-	-
35-49	42.6%	15.2%	29.5%	9.8%	2.9%	-	-
50-64	33.2%	18.2%	21.0%	25.6%	2.0%	-	-
65+	48.5%	4.7%	28.7%	13.0%	5.2%	-	-

Table 2-2: What type of place do weekend IndyGo riders begin their trip based on age?



# QUESTION 1

The origin/destination places for senior riders show that, compared to all riders, seniors make fewer trips to/from work and more trips to/from other locations. Seniors use IndyGo to go to a variety of locations, ranging from shopping to their doctor's office.

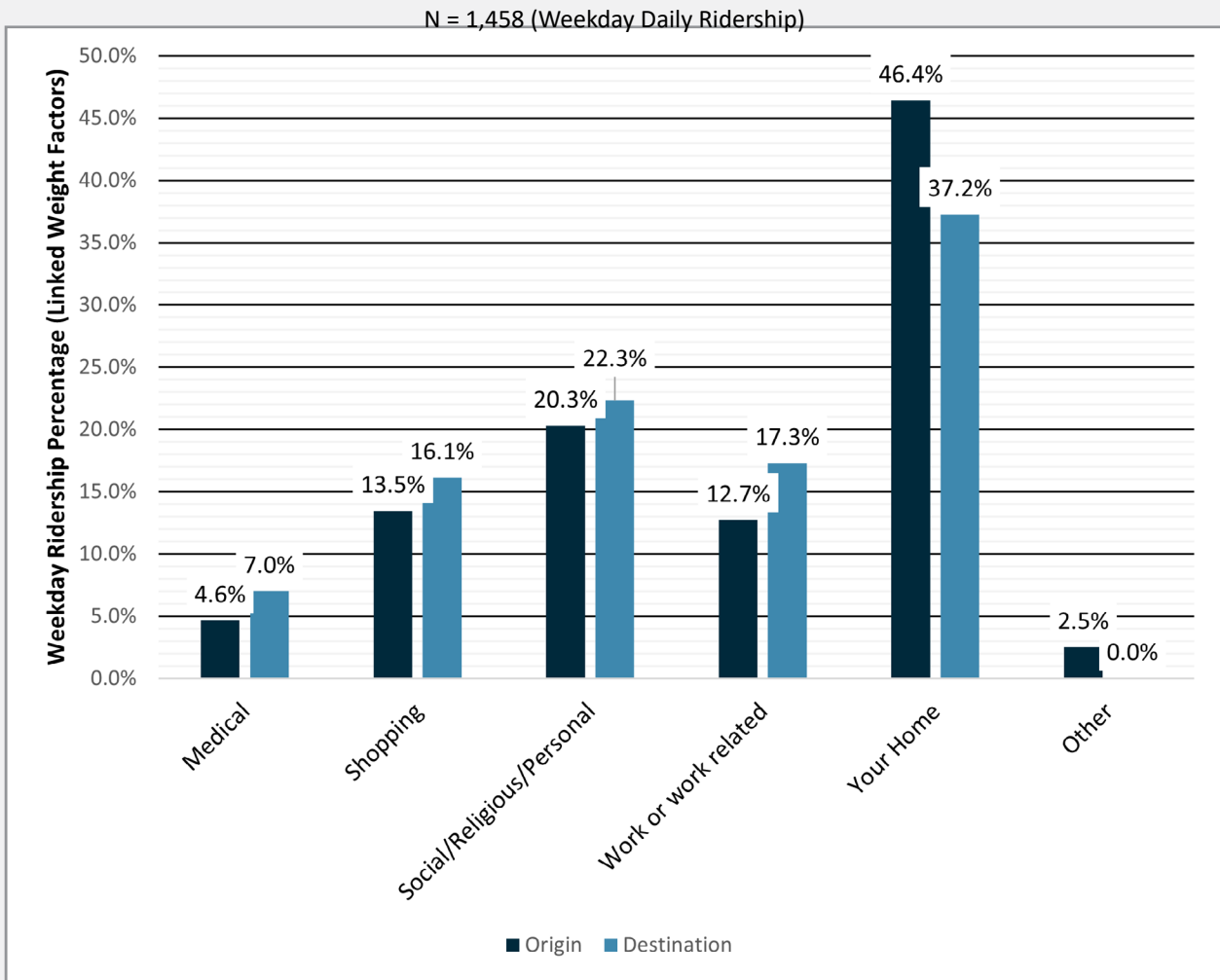


Figure 2-5: What type of places do seniors begin and end their weekday trips?



# QUESTION 1

Seniors who ride IndyGo rely on the service. About three senior riders in seven (42%) would not be able to make their trip if IndyGo service were not available. By comparison, 27% of all IndyGo riders would not be able to make their trip if IndyGo service were not available. See Question 15.

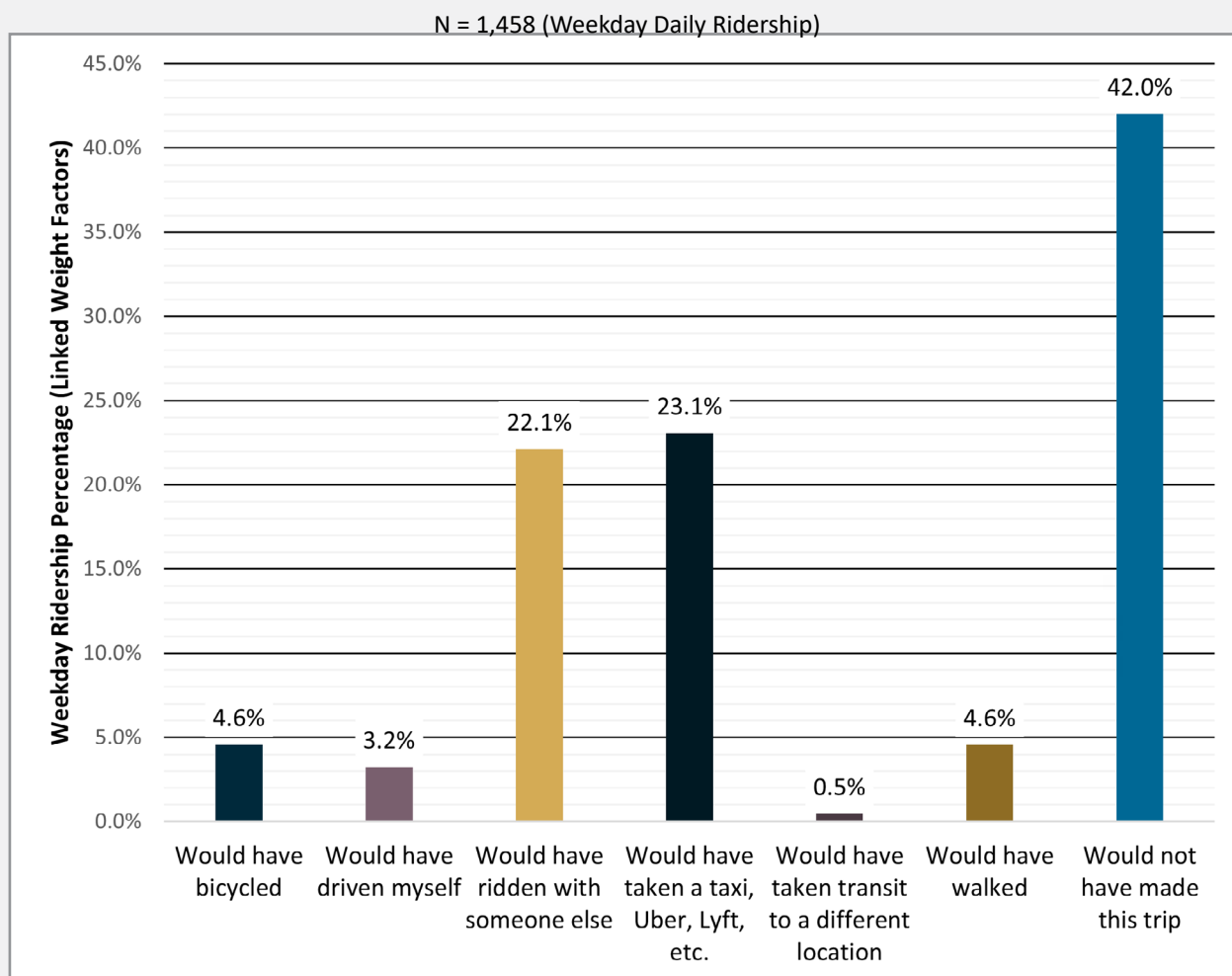


Figure 2-6: How would weekday senior riders make a trip if IndyGo service wasn't available?



# QUESTIONS 2 & 3

Questions 2 and 3 ask riders to identify the name of the place they are coming from and the address of that place, respectively.

A heat map of the home origin locations is shown below. It can be seen that IndyGo riders begin their trips from a large service area, with the highest concentration being the downtown area, Meridian Street north to 38th Street, and Washington Street east to Irvington.

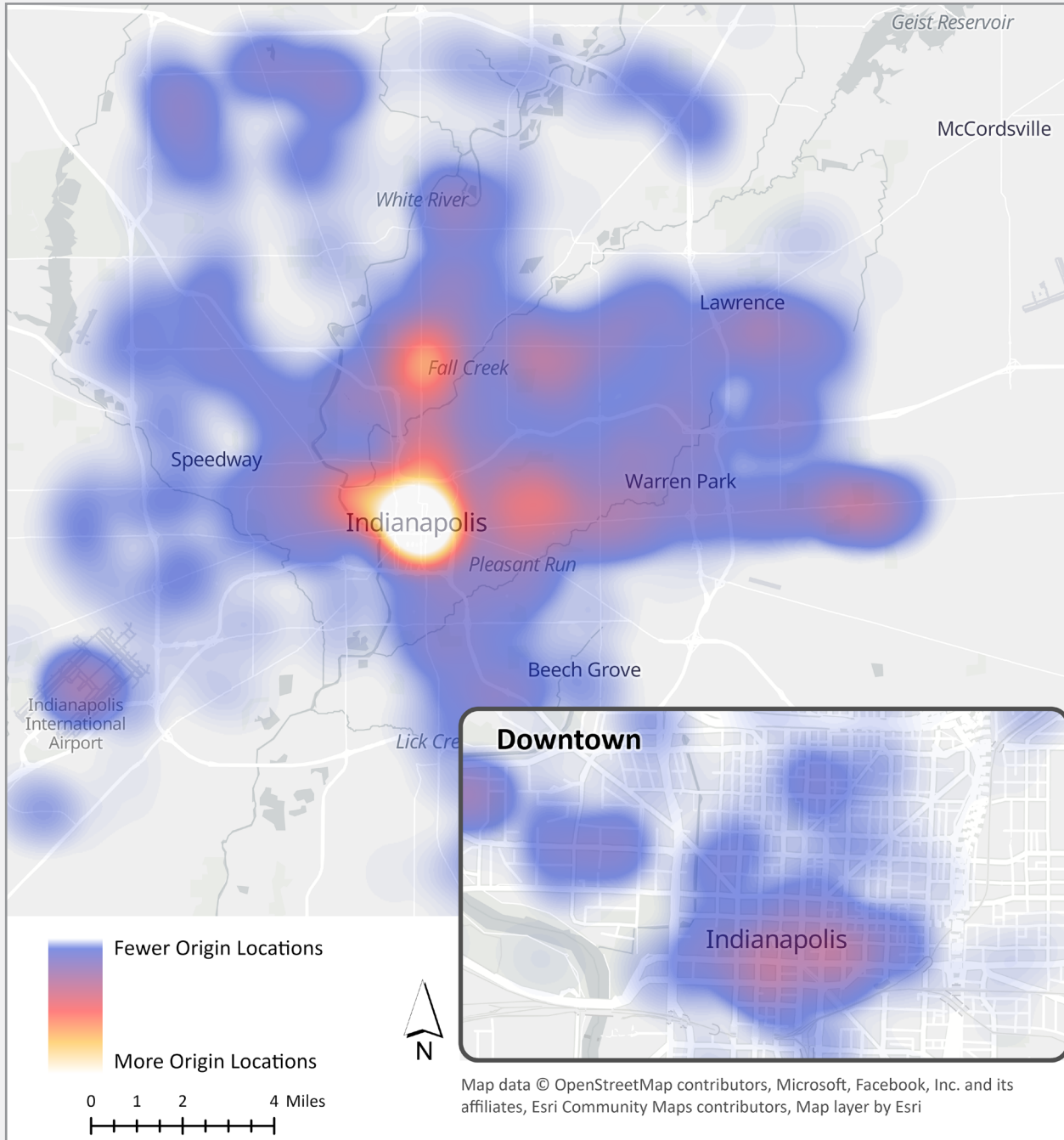


Figure 2-7: Origin locations heat map



## QUESTION 4

*Question 4: How did you get from your origin (the place in Question #1) to the very first bus you used for this one-way trip?*

The majority of weekday riders (94%) walk to get to the appropriate bus stop. This indicates that the typical weekday rider is not traveling far to get to the first bus stop of their trip. This also indicates the importance of a safe and well connected pedestrian network surrounding bus stops, as well as the comprehensive nature of the IndyGo service network.

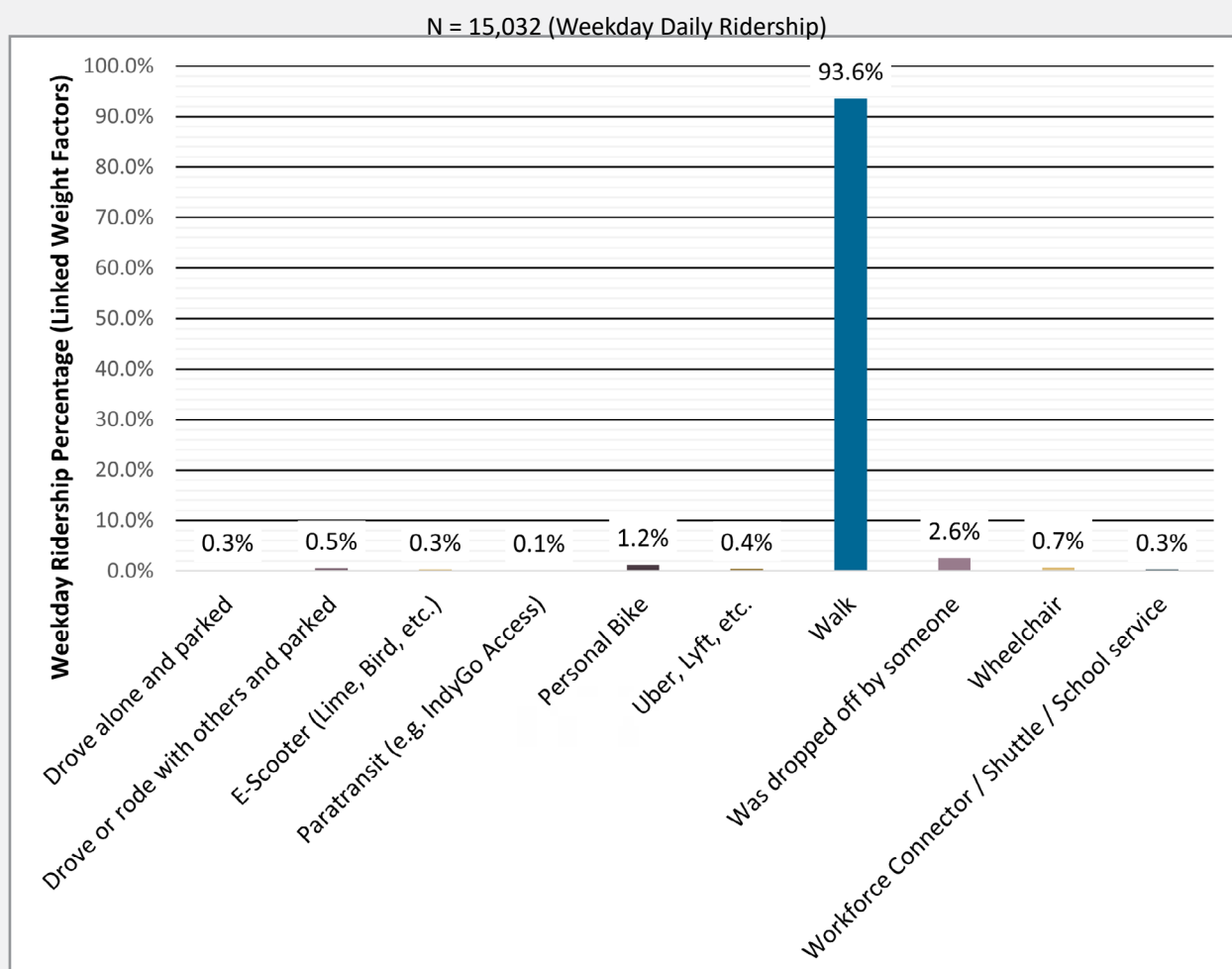


Figure 2-8: How do weekday IndyGo riders get to their first bus?



QUESTION 4

Similarly, most weekend riders walk to get to the first bus stop of their trip. Slightly higher percentages of weekend riders access IndyGo via bike or being dropped off. In addition to the pedestrian network surrounding bus stops, a safe and well connected bicycle network is also important as well as having appropriate facilities such as bike parking at each bus stop.

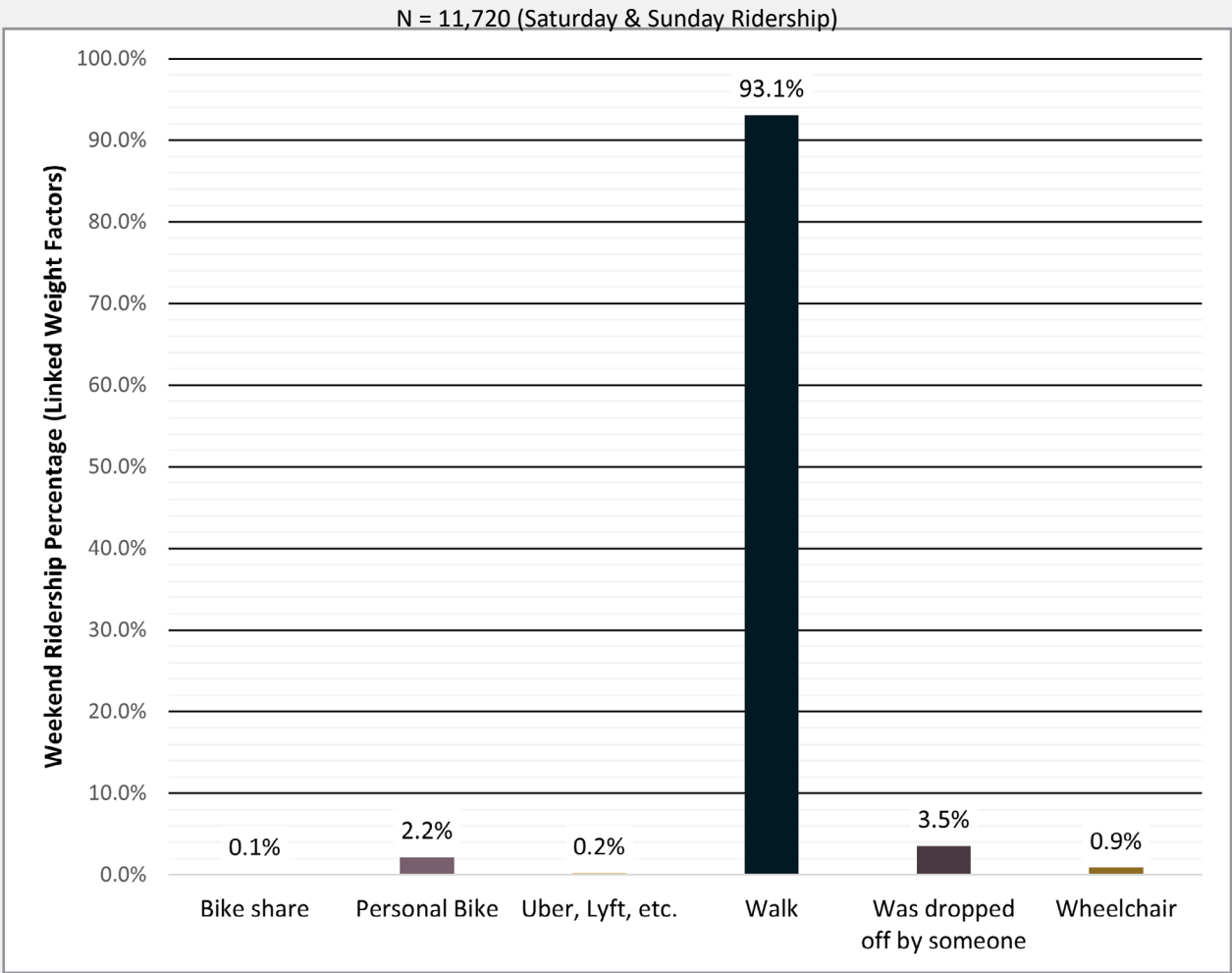


Figure 2-9: How do weekend IndyGo riders get to their first bus?



## QUESTION 5

*Question 5 asked respondents where they got on the bus to make this trip.*

The distance that riders travel from their trip origin to their first bus stop was estimated based on survey responses for this question as well as questions 2 and 3. Around 56% of passengers travel less than a quarter mile to reach their bus stop with about 29% traveling less than a tenth of a mile. 20% of riders travel more than 1 mile to their bus stop. For riders of the Red Line, passengers appear to travel further to reach their bus stop, 23% travel more than 1 mile. On the other hand, seniors (age 65+) appear to travel less to reach their first stop, 65% travel less than 1/4 mile.

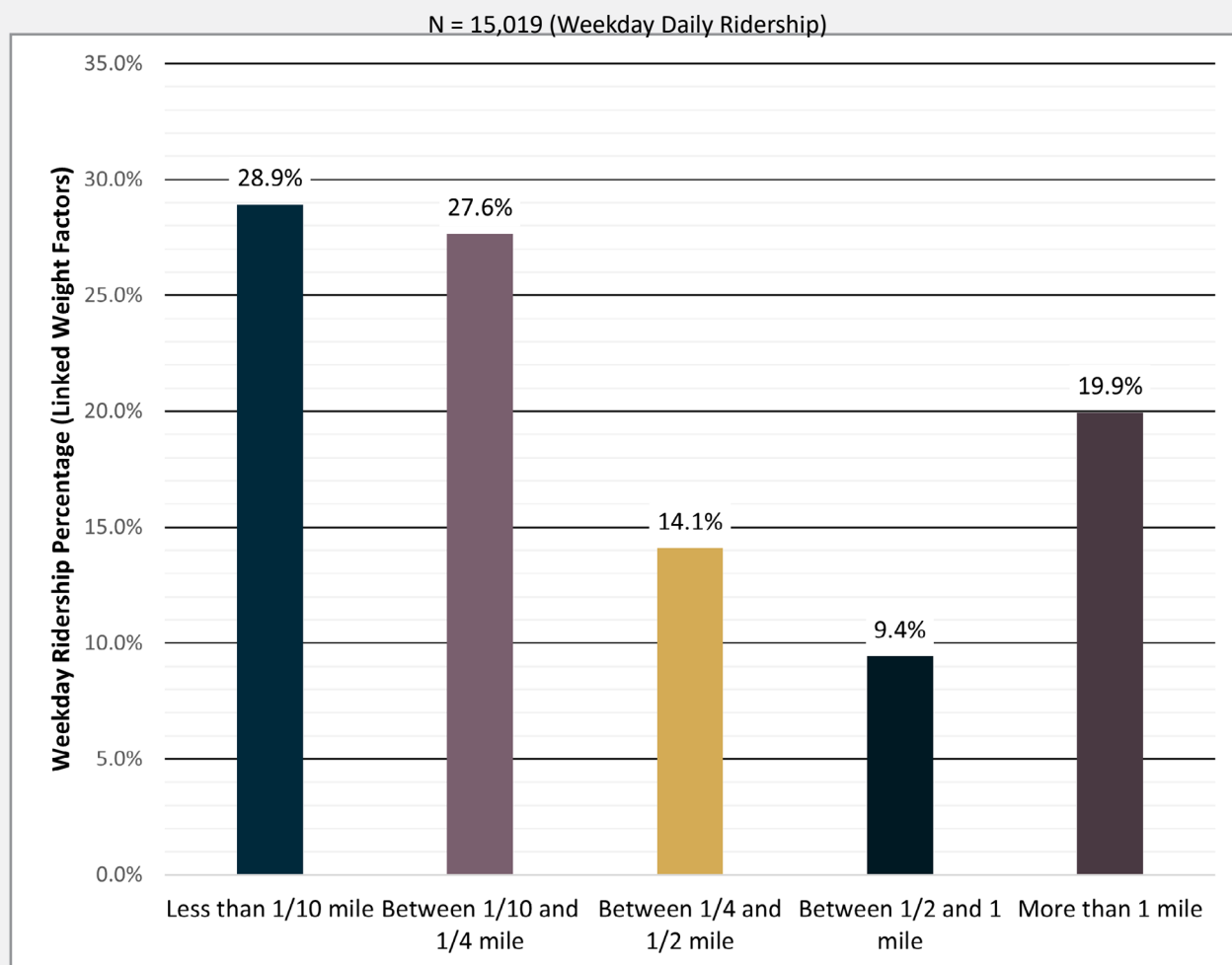


Figure 2-10: Distance riders travel from their origin to their first bus stop.



## QUESTION 6

### Question 6: What type of place are you going to now?

About 36% of passengers end their trips at home, while 27% of riders have work or a work related location as their transit destination place. Even though most riders end their trips at work or home, over a third of passengers end their trips at other locations including religious places, shopping or to obtain medical care. This shows that IndyGo serves a variety of trip destinations.

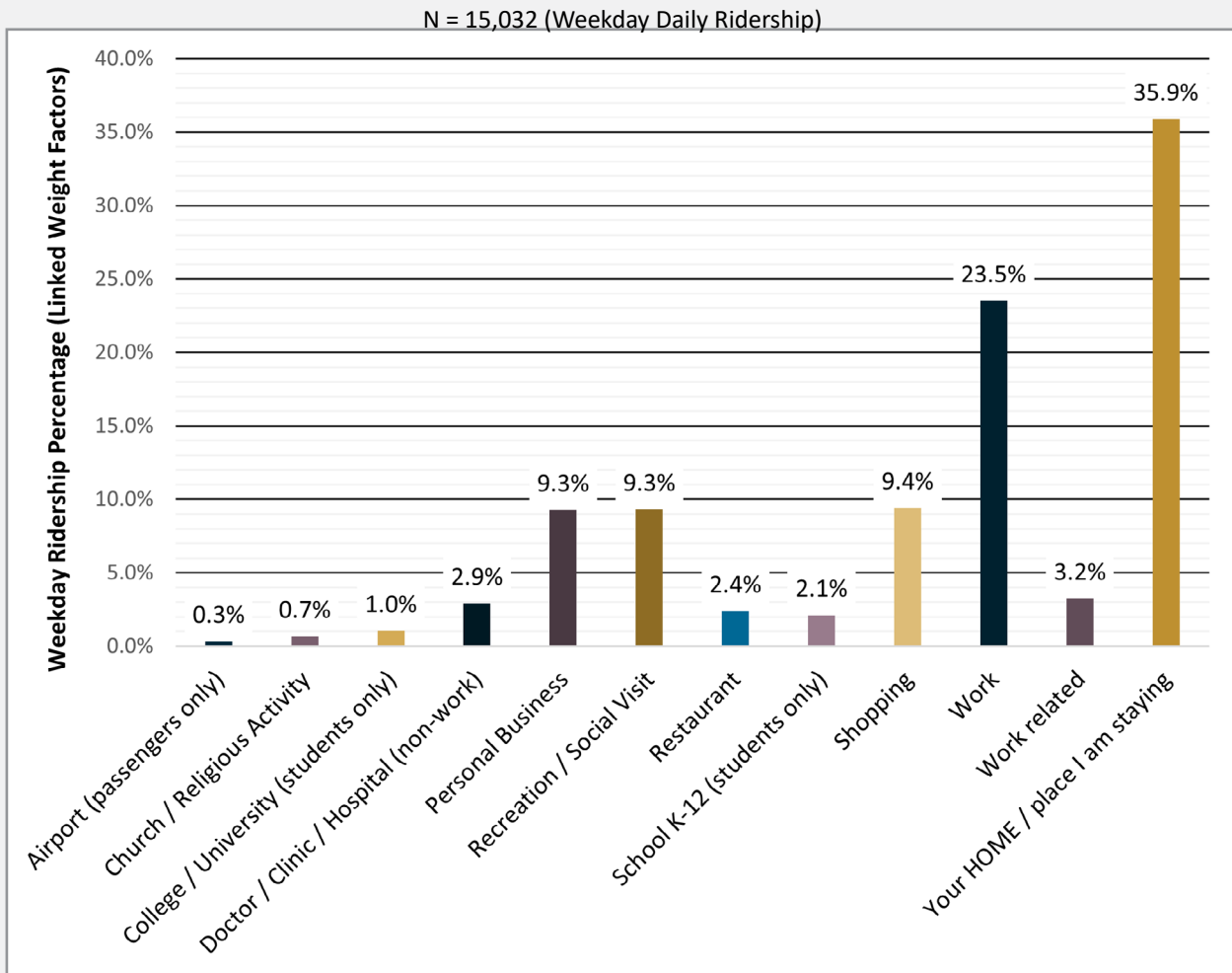


Figure 2-11: Where are weekday IndyGo riders going?





## QUESTION 6

Most weekend riders also end their trip at home, but a lower rate (32%) than weekday riders. Similarly, fewer riders end their trips at a work or work related destination compared to weekday riders. Weekend riders are more likely going to destinations for personal business, recreation, or shopping.

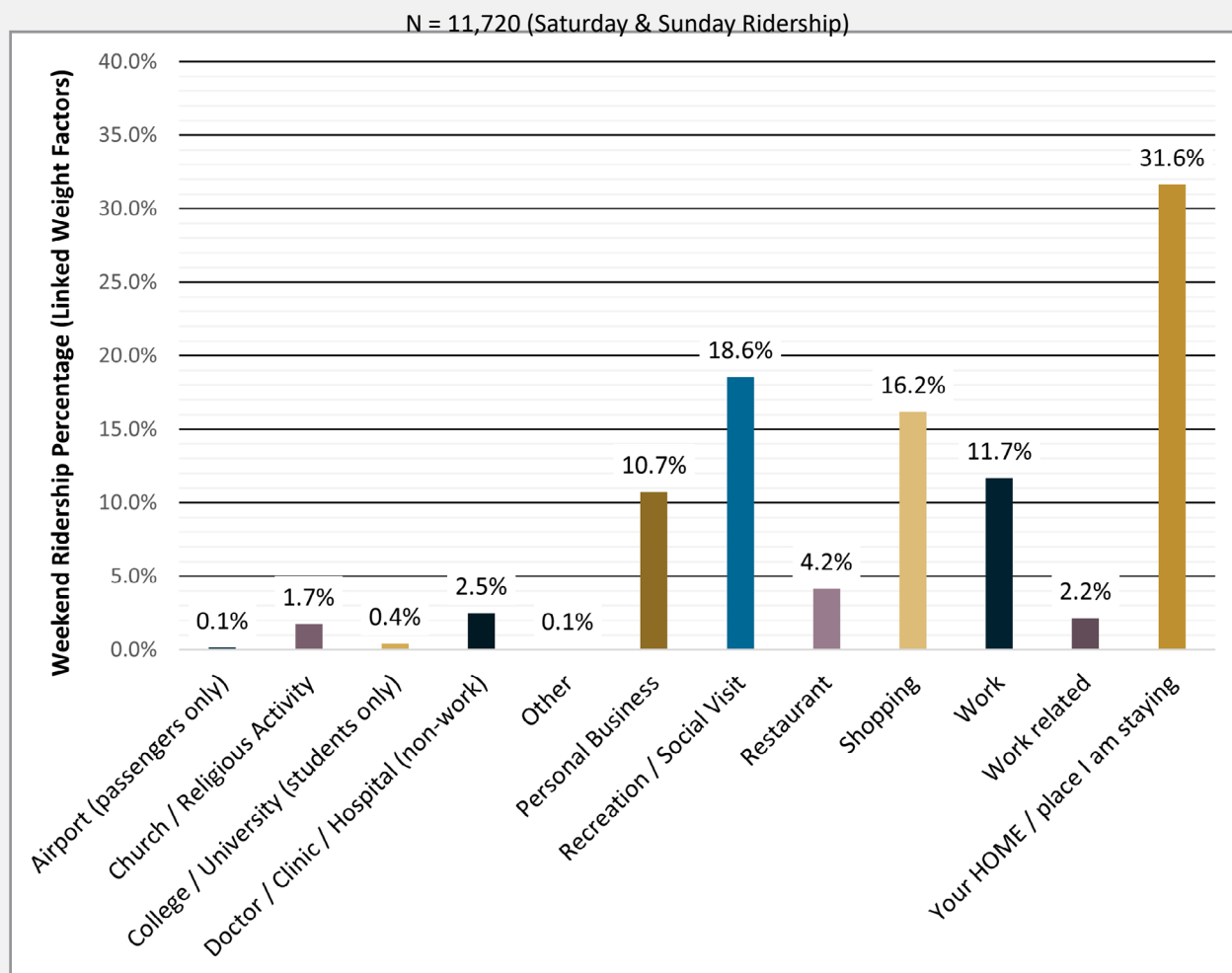


Figure 2-12: Where are weekend IndyGo riders going?



## QUESTION 6

The survey revealed that the destination location for nearly 6% of 19-24 year olds is college/university (down from 10% in the 2016 survey report). IndyGo's services provide transportation to students, which is an important component of access to higher education. A few of the larger schools within the IndyGo service area include:

- Indiana University Purdue University Indianapolis (IUPUI)
- University of Indianapolis
- Butler University
- Ivy Tech Community College

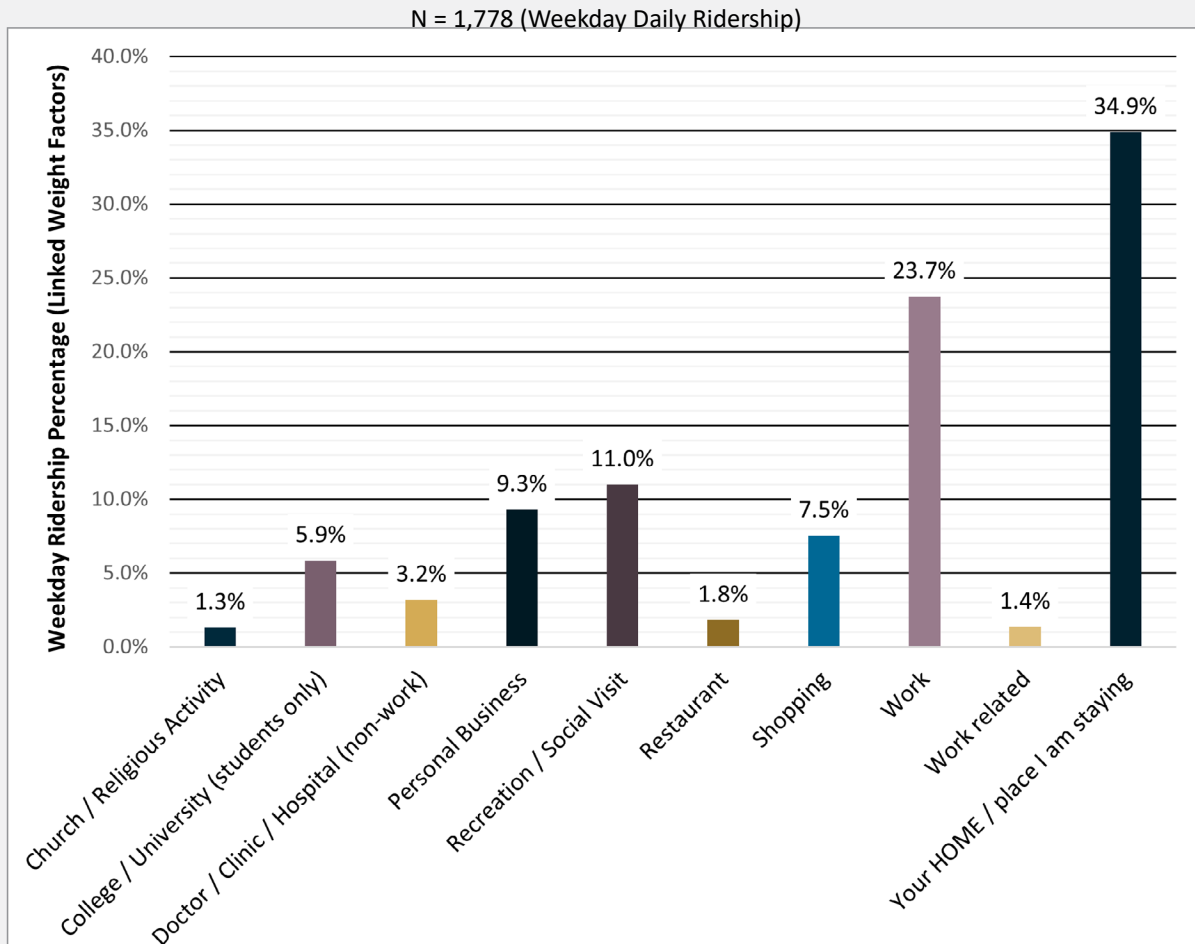


Figure 2-13: What types of places are destinations for 19-24 year old weekday IndyGo riders?



# QUESTIONS 7 & 8

Questions 7 and 8 ask riders to identify the name of the place they are going to and the address of that place, respectively.

A heat map of the destination locations is shown below. It can be seen that a high concentration of weekday IndyGo riders end their trips in the downtown area.

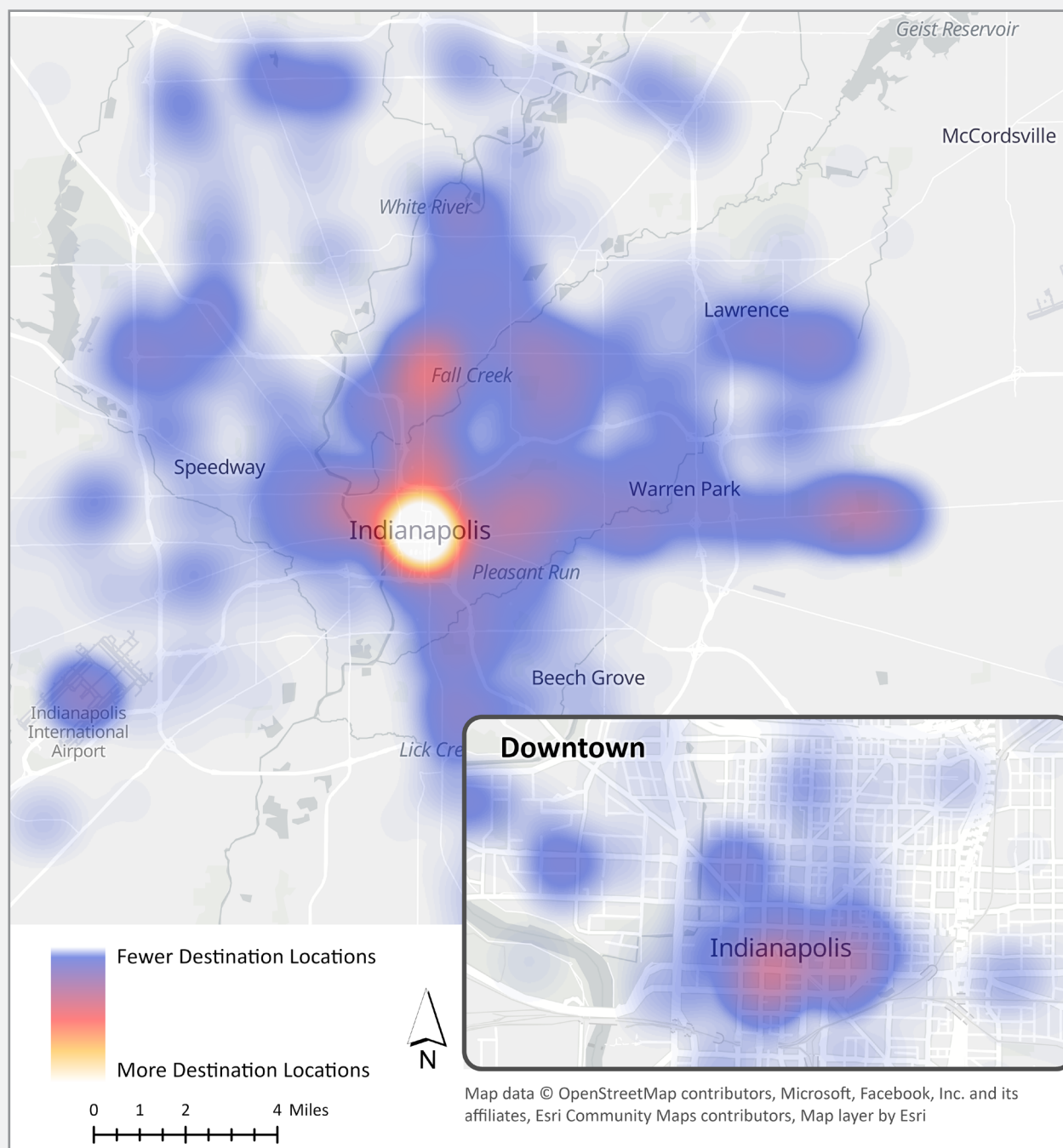


Figure 2-14: Destination locations heat map



QUESTION 9

Question 9: How will you get to your destination (listed in question #6) after you get off the last bus you will use for this one-way trip?

Similar to the origin mode statistics, the majority of riders walk to get to their final destination from the bus stop. The percent of passengers that arrive at their final destination location using a bike is very close to the percent of passenger that use a bike to arrive at their bus stop. This indicates that most of the riders using bikes utilize the bike racks on the bus (about 300 weekday riders). This further highlights the importance of bike racks on IndyGo buses.

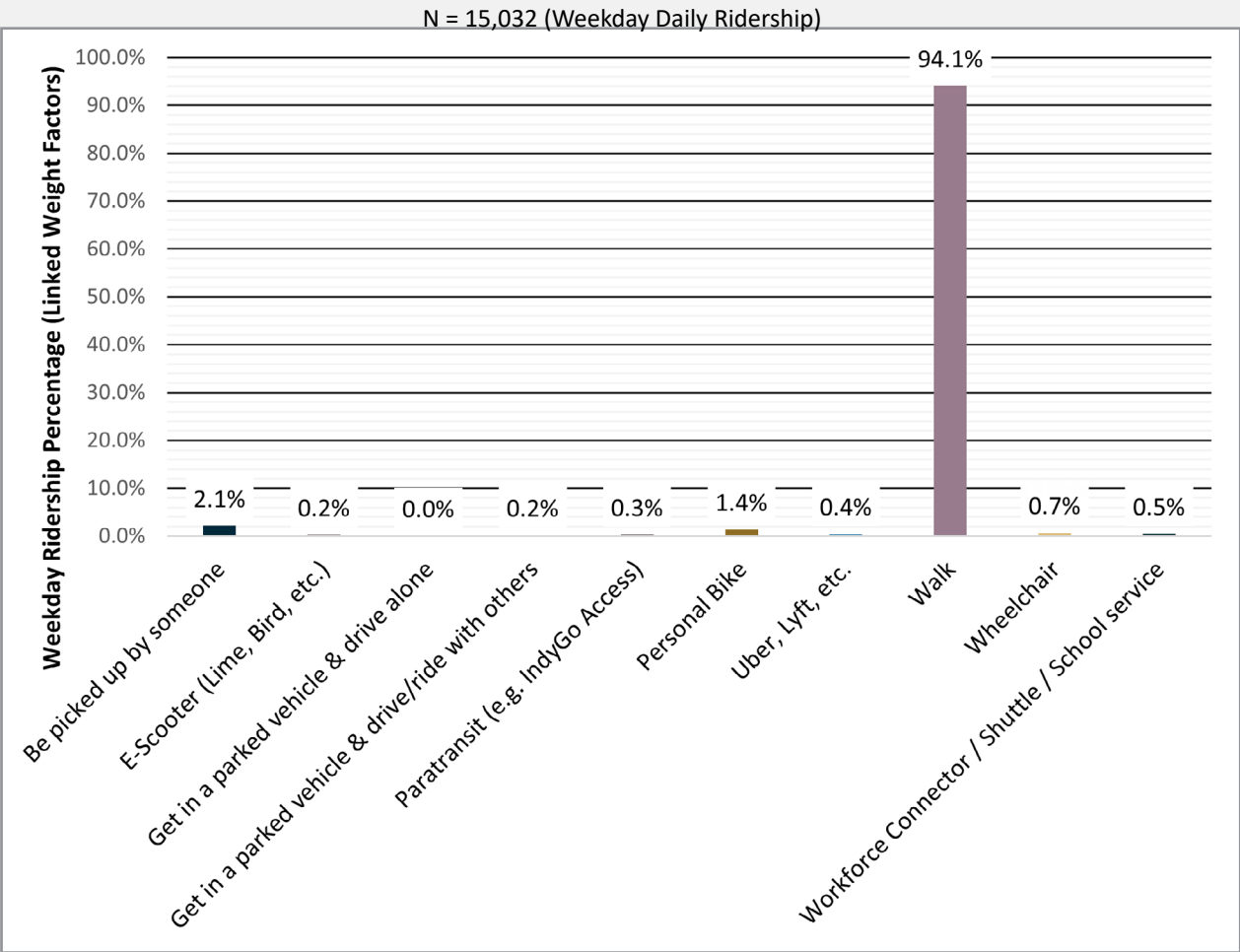


Figure 2-15: How weekday riders get to their final destination after exiting the bus?



## QUESTION 9

For weekend riders, most walk to their final destination. Interestingly, while 2.2% of riders use a bicycle to access the bus, 3.0% use a bike to leave the bus and reach their final destination. This imbalance may indicate that weekend riders are utilizing bike sharing programs to complete their trip.

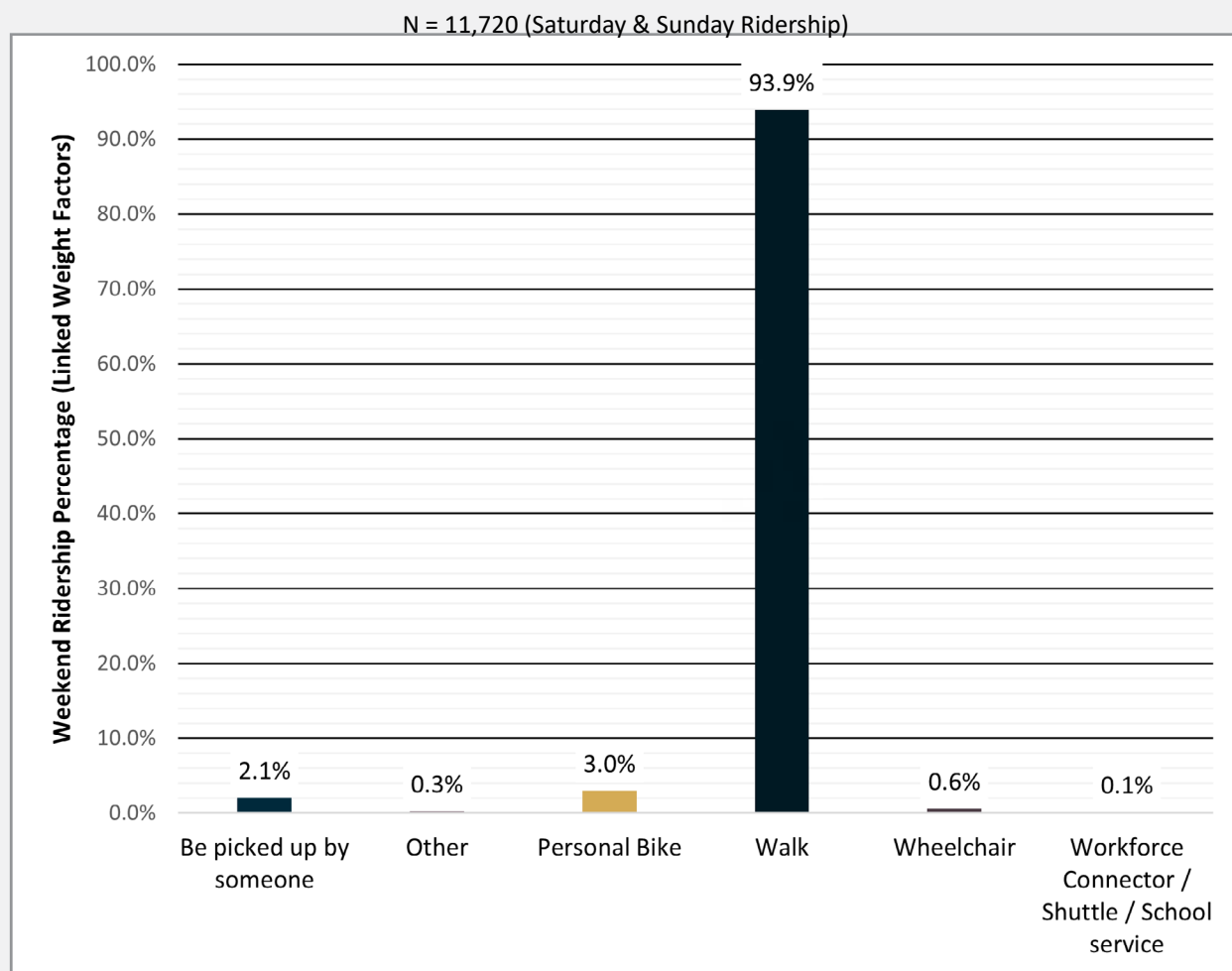


Figure 2-16: How weekend riders get to their final destination after exiting the bus?



QUESTION 10

Question 10: Where will you get off the bus?

The distance IndyGo riders travel from their last bus stop to their trip destination was estimated based on survey responses for this question as well as Questions 7 and 8. Approximately 60% of the passengers travel less than a quarter mile to their bus stop, while about 29% travel less than a tenth of a mile. 18% of passengers travel more than 1 mile from their bus stop to their final destination.

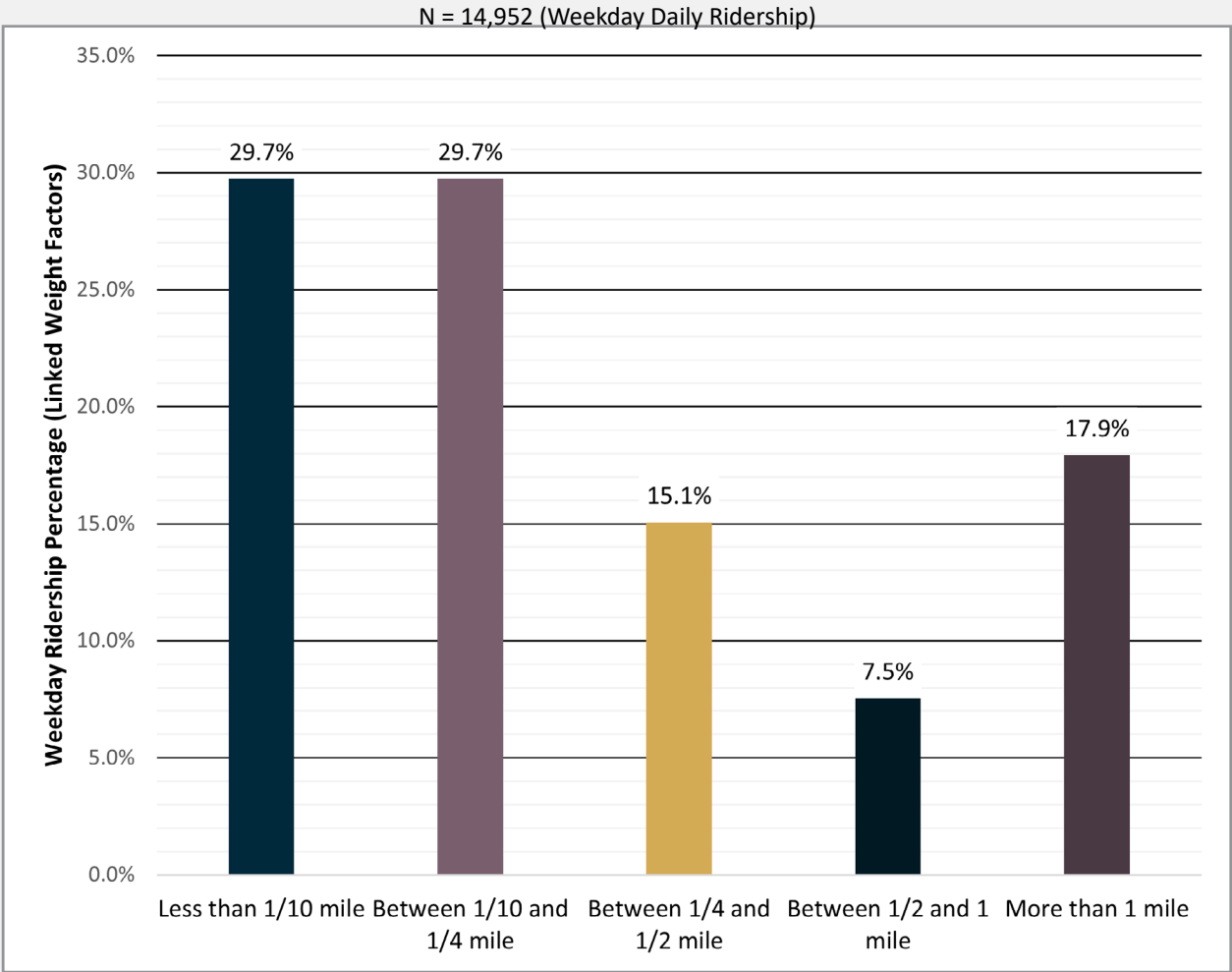


Figure 2-17: Distance weekday riders travel from the bus stop to their final destination.



# QUESTION 11

*Question 11 has three parts and pertains to how many buses a riders uses to make their one-way trip:*

The majority of weekday riders (about 88%) use only one bus to make their one-way trip, with 12% transferring once. Less than 1% of riders make two or more transfers. Weekend riders are more likely to use more than one bus, with 19% making a transfer. 81% of riders who transfer at least once use IndyGo at least 5 days per week.

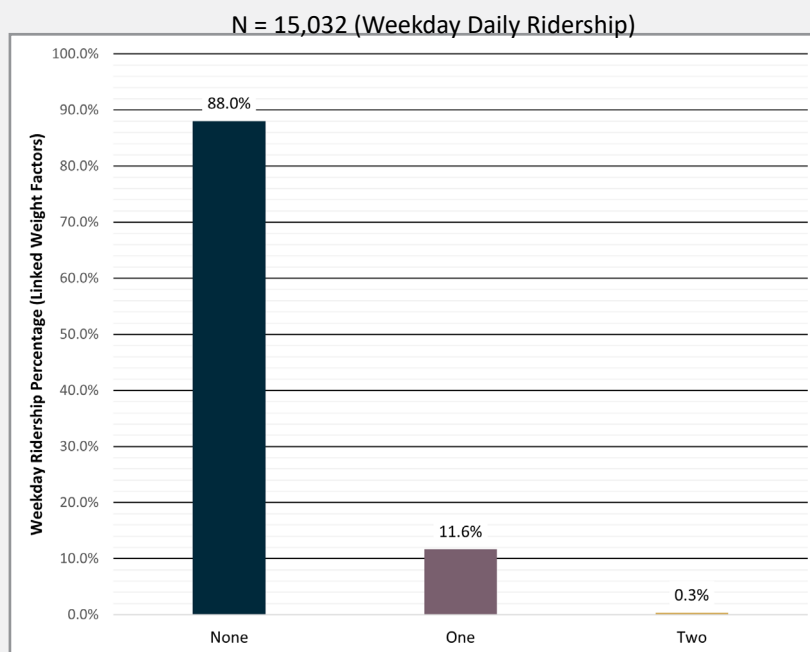


Figure 2-18: Number of transfers for weekday riders.

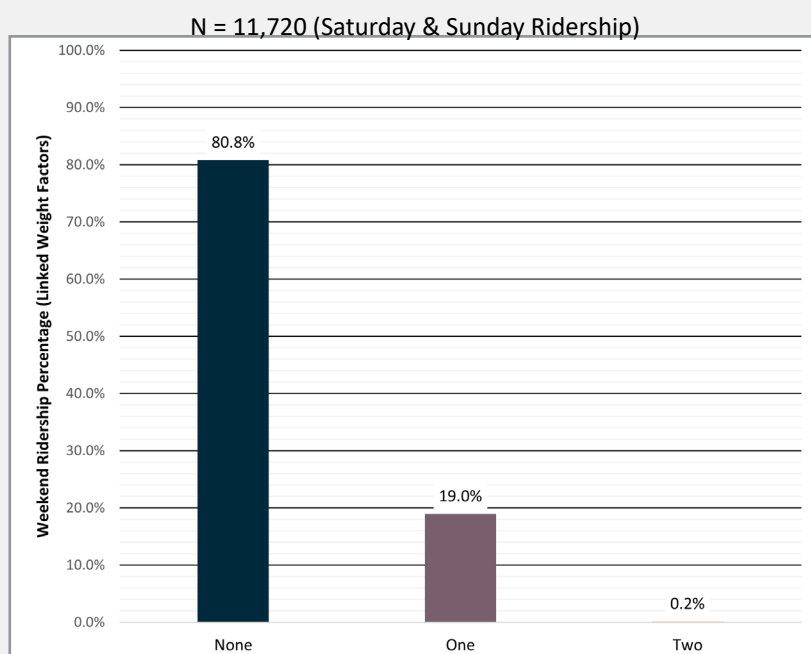


Figure 2-19: Number of transfers for weekend riders.



QUESTION 12

Question 12: What time did you board this bus?

Peak boarding times for weekday riders are 7:00 to 11:00 am and from 3:00 to 6:00 pm. This is generally consistent with what was found in the 2016 survey. It is noteworthy that peak weekday travel times (10 am to 11 am and 6 pm to 7 pm) are slightly later than traditional work commute time.

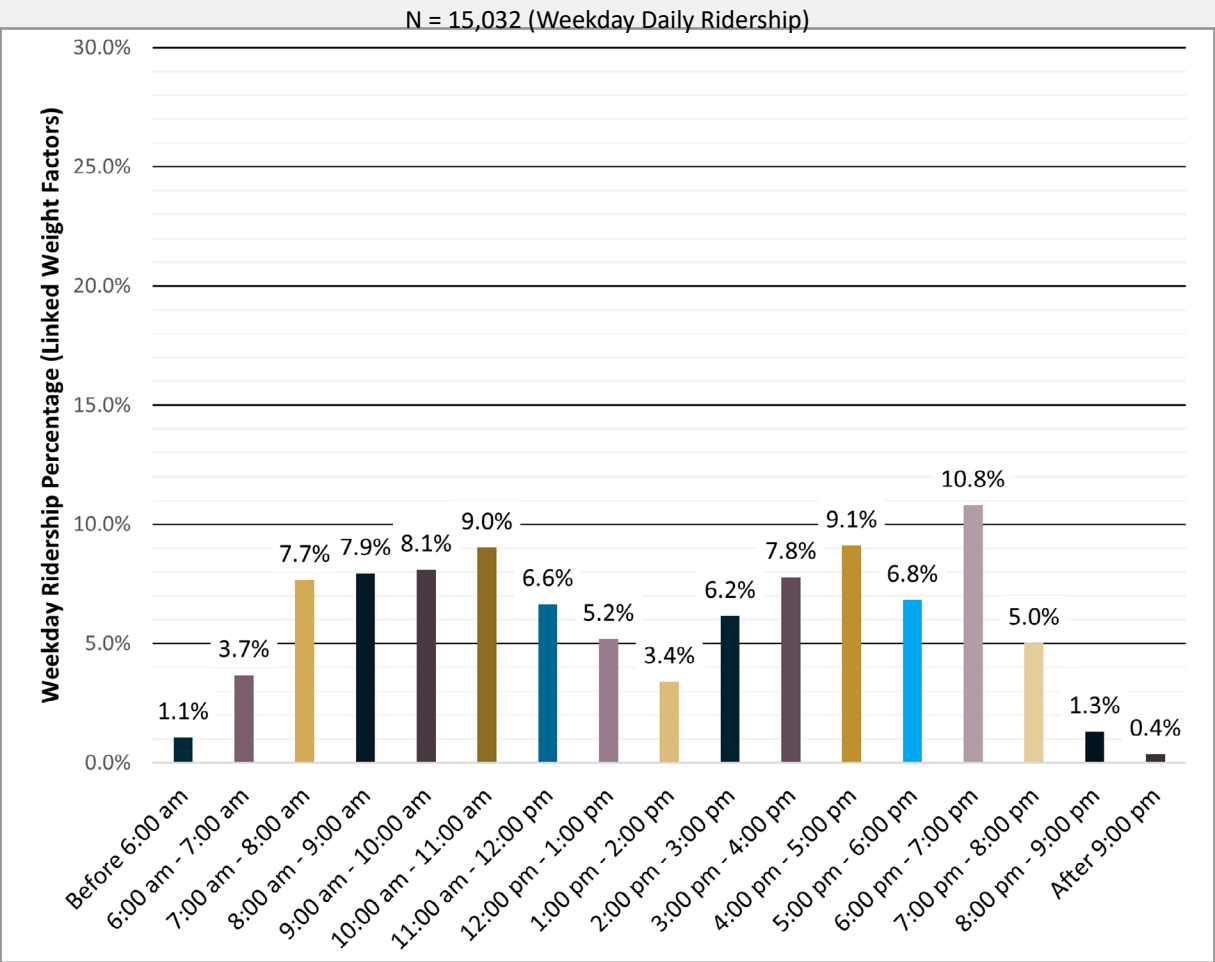


Figure 2-20: What time do weekday riders board their bus?





## QUESTION 12

On weekends, travel patterns are significantly different. Peak weekend boarding times are between 11:00 am and 2:00 pm.

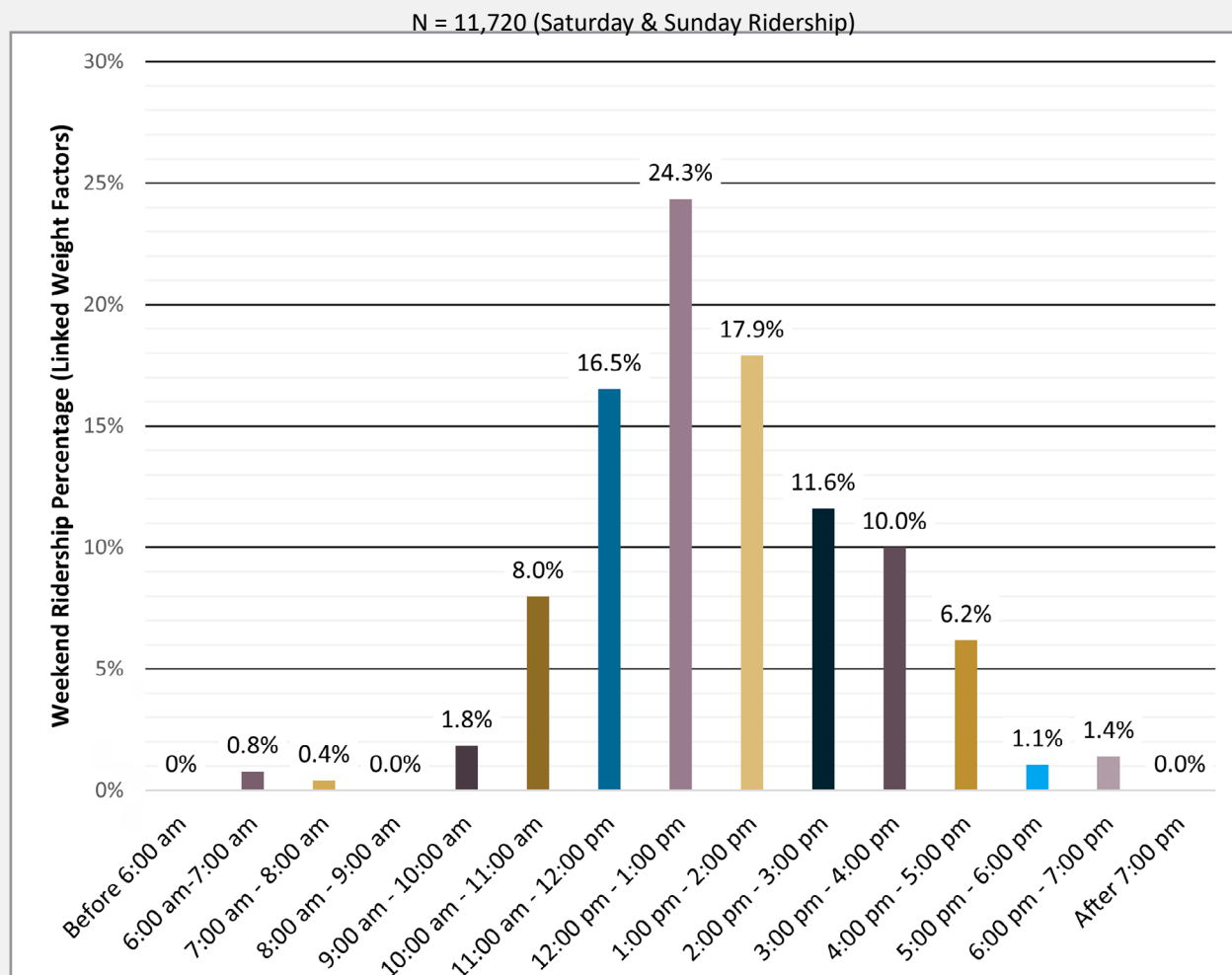


Figure 2-21: What time do weekend riders board their bus?



QUESTION 13

Question 13: Will you (or did you) make this same trip in exactly the opposite direction today?

56% of riders reported that they would make an identical trip in the opposite direction the same day. About 44% stated they would not make the same exact trip in the opposite direction on the same day. Many people make different trips in the “from home” and “to home” orientation (e.g., they may travel directly from home to work, but make a stop on the way home to shop, attend a night class, etc.). This indicates that a significant number of riders are using IndyGo service to link trips together and reach multiple destinations in the same trip.

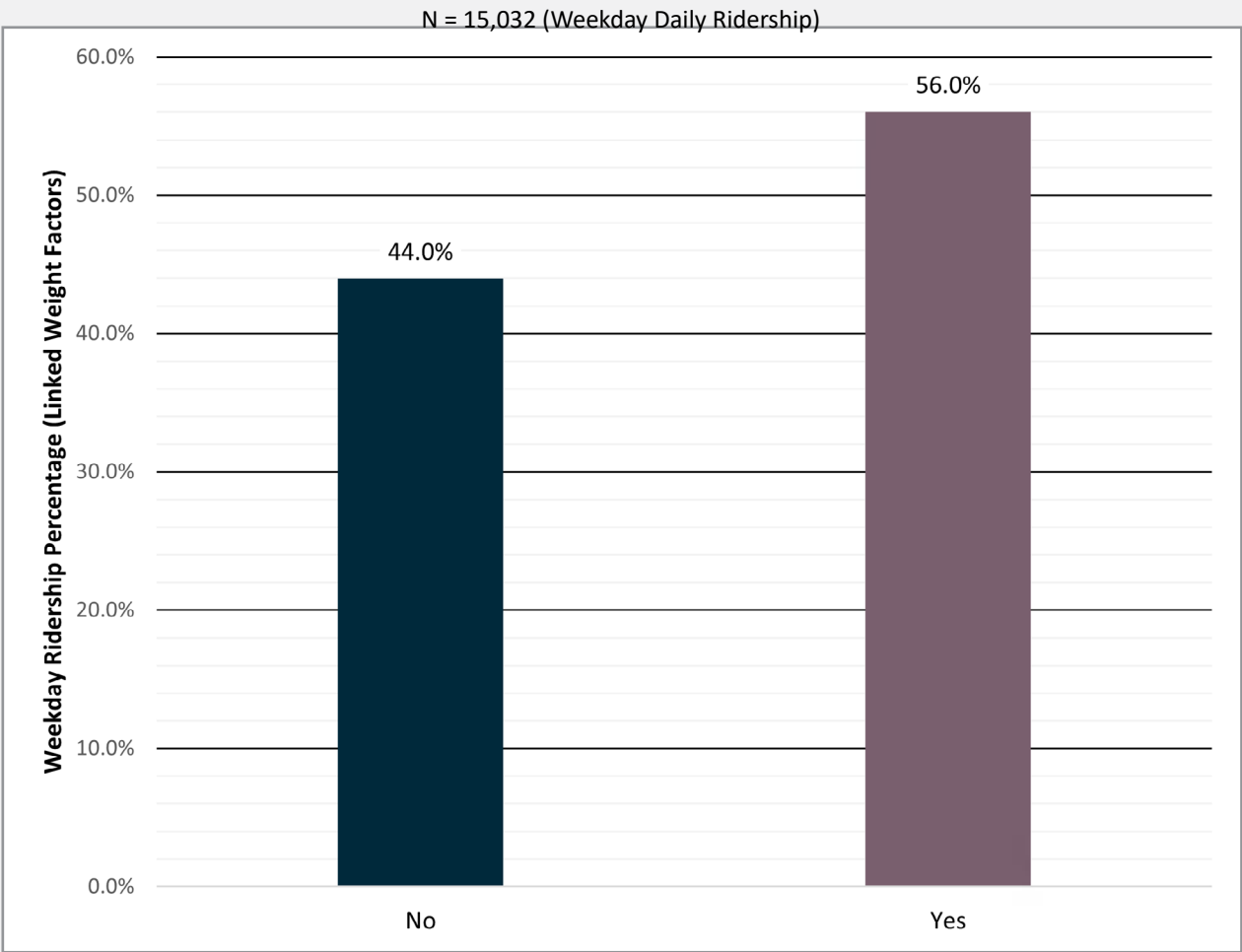


Figure 2-22: Do weekday riders make identical round-trips?



# QUESTION 14

## Question 14: What fare payment methods were used for this one-way trip?

More than a third of IndyGo passengers use cash while the remaining two-thirds use various types of passes and other prepay options. The 1-Day pass is the most utilized prepay alternative at 21% of riders. Almost 25% of weekday riders use either MyKey tap card or phone app. 31% of Red Line riders use either MyKey tap card or phone app.

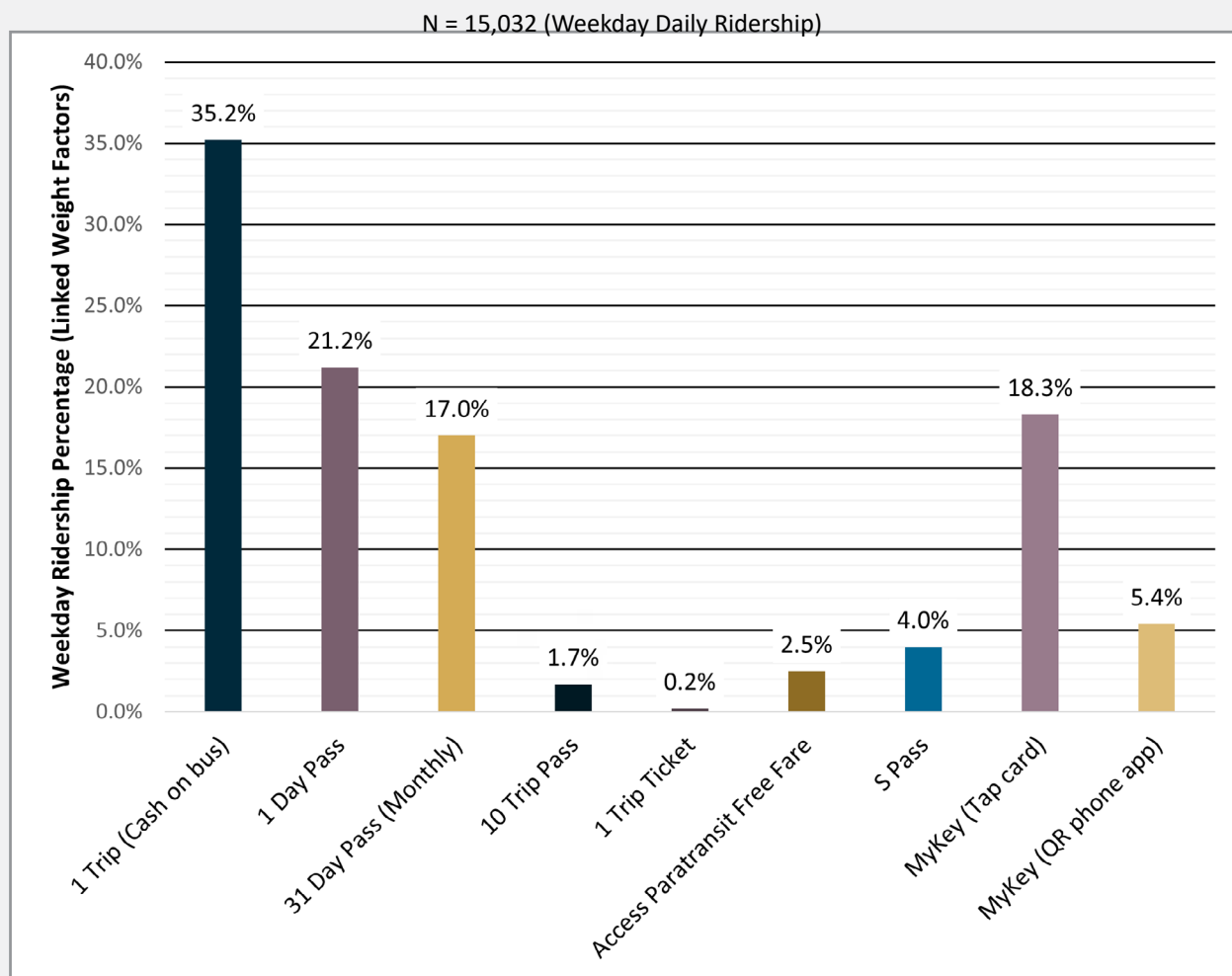


Figure 2-23: How do weekday riders pay their fare?



QUESTION 14

For weekend trips, a lower percentage of riders use cash (31%) while larger percentages rely on 1-Day and 10-Day prepay options (27% and 21% respectively). A slightly larger percentage of riders use Access paratransit free fare on the weekend (4%) compared to weekdays (2.5%).

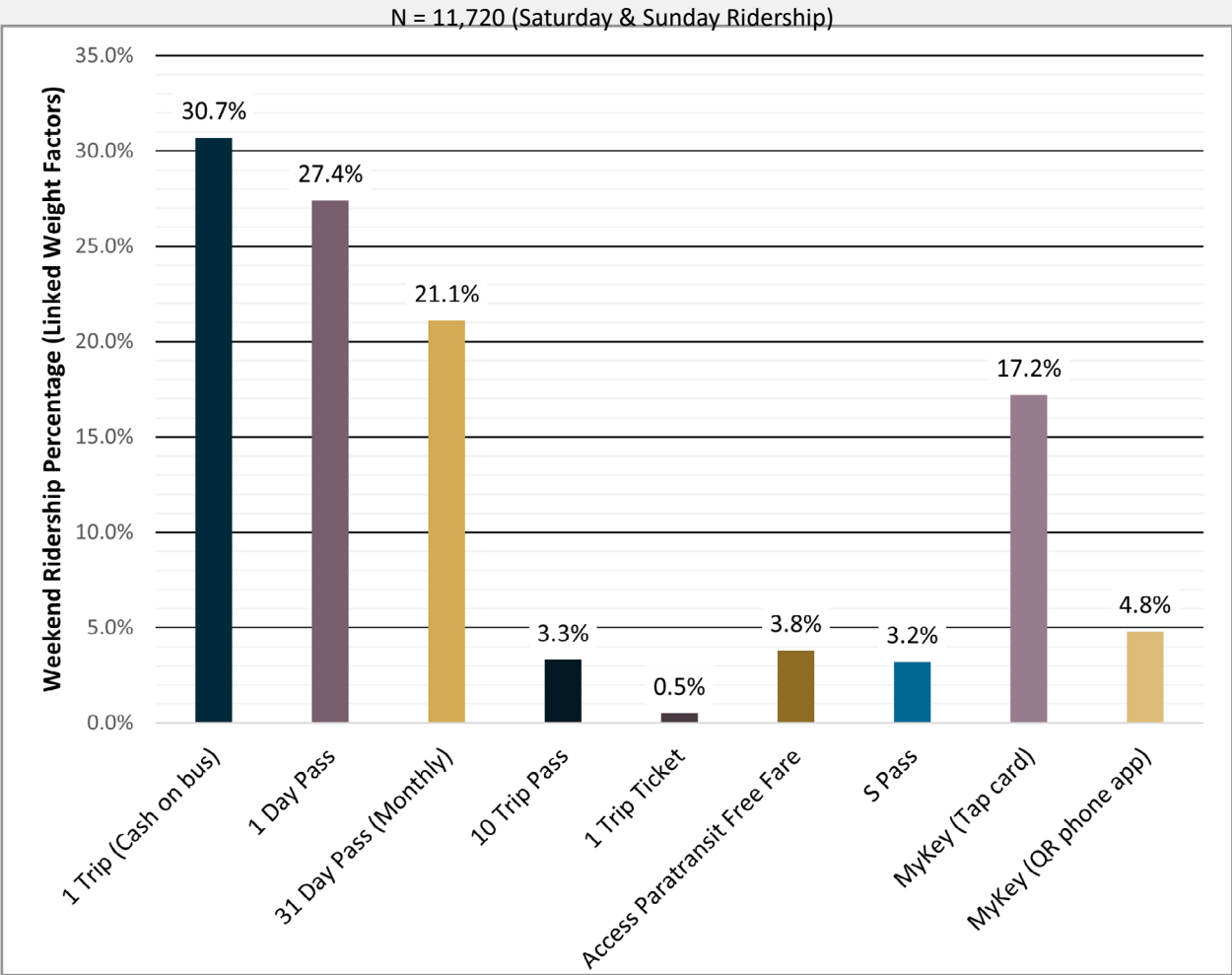


Figure 2-24: How do weekend riders pay their fare?



## QUESTION 14

*Question 14b: What type of fare was this?*

Most IndyGo passengers are regular fare riders (about 72%) but this number is down significantly from 81% in the 2016 survey. Other fare categories include individual with disability (8%), veteran (5.5%), senior (4.5%), and youth (3%).

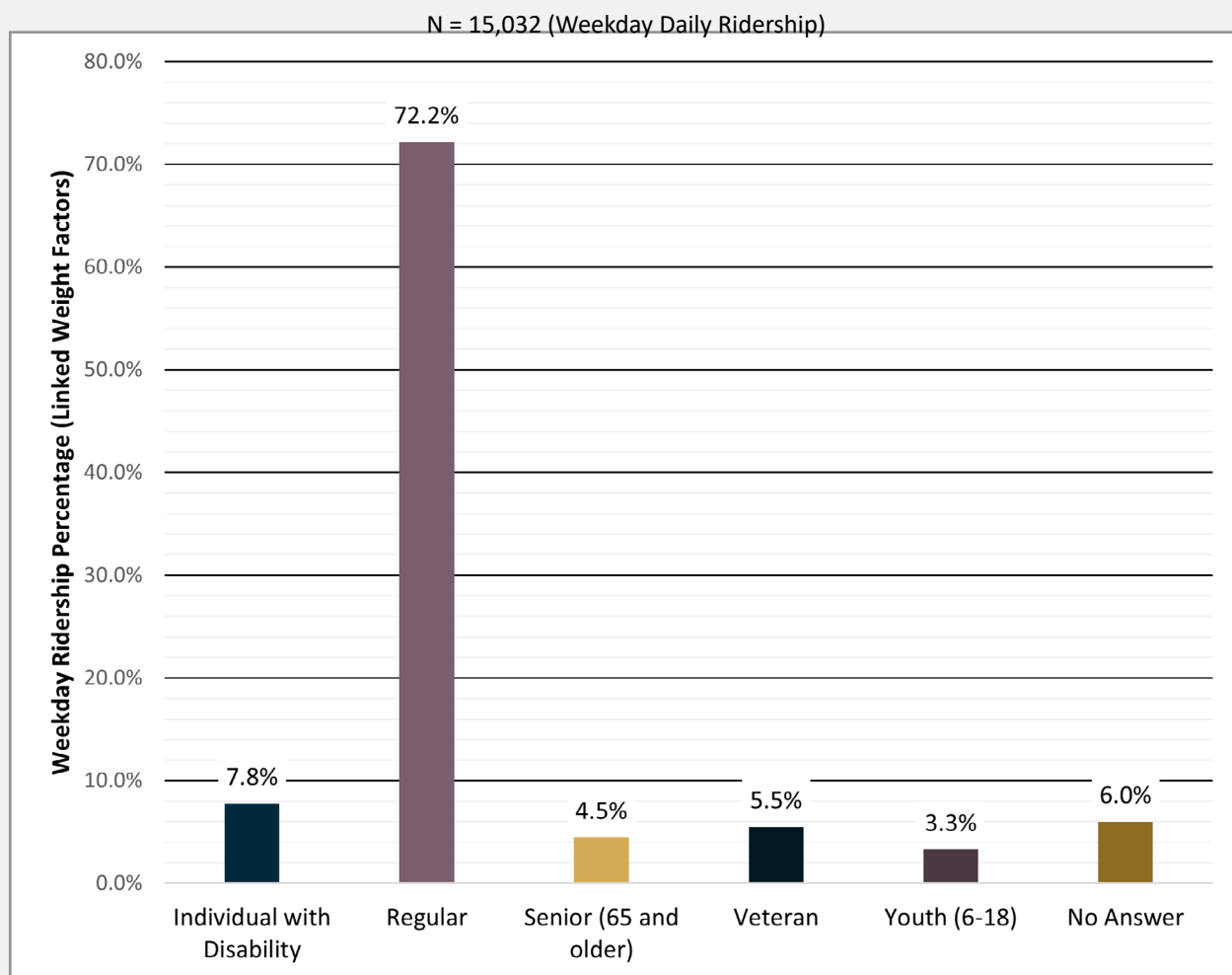


Figure 2-25: What types of fares to weekday riders pay?



QUESTION 14

Most weekend riders also pay the regular fare (67%). Other fares such as individual with disability (13%) and senior (6%) are used at higher percentages by weekend riders.

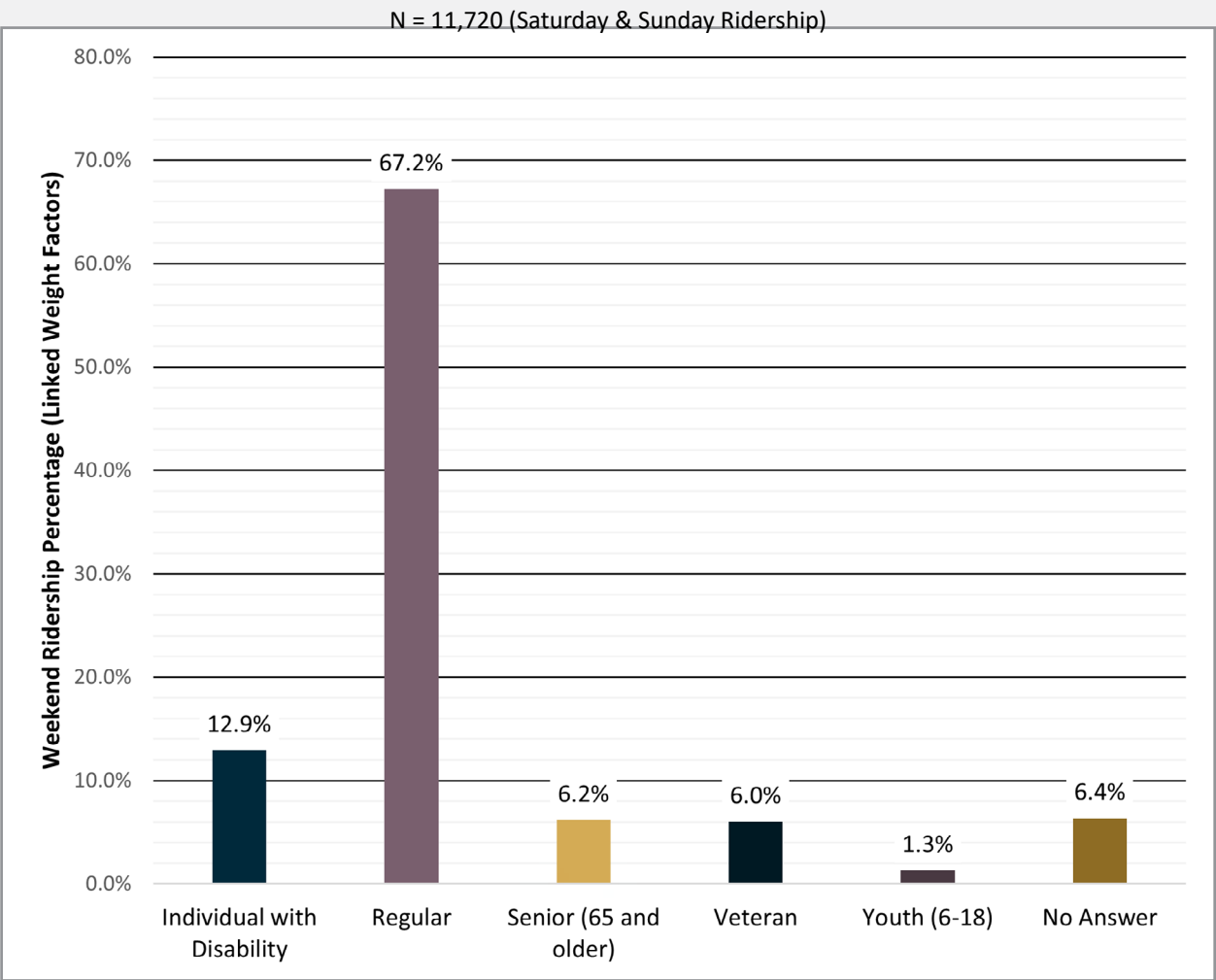


Figure 2-26: What types of fares to weekend riders pay?



# QUESTION 15

## Question 15: If bus service was not available, how would you have made this trip?

About a quarter (27%) of weekday riders reported that if IndyGo service was not available they would not make a trip. Nearly 73% of riders reported they would find another way to make the trip. The most popular alternate mode of transportation is taxi, Uber, Lyft, etc. (29%) followed by ride with someone else (22%). Only 4.5% of weekday riders indicated that they would drive themselves if bus service were not available.

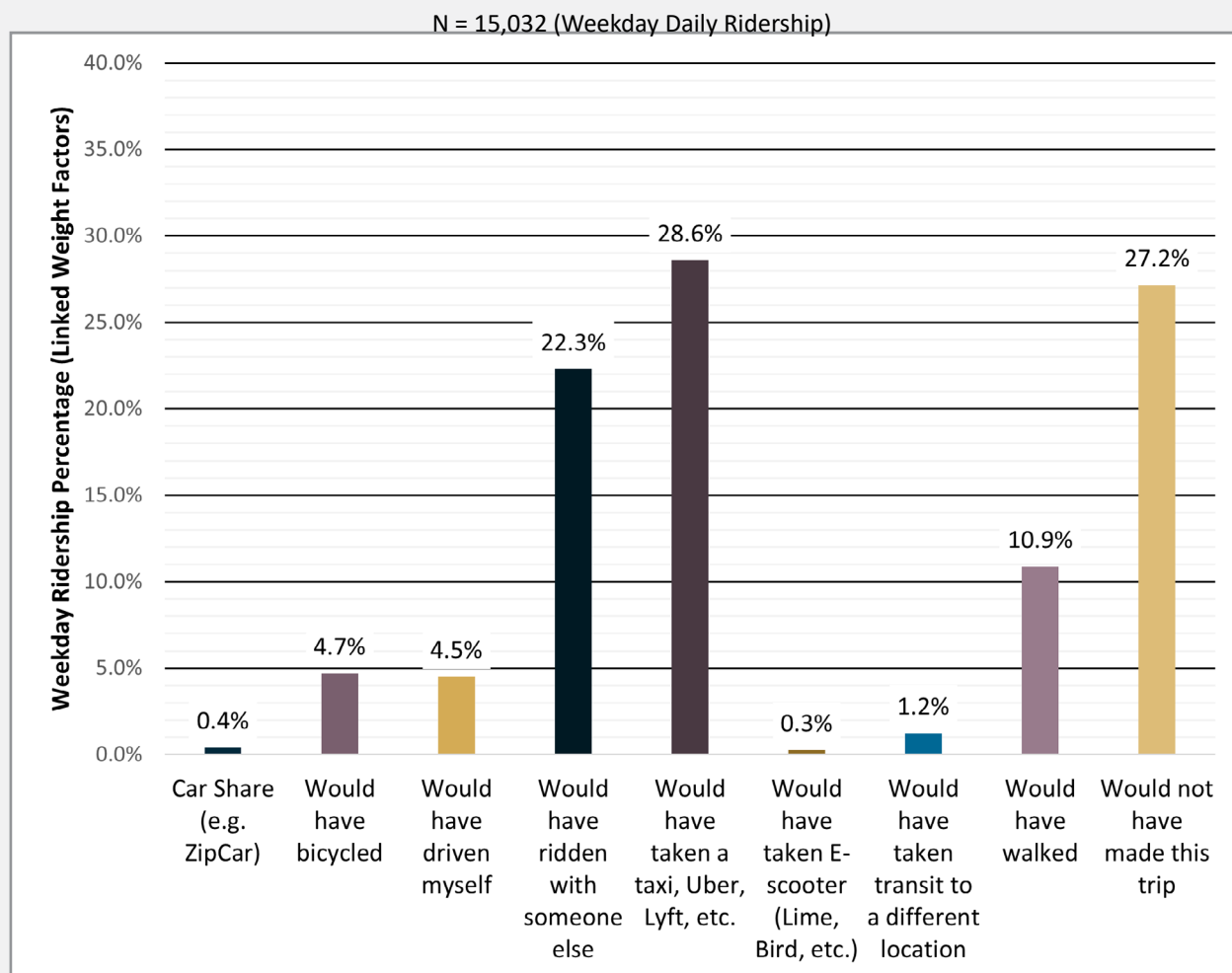


Figure 2-27: How would weekday riders make a trip if IndyGo service was not available?



QUESTION 15

35% of weekend riders would not have made their trip if bus service were not available, 10% more than for weekday riders. This difference is most likely due to weekend destinations more likely to be recreation and/or shopping. The remaining 65% of riders indicated they would take an alternative mode. Like weekday trips, the most common transit alternatives would be taxi, Uber, Lyft, etc. (22.5%) or riding with someone else (20%).

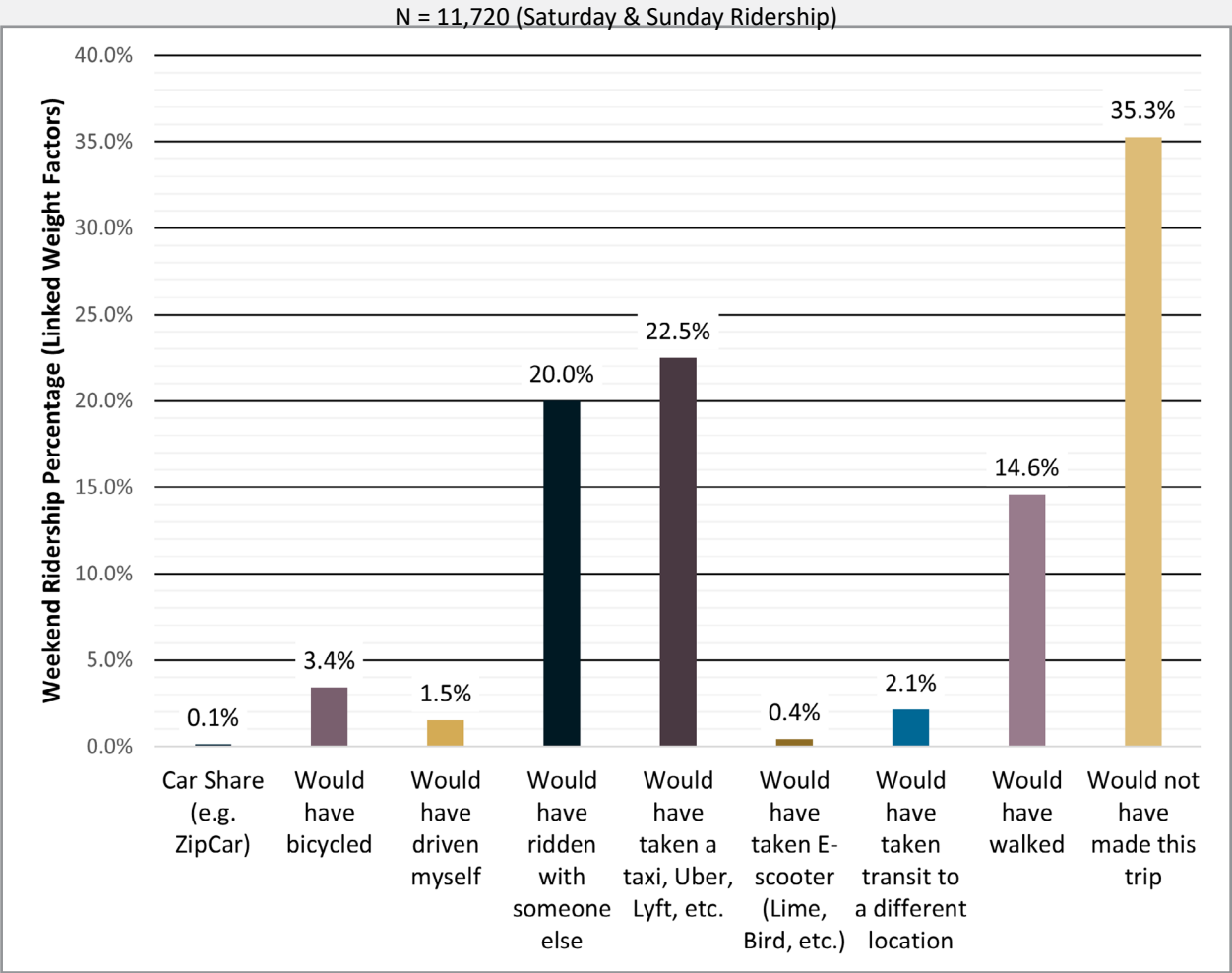


Figure 2-28: How would weekend riders make a trip if IndyGo service was not available?





## QUESTION 16

### Question 16: How many days a week do you usually ride IndyGo?

About 93% of riders use IndyGo multiple times a week, with 60% of them using IndyGo 5 days a week or more. Only a little more than 3% of riders used IndyGo once or twice a month. Overall, it appears that riders use IndyGo more days per week compared to the 2016 survey when 48% rode 3-5 days per week, compared to 55% in 2022, and 17% rode 6-7 days a week, compared to 32% in 2022.

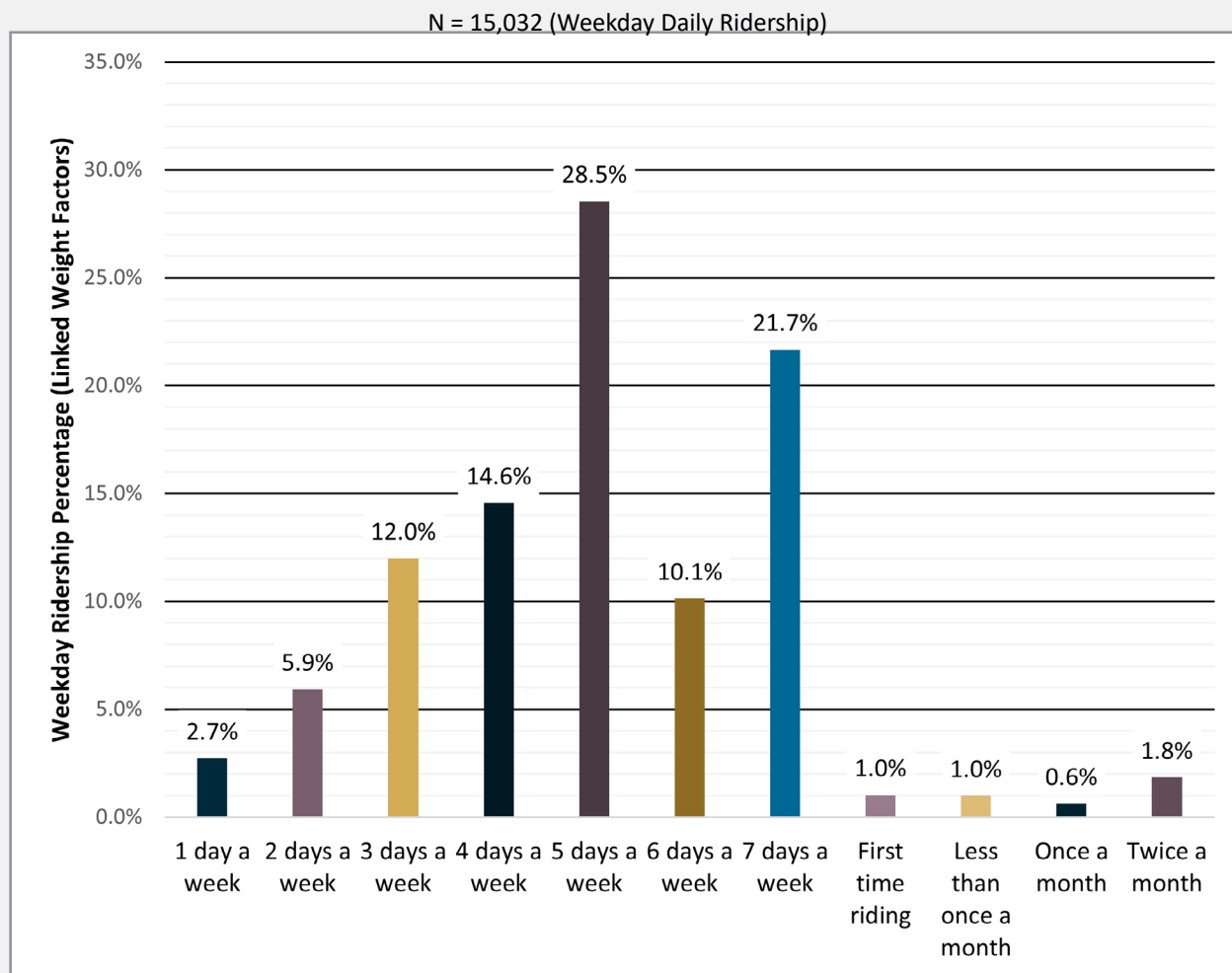


Figure 2-29: How frequently do riders use IndyGo?



## QUESTION 16

Comparing the transit frequency of senior riders to the transit frequency of the total ridership population, seniors ride less frequently. Approximately 30% of seniors ride 3 days a week or less (compared to 21% of the total ridership). The percentage of seniors who use IndyGo once a week is more than double compared to the total ridership population (6.2% vs 2.7%). Likewise, almost 7% of seniors use IndyGo twice a month or less compared to just 3% of the total ridership population.

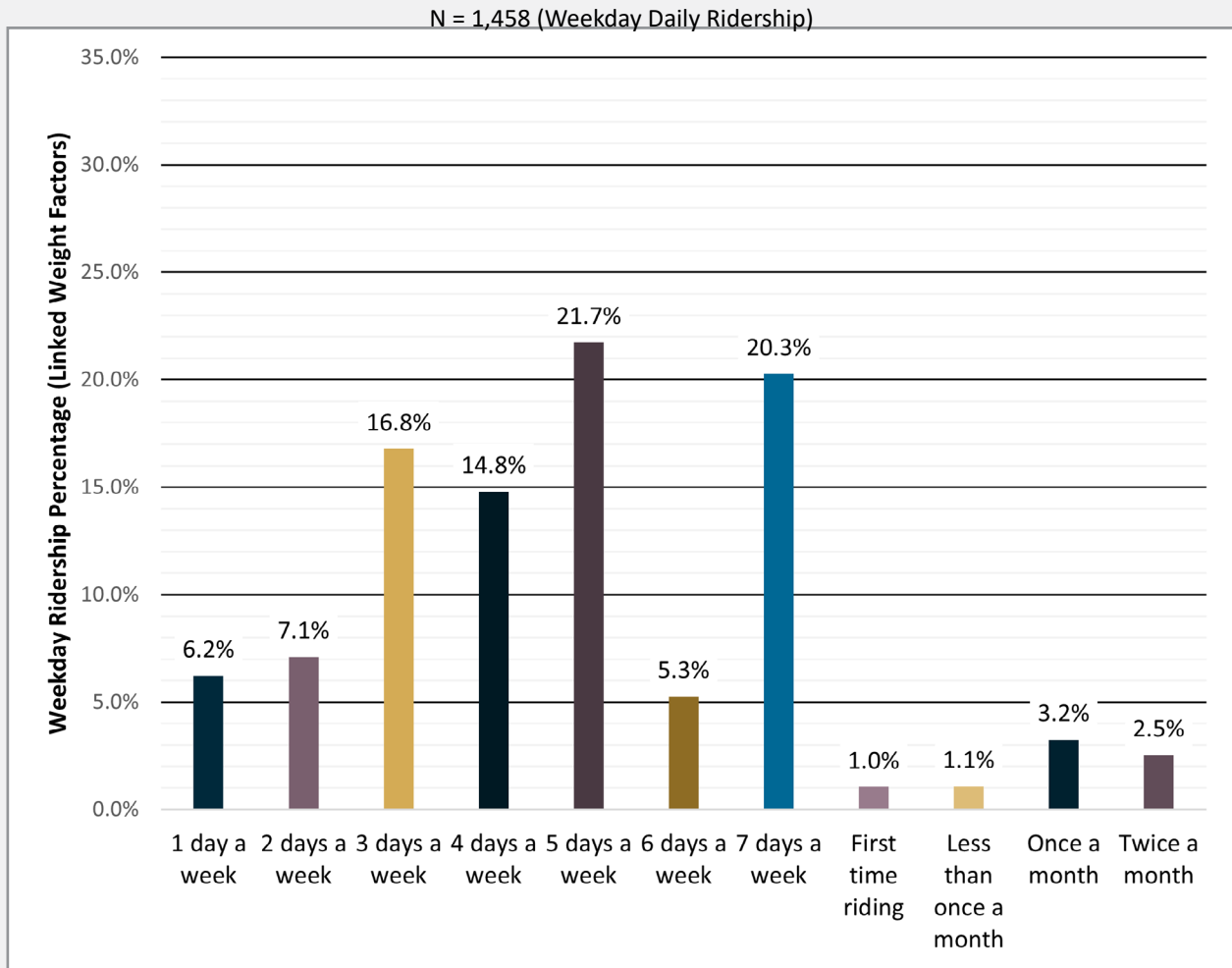


Figure 2-30: How frequently do senior riders use IndyGo?



# QUESTION 17

**Question 17: Do you have any of the following:**

*Smart phone*

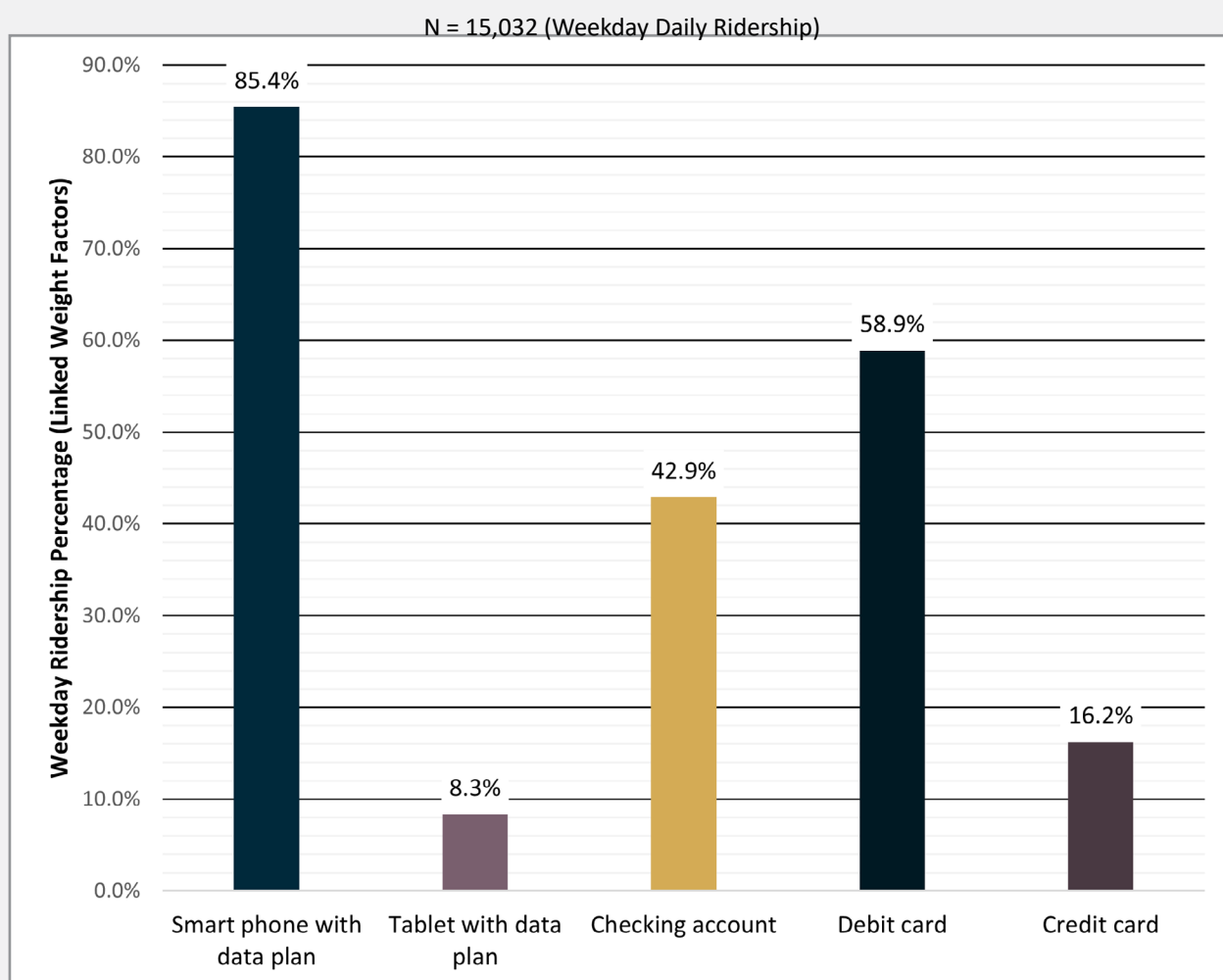
*Tablet*

*Checking account*

*Debit card*

*Credit Card*

85% of riders have a smart phone with a data plan (up from 77% in 2016), which is consistent with the national average among adults in the US. 43% of riders have a checking account, down from 51% in 2016. 59% of riders have a debit card, down from 66% in 2016, and 16% have a credit card, down from 24% in 2016.



**Figure 2-31: IndyGo riders who have a smart phone, tablet, checking account, debit/credit card.**



QUESTION 18

Question 18: Are you a visitor to the Indianapolis area?

While the majority of IndyGo passengers are not visitors (96%), a small but important portion are visitors (nearly 4%). This corresponds to nearly 550 riders daily. This suggests that IndyGo is reaching out and marketing its service to visitors, especially considering that many of these visitors may be from other cities which have a higher level of transit availability.

The percentage of riders who are visitors to the area for weekend trips is double (7%) compared to weekday trips and corresponds to nearly 900 weekend trips.

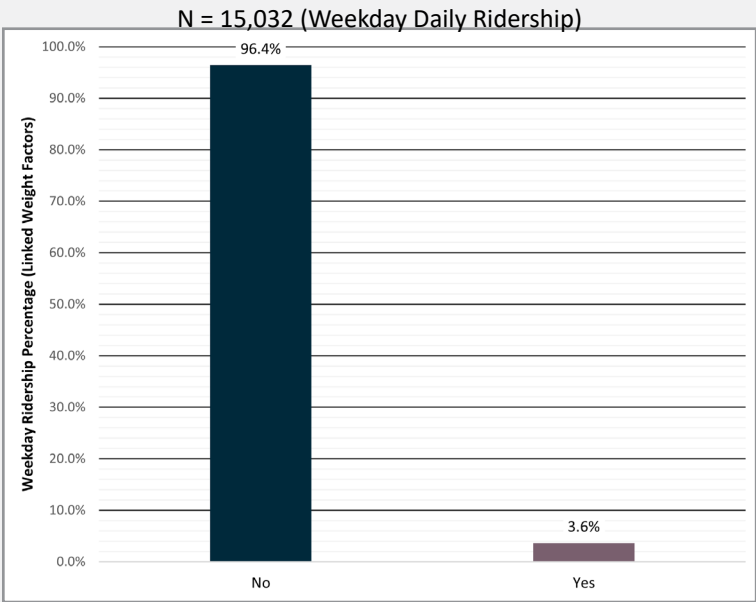


Figure 2-32: What percentage of weekday riders are visitors to Indianapolis?

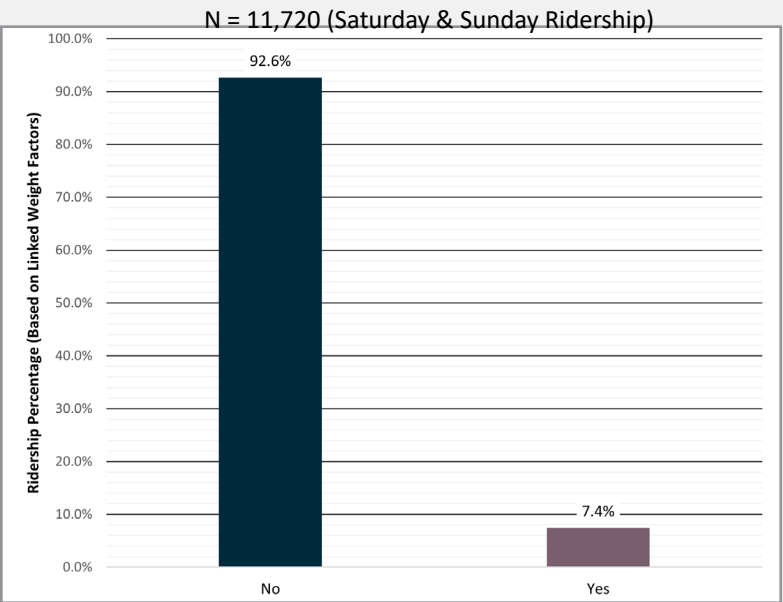


Figure 2-33: What percentage of weekend riders are visitors to Indianapolis?



# QUESTION 19

## Question 19: How many vehicles (cars, trucks, or motorcycles) are available to your household?

Over half of weekday IndyGo riders (57%) reported that there is no vehicle available to their household while only about 17% reported having two or more vehicles available to their household. Weekend riders are more likely to be without a vehicle in their household (68%) with only 11% having access to two or more vehicles in their household. The 2021 ACS reports only 7% of Marion County households do not have access to a vehicle while 52% have access to two or more vehicles.

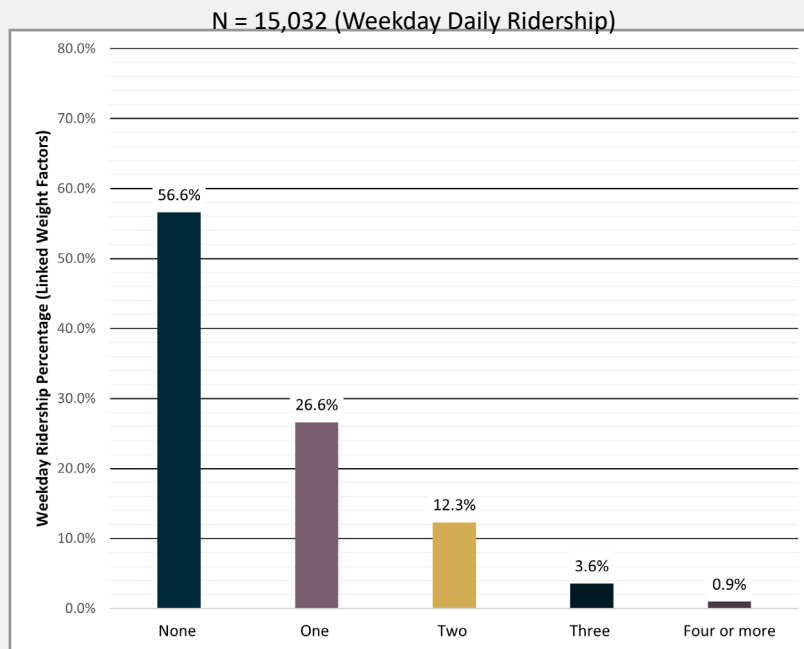


Figure 2-34: Number of vehicles available for weekday riders.

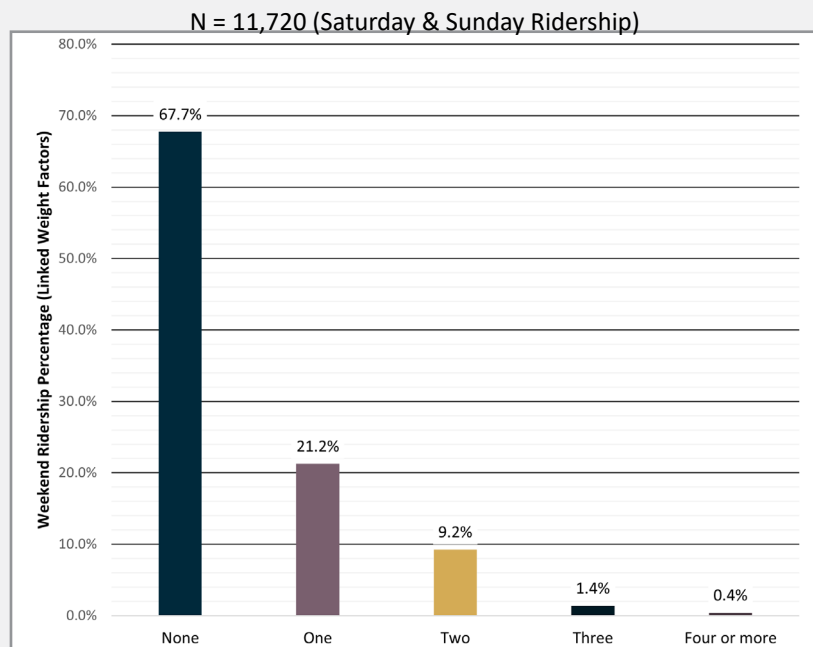


Figure 2-35: Number of vehicles available for weekend riders.



QUESTION 20

Question 20: Including YOU, home many people live in your household?

Nearly 30% of riders report only one individual in their household, approximately 24% of IndyGo riders have two individuals in their household and around 17% of riders have a household size of three. Finally, nearly 30% of riders live in households of four or more individuals.

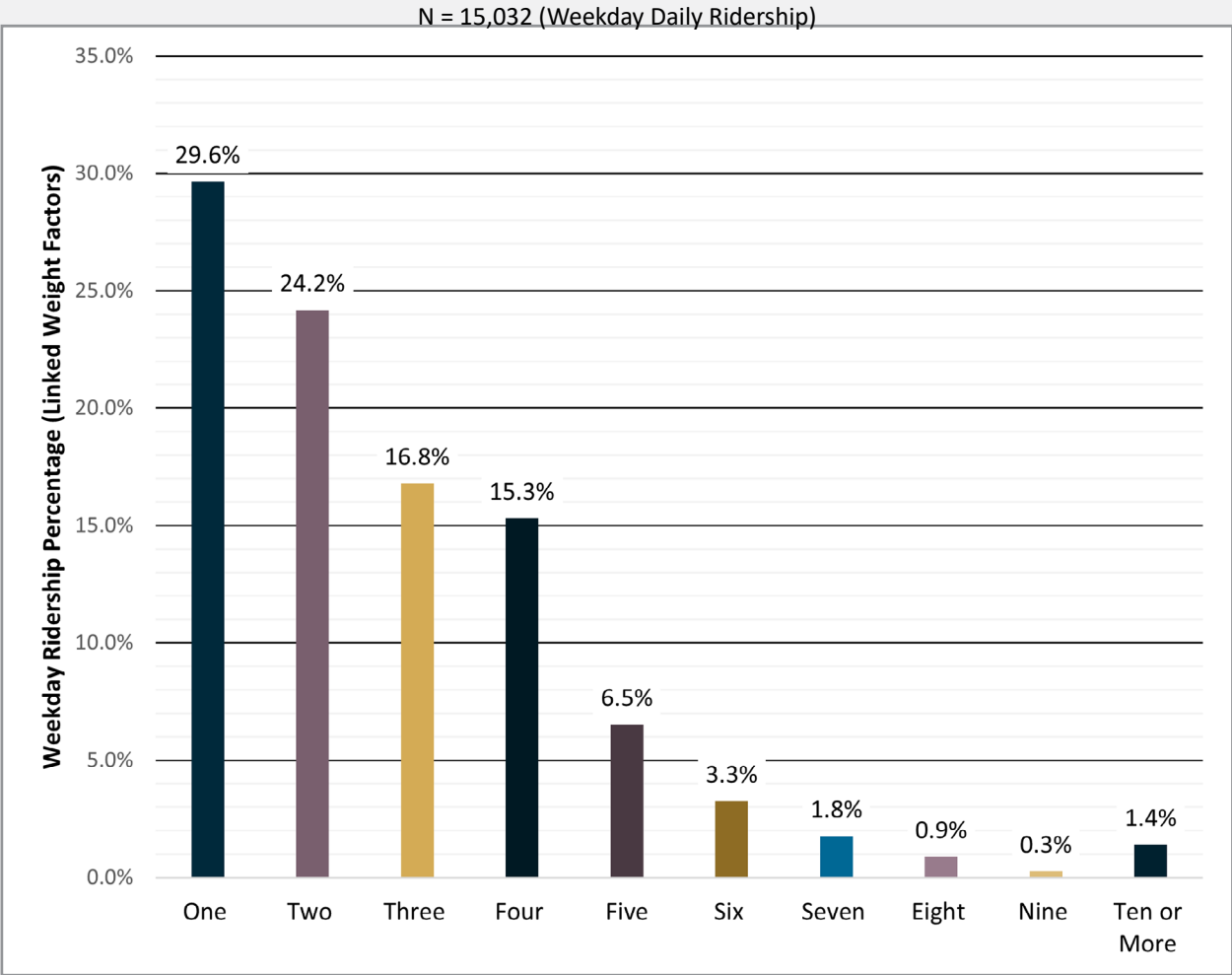


Figure 2-36: IndyGo riders’ household size.



# QUESTION 21

*Question 21: Including YOU, how many people (over age 15) in your household are employed full/part-time?*

About 34% of riders' households have one individual who is employed and 31% report having two individuals employed in their household. About 13% stated they have three people employed in their household. Finally, 14% report having no employed individuals in their household.

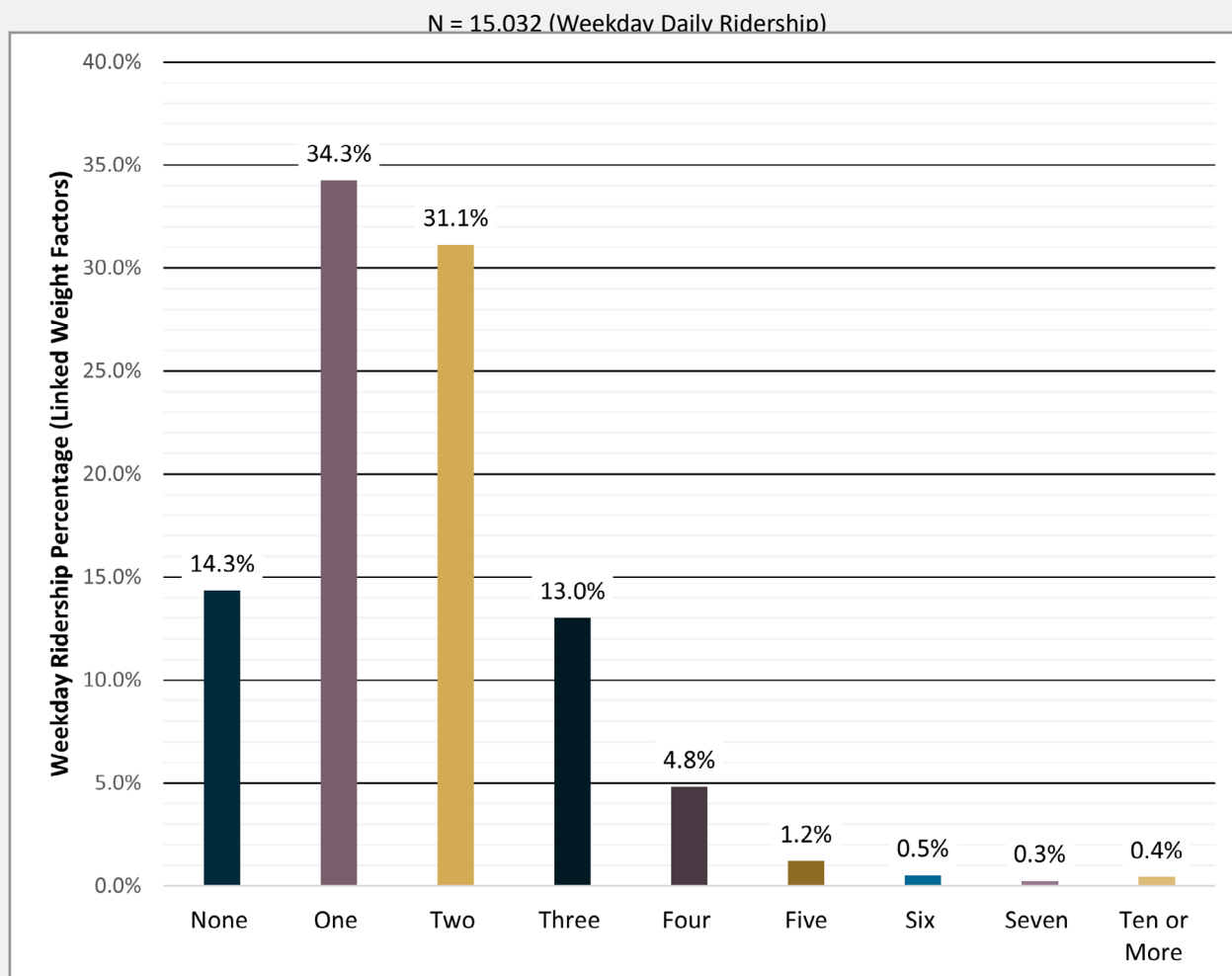


Figure 2-37: How many people in IndyGo rider households are employed?



QUESTION 22

Question 22: What is your employment status?

The majority of IndyGo passengers are employed, with about 55% working full-time and 17% working part-time. A significant portion of riders, 7.5%, are retired.

N = 15,032 (Weekday Daily Ridership)

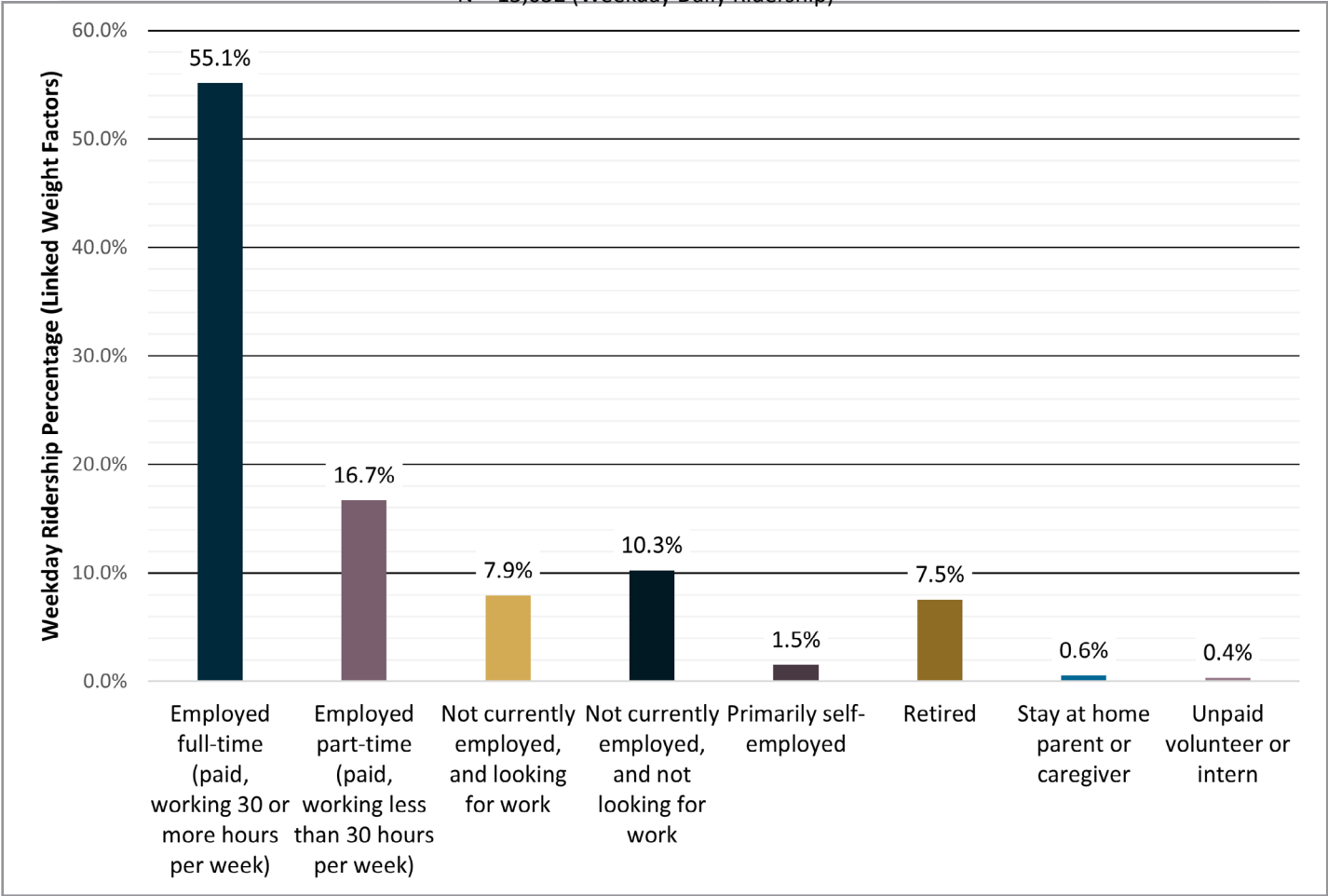


Figure 2-38: Weekday IndyGo riders' employment status.





## QUESTION 22

Lower percentages of weekend riders are employed either full-time or part-time. Conversely, higher percentages of weekend riders are not currently employed.

N = 11,720 (Saturday & Sunday Ridership)

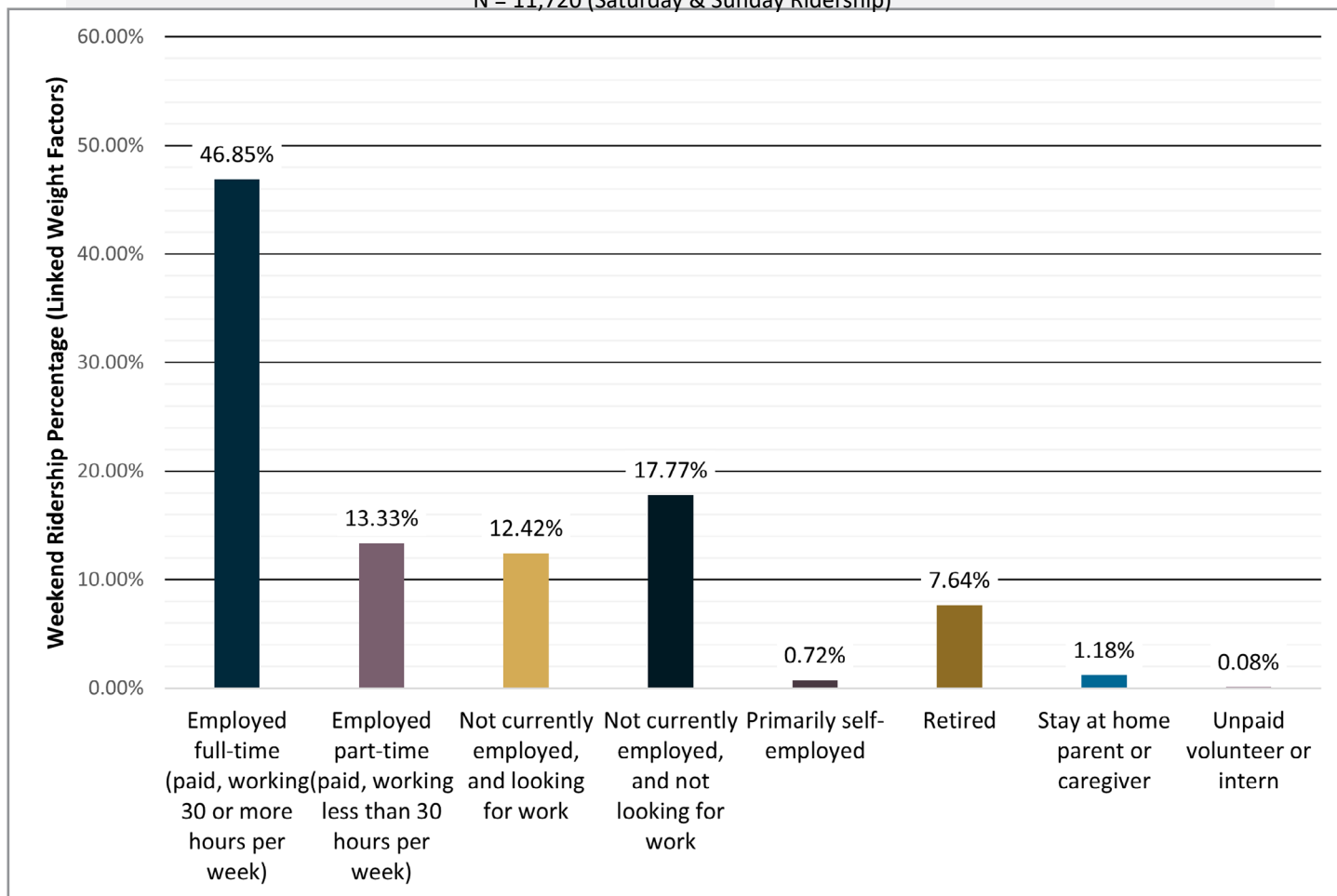


Figure 2-39: Weekend IndyGo riders' employment status.



QUESTION 24

Question 24: What is your student status?

About 16% of weekday IndyGo riders are students. Approximately 7% each go to a college/university or K-12 school. For weekend riders, only around 10% of riders are students.

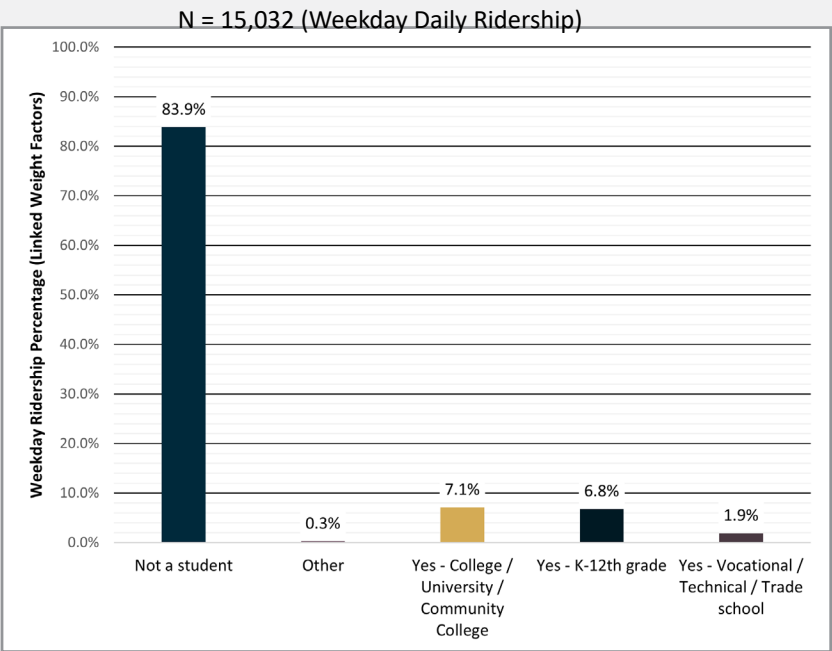


Figure 2-40: Weekday IndyGo riders’ student status.

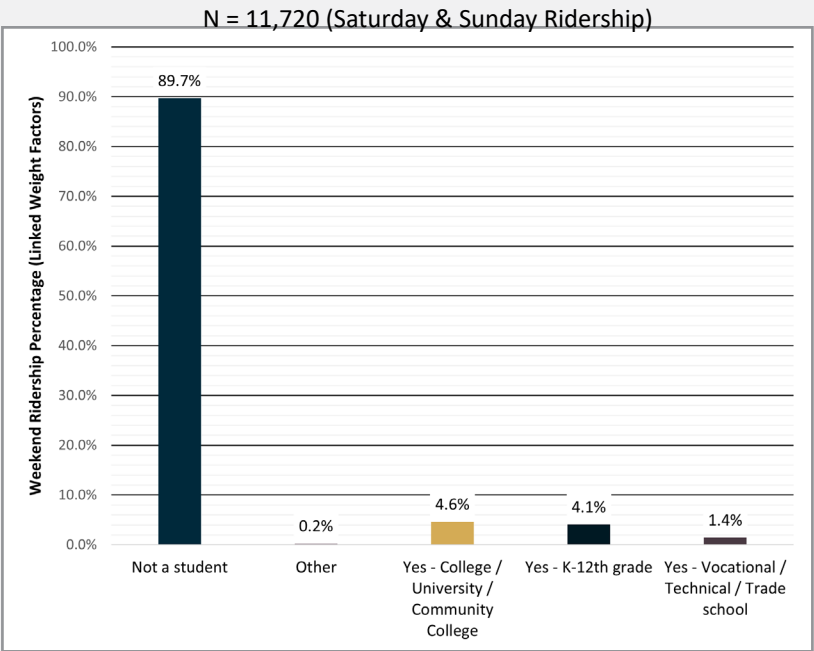


Figure 2-41: Weekend IndyGo riders’ student status.



## QUESTION 25

### Question 25: Do you have a valid driver's license?

Approximately 44% of IndyGo riders have a driver's license. This is lower than the national average of 65% of transit riders who have a driver's license. An even lower percentage, approximately 36%, of weekend riders report having a driver's license.

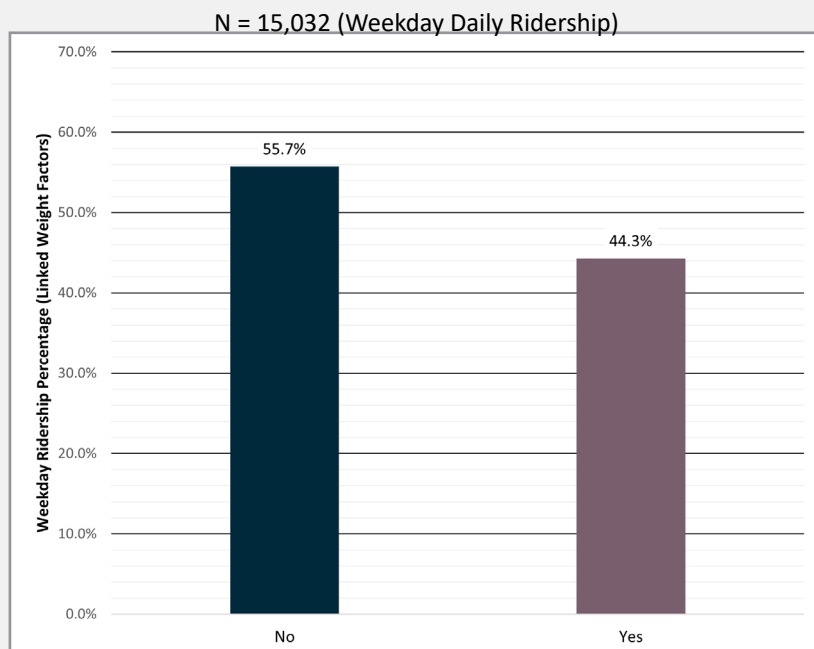


Figure 2-42: Weekday IndyGo riders driver's license status.

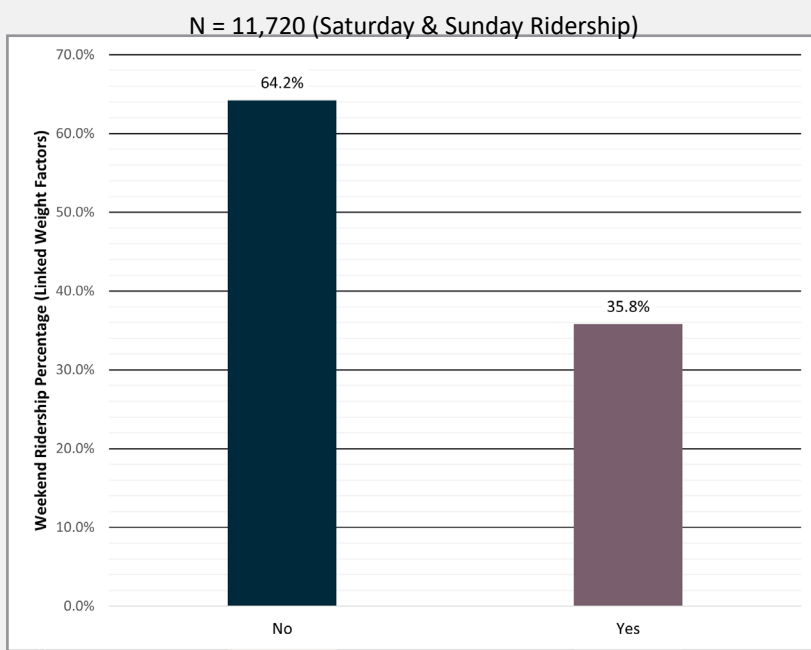


Figure 2-43: Weekend IndyGo riders driver's license status.



QUESTION 26

Question 26: What is your age?

About 83% of IndyGo riders are between the ages of 19 and 65. Almost 10% of riders are seniors (age 65 and over) while 7.5% are 18 and under. The age mix for weekend riders has a higher percentage in age groups 35-64 and a lower percentage in age groups under 18.

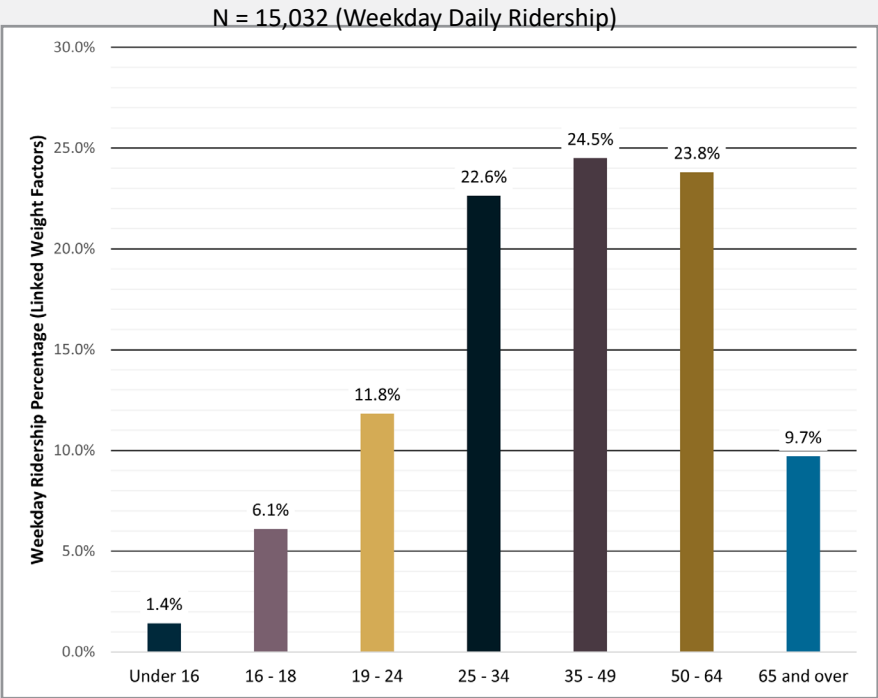


Figure 2-44: Weekday IndyGo riders' age.

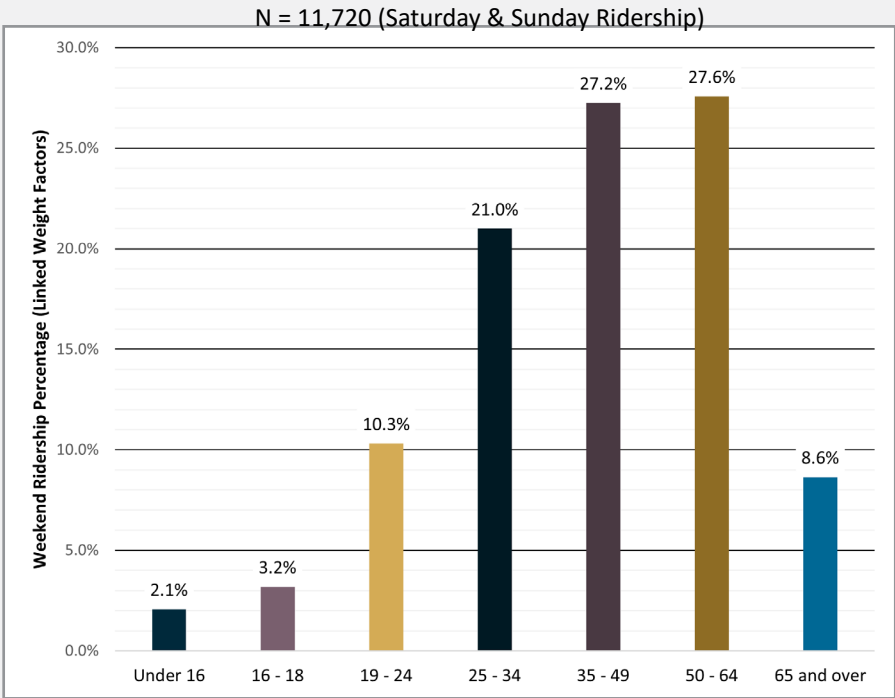


Figure 2-45: Weekend IndyGo riders' age.



# QUESTION 27 & 28

## Question 27 and 28: Are you Hispanic, Latino, Latina, or of Spanish Origin? What is your race/ethnicity?

More than half of IndyGo riders are Black/African/African American and around a third are White. Other reported races make up no more than 3% of riders and include Asian, American Indian/Alaskan Native, and Native Hawaiian/Pacific Islander, and Middle Eastern/North African. Hispanic riders of any race make up around 11%. There are only minor differences between the ethnic and racial makeup of weekday riders and weekend riders or between the 2022 and 2016 surveys.

Compared to non-minority riders, minority riders are more likely to live in a household with income under \$35,000 and are more likely to ride to get to work.

N = 15,032 (Weekday Daily Ridership)

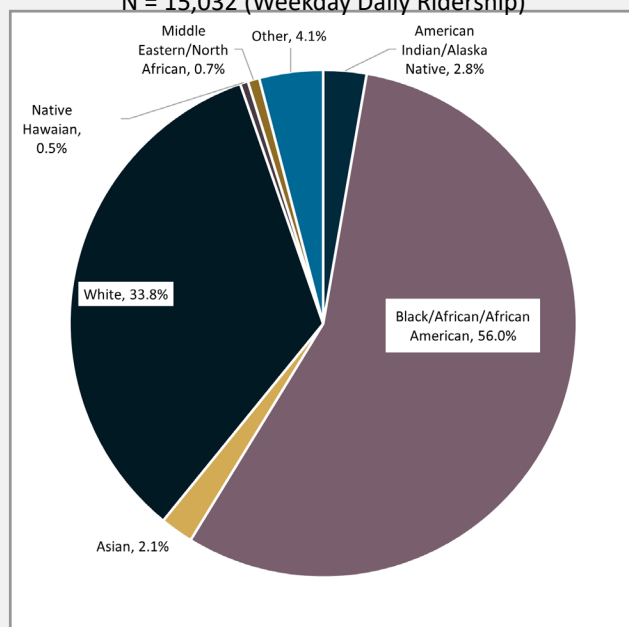


Figure 2-46: Weekday IndyGo riders' race.

N = 11,720 (Saturday & Sunday Ridership)

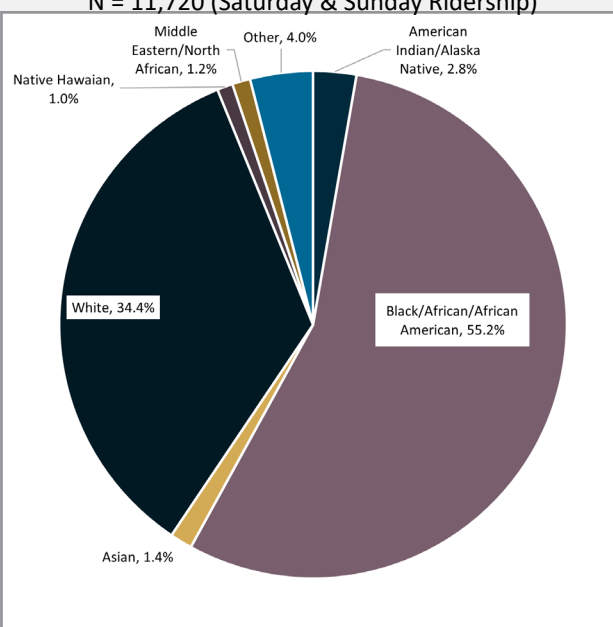


Figure 2-47: Weekend IndyGo riders' race.

	MINORITY RIDER (NON-WHITE)	NON-MINORITY RIDER (WHITE)
Income	76% with household income under 35k	64% with household income under 35k
Employment	74% employed, 55% full-time	72% employed, 56% full-time
Trip Purpose	29% destined for work	23% destined for work
Fare Type	61% use 1-trip cash or day pass	47% use 1-trip cash or day pass
Vehicle Access	57% have no access to a vehicle	56% have no access to a vehicle
Without Transit	27% would not have made trip without transit	28% would not have made trip without transit
Accessing Transit	93% walked to transit	94% walked to transit

Table 2-3: IndyGo minority rider profile



QUESTION 29

Question 29: Do you speak a language other than English at home?

The majority of weekday IndyGo riders (approximately 84%) reported speaking English at home while 16% said they spoke a language other than English at home. Of those who spoke a language other than English at home, 70% spoke Spanish. Compared to Marion County (2021 ACS 5-year average), a higher percentage of IndyGo riders speak a language other than English at home. Only minor differences are seen between weekday and weekend riders.

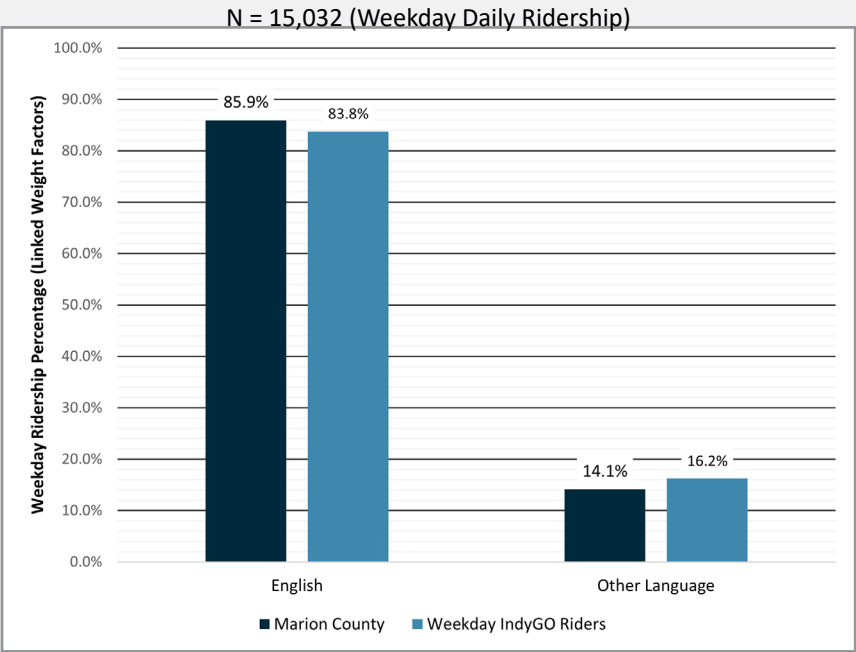


Figure 2-49: Weekday IndyGo riders who speak a language other than English at home.

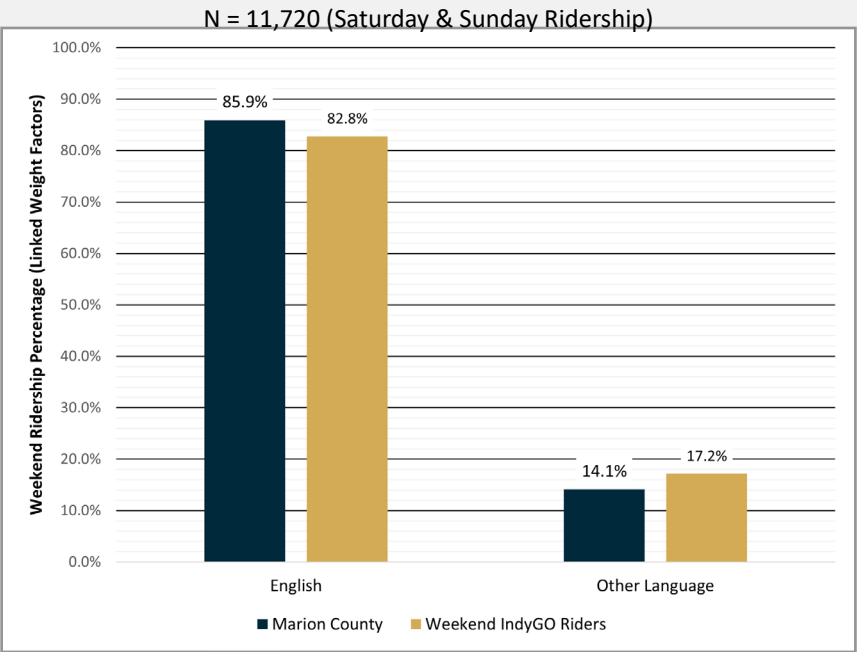


Figure 2-48: Weekend IndyGo riders who speak a language other than English at home.



## QUESTION 30

### Question 30: What is your gender?

Around 57% of weekday IndyGo riders are women and 40% men, in contrast to the 2016 study where 54% were men and 46% were women. On weekends, 62% of riders are women, 36% are men.

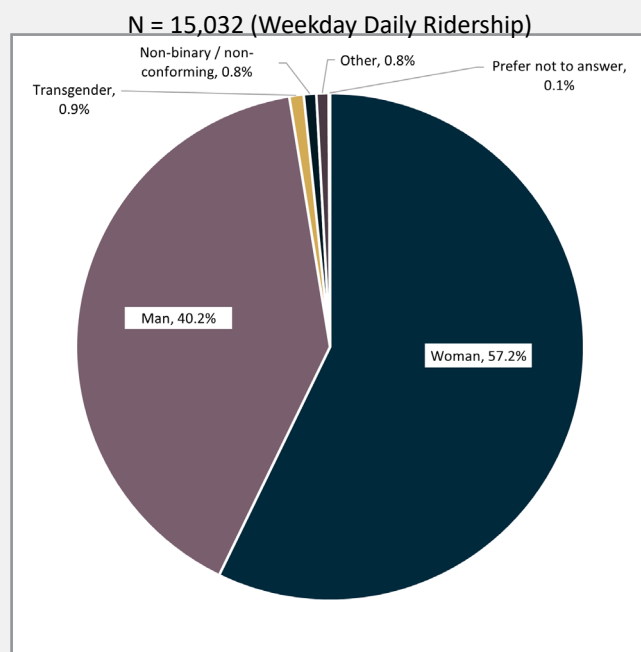


Figure 2-50: Weekday IndyGo riders gender mix.

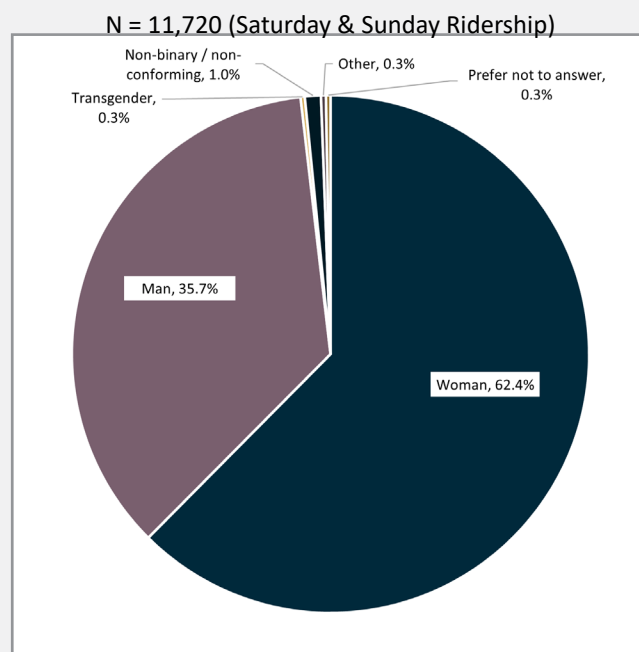


Figure 2-51: Weekend IndyGo riders gender mix.



QUESTION 31

Question 31: Which of the following best describes your total annual household income in 2021 before taxes?

Over a quarter of weekday riders (26%) have an annual household income of less than \$10,000 and 72% of weekday riders have an annual household income of less than \$35,000. Low-income riders are less likely to be employed full time and less likely to have access to a vehicle at home.

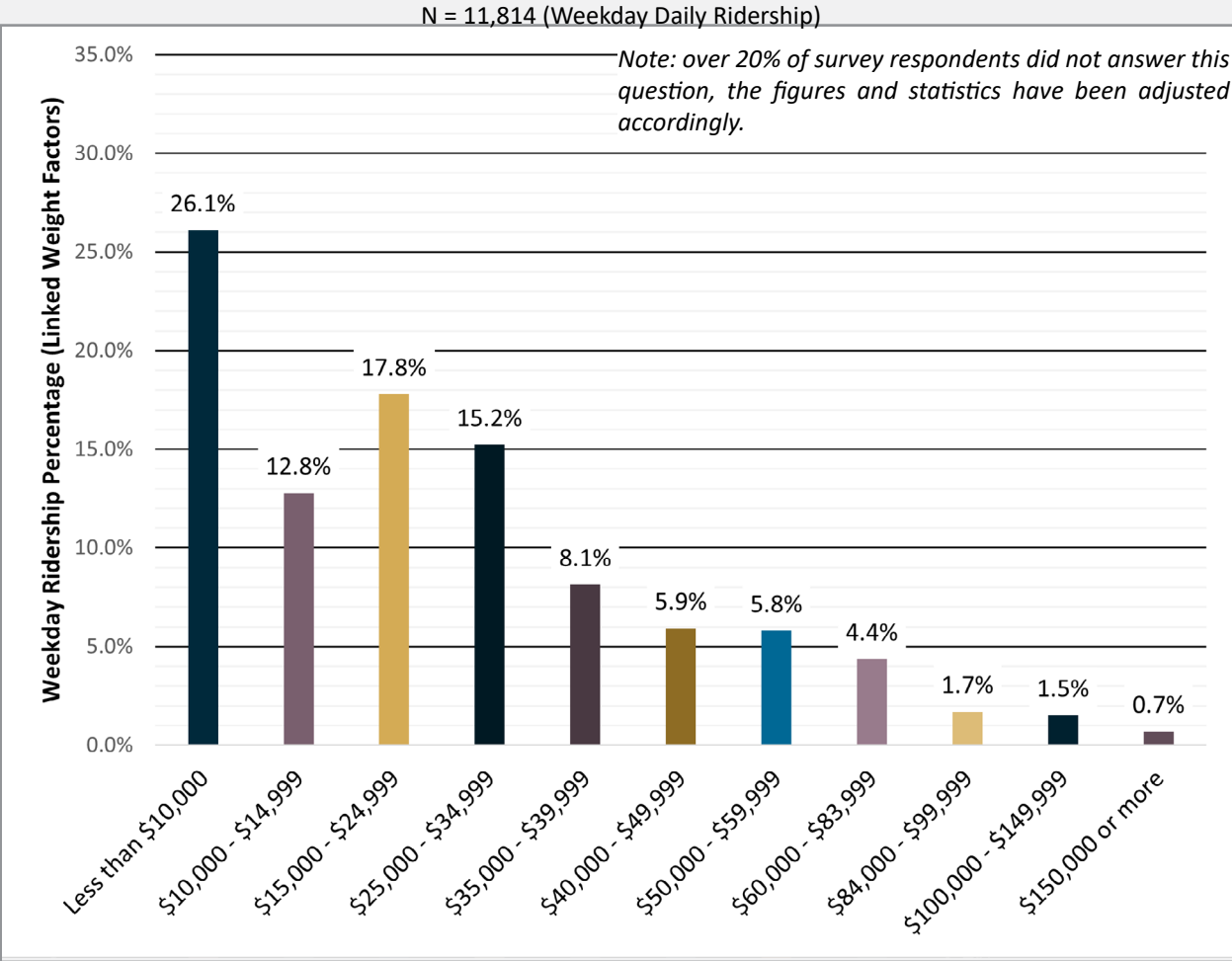


Figure 2-52: Weekday IndyGo riders’ adjusted household income.

	LOW-INCOME RIDER (HOUSEHOLD INCOME UNDER \$35K)	NON-LOW-INCOME RIDER (HOUSEHOLD INCOME ABOVE \$35K)
Employment	71% employed, 52% full-time	87% employed, 77% full-time
Trip Purpose	28% destined for work	27% destined for work
Fare Type	59% use 1-trip or day pass	51% use 1-trip or day pass
Vehicle Access	64% have no access to a vehicle	39% have no access to a vehicle
Without Transit	31% would not have made trip without transit	19% would not have made trip without transit
Accessing Transit	94% walked to transit	94% walked to transit
Language	13% speak a language other than English at home	21% speak a language other than English at home

Table 2-4: IndyGo low-income rider profile





## QUESTION 31

Annual household incomes for weekend riders largely follow the same pattern as with weekday riders. Nearly 30% of weekend riders have an annual household income of less than \$10,000 and 76% of weekend riders have an annual household income of less than \$35,000. Approximately 7% of weekend riders have an annual household income of at least \$60,000.

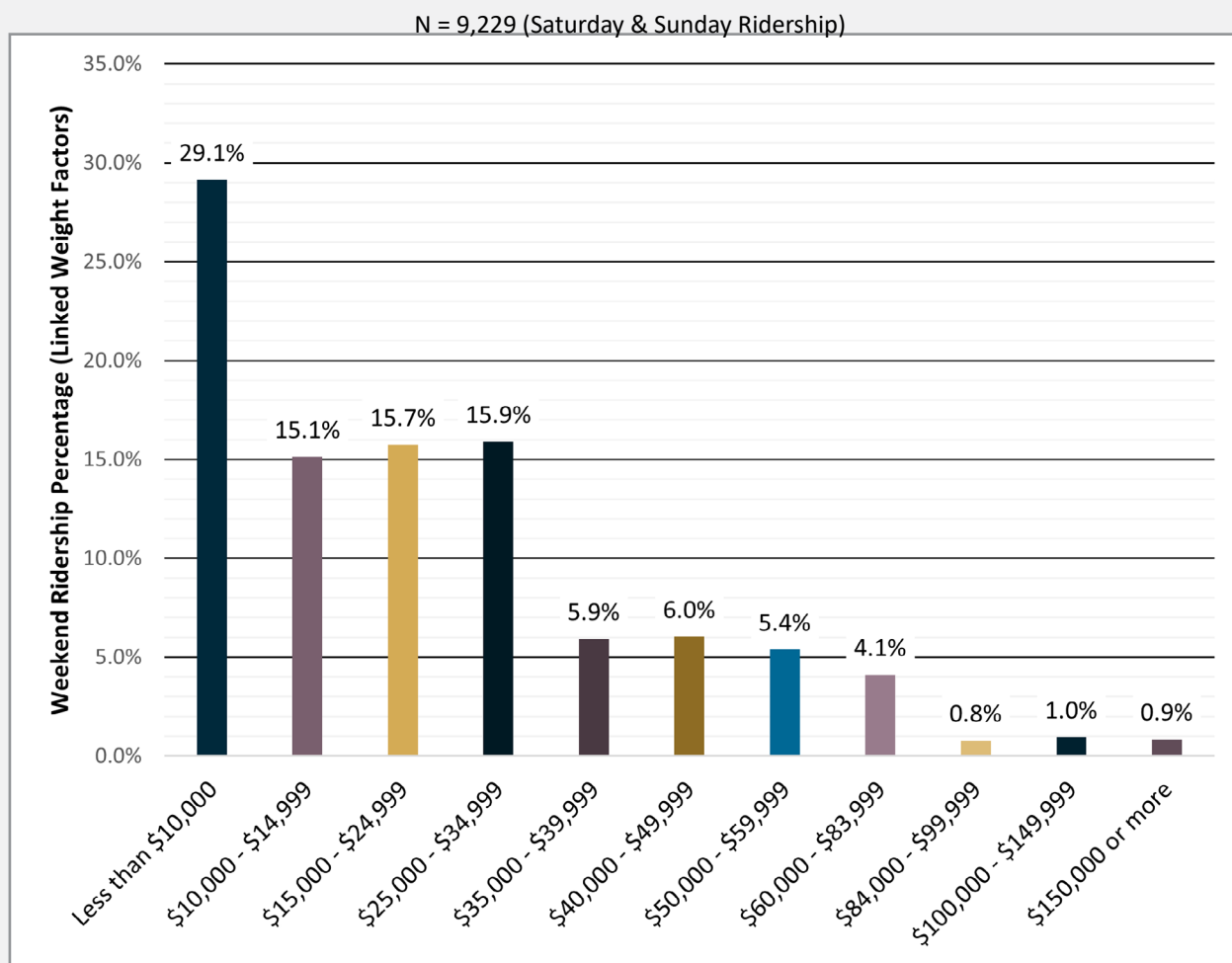


Figure 2-53: Weekend IndyGo riders' adjusted household income.



## QUESTION 31

Comparing the household income of IndyGo riders to that of Marion County residents, Marion County has a much lower percentage of households with income less than \$25,000 (21% compared to 57% - 60% of IndyGo riders). Nearly 70% of Marion County households earn at least \$35,000, compared to only 30% of IndyGo riders.

It is important to note that the income category limits between \$35,000 and \$100,000 in the 2021 ACS do not match the income category limits in the IndyGo survey.

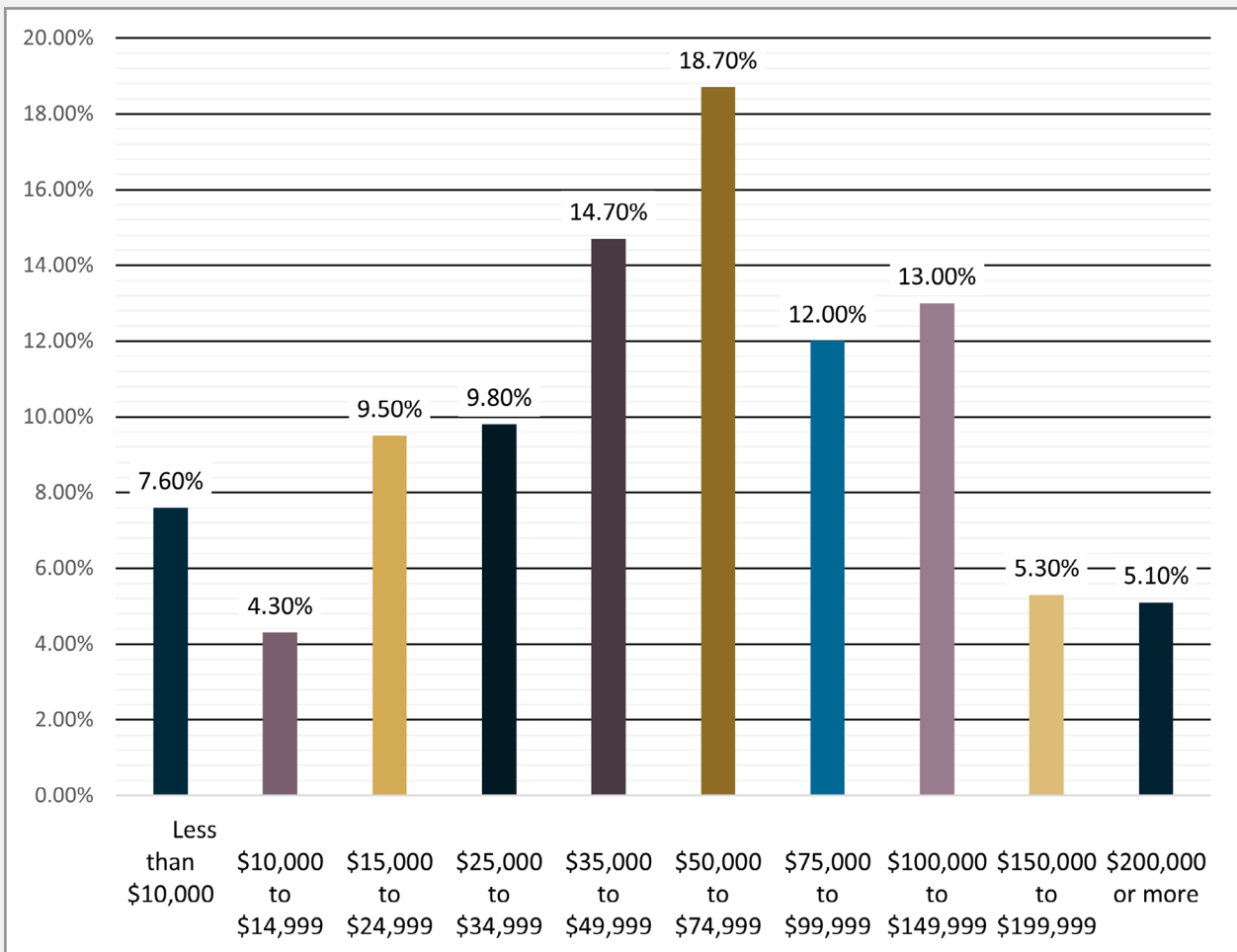


Figure 2-54: Marion County household income. (2021 ACS 5-year average)



## CHAPTER 3

# SURVEY ADMINISTRATION

This chapter describes the procedures used for carrying out the sampling of bus riders. Four major areas are addressed by these procedures:

- (1) survey design,
- (2) sampling plans,
- (3) survey field administration, and
- (4) data review

### 3.1 SURVEY DESIGN

#### 3.1.1 On-to-Off (O2O) Counts

ETC designed the O2O survey instrument to collect boarding-to-alighting locations for selected bus routes. The counts were conducted from the beginning to the end of the eligible times during weekdays and weekends on each route. The specific information collected on each survey included the following: Route, Direction of Travel, Boarding and Alighting locations, and Boarding and Alighting times.



### 3.1.2 Origin Destination (OD) Questionnaire

ETC designed a printed, web-based, and tablet-based version of the OD survey. The survey collected:

- All elements of the “one-way” trip, including purpose, origin and destination addresses, boarding and alighting locations, access and egress modes, and transfers made,
- Information needed for the travel demand model and transit planning, including person and household demographics, and
- Title VI information to be used for transit agency compliance.

For the full personal interview surveys, ETC used tablets integrated with GIS software to allow for accurate geocoding of most survey data as the survey is taken. The data geocoded included boarding and alighting stops for current route, all transfer locations for routes transferred to/from on the one-way trip, trip origin & destination locations, and home address/location.

While the tablet-based interview will be the primary method of data collection, other methods will also be used to make the best use of IMPO’s resources. For local bus riders who do not have sufficient time to complete the interview or do not want to do a face-to-face intercept survey, phone and/or web option were available. For commuter bus routes, hard copy self-administered paper questionnaires or web-based surveys may be employed. For non-English speaking ridership, an attempt was made to allocate bilingual interviewers to routes most likely to contain linguistically isolated riders. IndyGo provided ETC with a list of routes (10, 15, 25, 37, and 38) with high Spanish speaking ridership prior to data collection.

Origin	Place type of where the trip began (start location)
Destination	Place type of where the trip is ending (final location)
Boarding	Stop that the passenger got on the vehicle (first stop)
Alighting	Stop that the passenger got off the vehicle (final stop)
Access Mode	Transportation mode a passenger used to get from their origin location to their first bust stop
Egress Mode	Transportation mode a passenger used to get from their final bus stop to their destination location

Table 3-1: OD Trip Definitions



### 3.1.3 Survey Instrument - Weekday

#### 2022 IndyGo Transit On Board Survey

Please take a few minutes to answer a few questions to help us plan for your transit needs.

**What is your HOME ADDRESS** (please be specific, ex: 123 W. Main St):  
(If you are visiting the Indianapolis area, please list the **hotel name** or address where you are staying)

Street Address

City

State

Zip Code

#### COMING FROM?

##### 1. What type of place are you COMING FROM NOW?

(the starting place for your one-way trip)

- ☐ Work  
☐ Work related  
☐ College / University (students only)  
☐ School K-12 (students only)  
☐ Doctor / Clinic / Hospital (non-work)  
☐ Shopping  
☐ Restaurant  
☐ Personal Business  
☐ Recreation / Social Visit  
☐ Church / Religious Activity  
☐ Airport (passengers only)  
☐ Your HOME → Go to Question #4  
☐ Non-destination trip  
☐ Other: \_\_\_\_\_

##### 2. What is the **NAME** of the place you are coming from now?

\_\_\_\_\_

##### 3. What is the **EXACT ADDRESS** of this place? (OR Intersection if you do not know the exact address: )

\_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

##### 4. How did you **GET FROM** your origin (the place in Question #1) TO THE VERY FIRST bus you used for this one-way trip?

- ☐ Walk ☐ Wheelchair  
☐ Personal Bike ☐ Bike share  
☐ E-Bike ☐ E scooter (Lime, Bird, etc.)  
☐ Was dropped off by someone (answer 4a)  
☐ Drove alone and parked (answer 4a)  
☐ Drove or rode with others and parked (answer 4a)  
☐ Car share (e.g. ZipCar, etc.)  
☐ Uber, Lyft, etc. ☐ Paratransit (e.g. IndyGo Access)  
☐ Workforce Connector / Shuttle / School service  
☐ Taxi ☐ Other \_\_\_\_\_

##### 4a. Where did you board the **first** bus you used for this one-way trip? (Nearest intersection / Transit Center / Station Name):

##### 5. Where did you get **ON this bus**? Please provide the nearest intersection / transit center / Station Name:

##### 11a. Did you transfer FROM another bus/train **BEFORE** getting on this bus?

☐ Yes ☐ No

##### 11b. Will you transfer TO another bus/train **AFTER** getting off this bus?

☐ Yes ☐ No

##### 11c. Please list the **BUS ROUTES** in the exact order you use them for this one-way trip

**START** →  →  →  →  → **END**  
 1st Route 2nd Route 3rd Route 4th Route

Continue

#### GOING TO?

##### 6. What type of place are you GOING TO NOW?

(the ending place for your one-way trip)

- ☐ Work  
☐ Work related  
☐ College / University (students only)  
☐ School K-12 (students only)  
☐ Doctor / Clinic / Hospital (non-work)  
☐ Shopping  
☐ Restaurant  
☐ Personal Business  
☐ Recreation / Social Visit  
☐ Church / Religious Activity  
☐ Airport (passengers only)  
☐ Your HOME → Go to Question #9  
☐ Other: \_\_\_\_\_

##### 7. What is the **NAME** of the place you are going to now?

\_\_\_\_\_

##### 8. What is the **EXACT ADDRESS** of this place? (OR Intersection if you do not know the exact address: )

\_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

##### 9. How will you **GET TO** your destination (listed in Question #6) after you get off the **LAST** bus you will use for this one-way trip?

- ☐ Walk ☐ Wheelchair  
☐ Personal Bike ☐ Bike share  
☐ E-Bike ☐ E scooter (Lime, Bird, etc.)  
☐ Be picked up by someone (answer 9a)  
☐ Get in a parked vehicle & drive alone (answer 9a)  
☐ Get in a parked vehicle & drive/ride w/others (answer 9a)  
☐ Car share (e.g. ZipCar, etc.)  
☐ Uber, Lyft, etc. ☐ Paratransit (e.g. IndyGo Access)  
☐ Workforce Connector / Shuttle / School service  
☐ Taxi ☐ Other \_\_\_\_\_

##### 9a. Where will you get off the **last** bus you are using for this one-way trip? (Nearest intersection / Transit Center / Station Name):

##### 10. Where will you get **OFF this bus**? Please provide the nearest intersection / Transit Center / Station Name:



### OTHER INFORMATION ABOUT THIS TRIP

12. What time did you **BOARD** this bus? \_\_\_\_\_ : \_\_\_\_\_ am / pm (circle one)
13. Will you (or did you) make this same trip in exactly the opposite direction today?  
☐ No ☐ Yes- At what time did / will you leave for this trip in the opposite direction? \_\_\_\_\_ : \_\_\_\_\_ am/pm (circle one)
14. What fare payment methods did you use for this one-way trip? (*select all that apply*)  
☐ 1 Trip (Cash on bus) ☐ 1 Day Pass ☐ 31 Day Pass (Monthly) ☐ 10 Trip Pass  
☐ 1 Trip Ticket ☐ Access Paratransit Free Fare (Skip to Q15) ☐ S Pass (If Student Pass skip to Q15)  
☐ MyKey (Tap card) ☐ MyKey (QR phone app) ☐ Other \_\_\_\_\_
- 14a. (If Q14 is either MyKey option) How do you reload your MyKey account? ☐ Cash  
☐ Credit/Debit Card ☐ I don't, get a new one each time ☐ Provided by work, school, social service
- 14b. What type of fare was this?  
☐ Regular ☐ Youth (6-18) ☐ Senior (65 and older) ☐ Disabled ☐ Veteran
15. If bus services were not available, how would you have made this trip?  
☐ Would have walked ☐ Would have driven myself ☐ Car Share (e.g. ZipCar, etc.)  
☐ Would have bicycled ☐ Would have taken a taxi, Uber, Lyft, etc.  
☐ Would have ridden with someone else ☐ Would have taken transit to a different location  
☐ Would not have made this trip ☐ Would have taken E-Scooter (e.g. Line, Bird, etc.)
16. How many days a week do you usually make this trip?  
☐ 6-7 days a week ☐ 1-2 days a week ☐ Twice a month ☐ First time riding  
☐ 3-5 days a week ☐ Once a month ☐ Less than once a month
17. Do you have any of the following: (*check all that apply*) ☐ Smart phone with data plan  
☐ Tablet with data plan ☐ Tablet WITHOUT Data Plan ☐ Smart phone WITHOUT data plan  
☐ Checking account ☐ Debit card ☐ Credit card

### ABOUT YOU AND YOUR HOUSEHOLD

18. Are you a visitor to the Indianapolis area? ☐ Yes ☐ No
19. How many vehicles (cars, trucks, or motorcycles) are available to your household? \_\_\_\_\_ vehicles  
 19a. [If #19 is more than NONE] Could you have used one of these vehicles for this trip? ☐ Yes ☐ No
20. Including YOU, how many people live in your household? \_\_\_\_\_ people
21. Including YOU, how many people (over age 15) in your household are employed full/part-time? \_\_\_\_\_ people
22. What is your employment status? (check the one response that BEST describes you)  
☐ Employed full-time (paid, working 30 or more hours per week) ☐ Primarily self-employed  
☐ Employed part-time (paid, working less than 30 hours per week) ☐ Unpaid volunteer or intern  
☐ Not currently employed, and looking for work ☐ Stay at home parent or caregiver  
☐ Not currently employed, and not looking for work ☐ Retired
- 23a. Did you make a trip to work since you left home? ☐ Yes ☐ No  
 23b. Will you make a trip to work before you will arrive home? ☐ Yes ☐ No  
 23c. [If #23a or #23b is YES] Provide work name /address \_\_\_\_\_
24. What is your student status? (check the one response that BEST describes you)  
☐ Not a student ☐ Yes – College / University / Community College  
☐ Yes – K - 12<sup>th</sup> grade ☐ Yes – Vocational / Technical / Trade School ☐ Other \_\_\_\_\_
- 25a. Did you make a trip to school since you left home? ☐ Yes ☐ No  
 25b. Will you make a trip to school before you will arrive home? ☐ Yes ☐ No  
 25c. [If #25a or #25b is YES] Provide school name \_\_\_\_\_
25. Do you have a valid driver's license? ☐ Yes ☐ No
26. What is your AGE?  
☐ Under 16 ☐ 19-24 ☐ 35-49 ☐ 65 and over  
☐ 16-18 ☐ 25-34 ☐ 50-64
27. Are you Hispanic, Latino, Latina, or of Spanish origin? ☐ Yes ☐ No
28. What is your race / ethnicity? (check all that apply)  
☐ American Indian or Alaska Native ☐ Asian ☐ Black/African/African American  
☐ Native Hawaiian or Pacific Islander ☐ White/Caucasian ☐ Other: \_\_\_\_\_
29. Do you speak a language other than English at home? ☐ No ☐ Yes - Which language? \_\_\_\_\_  
 29a. [If #29 is Yes] How well do you speak English? ☐ Very Well ☐ Well ☐ Less than well ☐ Not at all
30. What is your gender? ☐ Woman ☐ Man ☐ Transgender ☐ Non-binary/non-conforming  
☐ Prefer not to answer ☐ Prefer to self-describe
31. Which of the following BEST describes your TOTAL ANNUAL HOUSEHOLD INCOME in 2021 before taxes?  
☐ Less than \$10,000 ☐ \$25,000 - \$34,999 ☐ \$50,000 - \$59,999 ☐ \$100,000 - \$149,999  
☐ \$10,000 - \$14,999 ☐ \$35,000 - \$39,999 ☐ \$60,000 - \$83,999 ☐ \$150,000 or more  
☐ \$15,000 - \$24,999 ☐ \$40,000 - \$49,999 ☐ \$84,000 - \$99,999

#### REGISTER TO WIN 1 of 3 31 Day Passes

People who submit a fully completed survey will be entered in a random drawing for one of three 31-Day Passes. You must provide your home address at the beginning of the survey and answer all questions to be eligible. More information regarding the project and drawing can be found at: [indympo.org/onboardsurvey](http://indympo.org/onboardsurvey).

Your Name: \_\_\_\_\_

Phone Number: (\_\_\_\_) \_\_\_\_\_

#### ***Thank you for your help!***

1. Promoter is ETC Institute and the sponsor is IndyGo.

2. Retail value is \$60.

3. The odds of being selected is dependent on the number of entries received.

4. **Eligibility:** This sweepstakes is open to legal residents living and working within Marion County who are at least eighteen (18) years old at the time of entry. Employees of the Indianapolis Public Transportation Corporation (IndyGo) and other companies associated with the promotion of this sweepstakes and their respective parents, subsidiaries, affiliates and advertising and promotion agencies as well as the immediate family (spouse, parents, siblings, and children) and household members of each such employee are not eligible. Former IndyGo employees are eligible so long as they have not been employed by, or within the employment of IndyGo for at least twelve (12) calendar months before the commencement of the sweepstake.



### 3.1.4 Survey Instrument - Weekend

#### 2022 IndyGo Transit On Board Survey

Please take a few minutes to answer a few questions to help us plan for your transit needs.

**What is your HOME ADDRESS** (please be specific, ex: 123 W. Main St):  
(If you are visiting the Indianapolis area, please list the **hotel name** or address where you are staying)

Street Address

City

State

Zip Code

#### COMING FROM?

##### 1. What type of place are you COMING FROM NOW?

(the starting place for your one-way trip)

- ☐ Work
- ☐ Work related
- ☐ College / University (students only)
- ☐ School K-12 (students only)
- ☐ Doctor / Clinic / Hospital (non-work)
- ☐ Shopping
- ☐ Restaurant
- ☐ Personal Business
- ☐ Recreation / Social Visit
- ☐ Church / Religious Activity
- ☐ Airport (passengers only)
- ☐ Your **HOME**
- ☐ Non-destination trip
- ☐ Other: \_\_\_\_\_

##### 2. How did you GET FROM your origin (the place in Question #1) TO THE VERY FIRST bus you used for this one-way trip?

- ☐ Walk
- ☐ Personal Bike
- ☐ E-Bike
- ☐ Was dropped off by someone (answer 4a)
- ☐ Drove alone and parked (answer 4a)
- ☐ Drove or rode with others and parked (answer 4a)
- ☐ Car share (e.g. ZipCar, etc.)
- ☐ Uber, Lyft, etc.
- ☐ Workforce Connector / Shuttle / School service
- ☐ Taxi
- ☐ Wheelchair
- ☐ Bike share
- ☐ E scooter (Lime, Bird, etc.)
- ☐ Paratransit (e.g. IndyGo Access)
- ☐ Other: \_\_\_\_\_

#### GOING TO?

##### 3. What type of place are you GOING TO NOW?

(the ending place for your one-way trip)

- ☐ Work
- ☐ Work related
- ☐ College / University (students only)
- ☐ School K-12 (students only)
- ☐ Doctor / Clinic / Hospital (non-work)
- ☐ Shopping
- ☐ Restaurant
- ☐ Personal Business
- ☐ Recreation / Social Visit
- ☐ Church / Religious Activity
- ☐ Airport (passengers only)
- ☐ Your **HOME**
- ☐ Other: \_\_\_\_\_

##### 4. How will you GET TO your destination (listed in Question #3) after you get off the LAST bus you will use for this one-way trip?

- ☐ Walk
- ☐ Personal Bike
- ☐ E-Bike
- ☐ Be picked up by someone (answer 9a)
- ☐ Get in a parked vehicle & drive alone (answer 9a)
- ☐ Get in a parked vehicle & drive/ride w/others (answer 9a)
- ☐ Car share (e.g. ZipCar, etc.)
- ☐ Uber, Lyft, etc.
- ☐ Workforce Connector / Shuttle / School service
- ☐ Taxi
- ☐ Wheelchair
- ☐ Bike share
- ☐ E scooter (Lime, Bird, etc.)
- ☐ Paratransit (e.g. IndyGo Access)
- ☐ Other: \_\_\_\_\_

5. Did you transfer FROM another bus/train BEFORE getting on this bus?

☐ Yes ☐ No

6. Will you transfer TO another bus/train AFTER getting off this bus?

☐ Yes ☐ No

7. Please list the **BUS ROUTES** in the exact order you use them for this one-way trip

START →  →  →  →  → END

1st Route

2nd Route

3rd Route

4th Route

Continue



### OTHER INFORMATION ABOUT THIS TRIP

8. What time did you BOARD this bus? \_\_\_\_\_ : \_\_\_\_\_ am / pm (circle one)
9. Will you (or did you) make this same trip in exactly the opposite direction today?  
☐ No ☐ Yes- At what time did / will you leave for this trip in the opposite direction? \_\_\_\_\_ : \_\_\_\_\_ am/pm (circle one)
10. What fare payment methods did you use for this one-way trip? (select all that apply)  
☐ 1 Trip (Cash on bus) ☐ 1 Day Pass ☐ 31 Day Pass (Monthly) ☐ 10 Trip Pass  
☐ 1 Trip Ticket ☐ Access Paratransit Free Fare (Skip to Q13) ☐ S Pass (If Student Pass skip to Q13)  
☐ MyKey (Tap card) ☐ MyKey (QR phone app) ☐ Other \_\_\_\_\_
11. (If Q10 is either MyKey option) How do you reload your MyKey account? ☐ Cash  
☐ Credit/Debit Card ☐ I don't, get a new one each time ☐ Provided by work, school, social service
12. What type of fare was this?  
☐ Regular ☐ Youth (6-18) ☐ Senior (65 and older) ☐ Disabled ☐ Veteran
13. If bus services were not available, how would you have made this trip?  
☐ Would have walked ☐ Would have driven myself ☐ Car Share (e.g. ZipCar, etc.)  
☐ Would have bicycled ☐ Would have taken a taxi, Uber, Lyft, etc.  
☐ Would have ridden with someone else ☐ Would have taken transit to a different location  
☐ Would not have made this trip ☐ Would have taken E-Scooter (e.g. Line, Bird, etc.)
14. How many days a week do you usually make this trip?  
☐ 6-7 days a week ☐ 1-2 days a week ☐ Twice a month ☐ First time riding  
☐ 3-5 days a week ☐ Once a month ☐ Less than once a month
15. Do you have any of the following: (check all that apply) ☐ Smart phone with data plan  
☐ Tablet with data plan ☐ Tablet WITHOUT Data Plan ☐ Smart phone WITHOUT data plan  
☐ Checking account ☐ Debit card ☐ Credit card

### ABOUT YOU AND YOUR HOUSEHOLD

16. Are you a visitor to the Indianapolis area? ☐ Yes ☐ No
17. How many vehicles (cars, trucks, or motorcycles) are available to your household? \_\_\_\_\_ vehicles  
 17a. [If #17 is more than NONE] Could you have used one of these vehicles for this trip? ☐ Yes ☐ No
18. Including YOU, how many people live in your household? \_\_\_\_\_ people
19. Including YOU, how many people (over age 15) in your household are employed full/part-time? \_\_\_\_\_ people
20. What is your employment status? (check the one response that BEST describes you)  
☐ Employed full-time (paid, working 30 or more hours per week) ☐ Primarily self-employed  
☐ Employed part-time (paid, working less than 30 hours per week) ☐ Unpaid volunteer or intern  
☐ Not currently employed, and looking for work ☐ Stay at home parent or caregiver  
☐ Not currently employed, and not looking for work ☐ Retired
21. What is your student status? (check the one response that BEST describes you)  
☐ Not a student ☐ Yes - College / University / Community College  
☐ Yes - K - 12<sup>th</sup> grade ☐ Yes - Vocational / Technical / Trade School ☐ Other \_\_\_\_\_
22. Do you have a valid driver's license? ☐ Yes ☐ No
23. What is your AGE? ☐ Under 16 ☐ 19-24 ☐ 35-49 ☐ 65 and over  
☐ 16-18 ☐ 25-34 ☐ 50-64
24. Are you Hispanic, Latino, Latina, or of Spanish origin? ☐ Yes ☐ No
25. What is your race / ethnicity? (check all that apply)  
☐ American Indian or Alaska Native ☐ Asian ☐ Black/African/African American  
☐ Native Hawaiian or Pacific Islander ☐ White/Caucasian ☐ Other: \_\_\_\_\_
26. Do you speak a language other than English at home? ☐ No ☐ Yes - Which language? \_\_\_\_\_  
 26a. [If #26 is Yes] How well do you speak English? ☐ Very Well ☐ Well ☐ Less than well ☐ Not at all
29. What is your gender? ☐ Woman ☐ Man ☐ Transgender ☐ Non-binary/non-conforming  
☐ Prefer not to answer ☐ Prefer to self-describe
30. Which of the following BEST describes your TOTAL ANNUAL HOUSEHOLD INCOME in 2021 before taxes?  
☐ Less than \$10,000 ☐ \$25,000 - \$34,999 ☐ \$50,000 - \$59,999 ☐ \$100,000 - \$149,999  
☐ \$10,000 - \$14,999 ☐ \$35,000 - \$39,999 ☐ \$60,000 - \$83,999 ☐ \$150,000 or more  
☐ \$15,000 - \$24,999 ☐ \$40,000 - \$49,999 ☐ \$84,000 - \$99,999

### REGISTER TO WIN 1 of 3 31 Day Passes

People who submit a fully completed survey will be entered in a random drawing for one of three 31-Day Passes. You must provide your home address at the beginning of the survey and answer all questions to be eligible. More information regarding the project and drawing can be found at: [indympo.org/onboardsurvey](http://indympo.org/onboardsurvey).

Your Name: \_\_\_\_\_

Phone Number: (\_\_\_\_) \_\_\_\_\_

**Thank you for your help!**

1. Promoter is ETC Institute and the sponsor is IndyGo.

2. Retail value is \$60.

3. The odds of being selected is dependent on the number of entries received.

4. **Eligibility:** This sweepstakes is open to legal residents living and working within Marion County who are at least eighteen (18) years old at the time of entry. Employees of the Indianapolis Public Transportation Corporation (IndyGo) and other companies associated with the promotion of this sweepstakes and their respective parents, subsidiaries, affiliates and advertising and promotion agencies as well as the immediate family (spouse, parents, siblings, and children) and household members of each such employee are not eligible. Former IndyGo employees are eligible so long as they have not been employed by, or within the employment of IndyGo for at least twelve (12) calendar months before the commencement of the sweepstake.





## 3.2 SAMPLING PLANS

To ensure the distribution of completed surveys mirror the distribution of the IndyGo passengers, ETC, IndyGo, and the IMPO established proportional sampling goals for both the O2O Counts and the Origin Destination (OD) survey.

### 3.2.1 OD Survey

The source of ridership used in order to create the sample plans was the average daily ridership for April 2022. This ridership totaled 17,655 average weekday boardings, 11,340 average Saturday boardings, and 8,152 average Sunday boardings. Prior to April 2022, other ridership periods were reviewed and they showed that ridership was increasing. April 2022 was used because it was the most recent non-summer full month available as was the best ridership source to project what would be occurring in the fall.

In coordination with the IMPO, ETC developed a sample plan that would ensure the completion of the OD survey by at least 2,000 weekday passengers and 500 weekend passengers (300 Saturday and 200 Sunday). Overall, a total of 2,180 weekday OD surveys were collected and 531 weekend passengers (322 Saturday and 209 Sunday).

Weekday sampling goals were created to guide the collection by route, time period, and direction. April 2022 ridership was used to generate a 10.75% sample rate. Weekend sampling goals were generated using the same April 2022 data and used a 2.5% sample rate for Saturday and a 2.25% sample rate for Sunday. Table 3-22 displays the Weekend OD survey sampling goals and collected surveys. Table 3-33 displays the sampling goals and surveys collected for the weekday survey.

### 3.2.2 On-to-Off (O2O) Counts

The sampling plan for the O2O counts was designed to obtain completed weekday boarding and alighting pairs from a minimum of 20 percent of routes with an Average Weekday Ridership (AWR) ridership of at least 1,800. Overall, the O2O count sample plan was designed to collect a minimum of 1,732 pairs. ETC collected a total of 2,030 pairs. The sample plan displayed in Table 3-55 displays the goals for each route by route, time period, and direction.



Route Surveyed	Saturday		Sunday	
	Sampling Goals	Collection	Sampling Goals	Collection
2 - East 34th St	3	4	2	2
3 - Michigan Street	10	12	7	8
4 - Fort Harrison	4	4	3	3
5 - East 25th St	6	7	4	6
6 - Harding	3	4	2	3
8 - Washington	60	71	40	44
10 - 10th Street	41	46	26	28
11 - East 16th St	2	5	1	2
12 - Minnesota	1	1	1	1
13 - Raymond Street	2	3	1	2
14 - Prospect	3	4	3	4
15 - West 34th St	5	6	4	3
16 - Beech Grove	5	6	3	5
18 - Broad Ripple	3	3	2	2
19 - Castleton	9	9	5	5
21 - East 21st St	7	8	5	6
24 - Mars Hill	3	5	2	2
25 - West 16th St	5	6	4	5
26 - Keystone	7	7	3	3
28 - St. Vincent	4	4	3	3
30 - 30th Street Crosstown	3	3	2	2
31 - U S 31	5	6	4	7
34 - ML King/Michigan Rd	10	10	7	7
37 - Park 100	10	10	6	7
38 - West 38th St	11	12	7	7
39 - East 38th St	36	38	22	24
55 - English	2	3	2	2
86 - 86th St Crosstown	5	5	2	2
87 - Eastside Circulator	5	5	3	3
90 - Red Line	8	10	5	7
901 - Route 90 - Nora	1	2	1	1
902 - Route 90 - Greenwood Extension	3	3	2	3
<b>Totals</b>	<b>282</b>	<b>322</b>	<b>184</b>	<b>209</b>

Table 3-2: Saturday and Sunday Sample Plan (OD)



Route Surveyed	Sampling Goals					Collection						
	1 = AM Peak (Before 10am)	2 = Midday (10am-2pm)	3 = PM Peak (2pm-6:30pm)	4 = Evening (6:30pm and later)	Direction Total	Route Total	1 = AM Peak (Before 10am)	2 = Midday (10am-2pm)	3 = PM Peak (2pm-6:30pm)	4 = Evening (6:30pm and later)	Direction Total	Route Total
2 - East 34th St [Inbound]	2	3	1	1	8	23	4	6	7	4	21	35
2 - East 34th St [Outbound]	2	2	3	2	10		2	5	3	4	14	
3 - Michigan Street [Eastbound]	7	13	11	4	35	97	14	19	11	5	49	100
3 - Michigan Street [Westbound]	11	15	8	3	37		12	20	12	7	51	
4 - Fort Harrison [Inbound]	3	4	1	1	9	25	3	6	4	3	16	30
4 - Fort Harrison [Outbound]	2	3	2	2	9		3	4	3	4	14	
5 - East 25th St [Inbound]	6	8	4	3	21	57	6	11	10	3	30	61
5 - East 25th St [Outbound]	3	7	7	5	22		7	12	7	5	31	
6 - Harding [Inbound]	3	4	2	1	10	25	3	7	8	2	20	34
6 - Harding [Outbound]	2	3	3	2	9		5	4	3	2	14	
8 - Washington [Eastbound]	20	39	27	18	105	287	28	58	36	21	143	288
8 - Washington [Westbound]	25	41	24	18	108		32	55	30	28	145	
10 - 10th Street [Eastbound]	19	35	23	14	91	245	24	42	34	15	115	247
10 - 10th Street [Westbound]	22	34	21	14	91		30	47	34	21	132	
11 - East 16th St [Inbound]	1	2	1	1	5	14	2	2	2	1	7	18
11 - East 16th St [Outbound]	1	1	1	2	5		2	2	2	5	11	
12 - Minnesota [Inbound]	1	1	0	0	3	8	4	2	1	2	9	20
12 - Minnesota [Outbound]	0	1	1	1	3		2	7	1	1	11	
13 - Raymond Street [Inbound]	1	1	0	0	3	8	4	6	1	1	12	21
13 - Raymond Street [Outbound]	1	1	1	0	3		3	3	2	1	9	
14 - Prospect [Inbound]	2	2	1	1	6	17	5	4	2	2	13	28
14 - Prospect [Outbound]	1	2	2	2	7		4	4	3	4	15	
15 - West 34th St [Inbound]	6	5	2	2	14	39	7	6	6	4	23	42
15 - West 34th St [Outbound]	2	4	5	3	14		4	5	6	4	19	
16 - Beech Grove [Inbound]	3	4	3	2	11	33	7	5	5	2	19	42
16 - Beech Grove [Outbound]	4	5	3	2	14		10	6	3	4	23	
18 - Broad Ripple [Inbound]	2	2	1	1	7	18	3	9	3	2	17	27
18 - Broad Ripple [Outbound]	3	2	2	1	7		4	3	2	1	10	
19 - Castleton [Inbound]	5	8	5	4	22	60	7	9	6	7	29	61
19 - Castleton [Outbound]	6	9	5	2	23		7	10	12	3	32	
21 - East 21st St [Inbound]	5	6	3	2	16	37	5	8	4	5	22	47
21 - East 21st St [Outbound]	2	4	3	2	12		4	10	8	3	25	
24 - Mars Hill [Inbound]	3	3	3	1	11	31	3	7	9	1	20	36
24 - Mars Hill [Outbound]	4	4	2	2	12		4	6	3	3	16	

Table 3-3: Weekday Sampling Plan



Route Surveyed	Sampling Goals					Collection						
	1 = AM Peak (Before 10am)	2 = Midday (10am-2pm)	3 = PM Peak (2pm-6:30pm)	4 = Evening (6:30pm and later)	Direction Total	Route Total	1 = AM Peak (Before 10am)	2 = Midday (10am-2pm)	3 = PM Peak (2pm-6:30pm)	4 = Evening (6:30pm and later)	Direction Total	Route Total
25 - West 16th St [Inbound]	3	4	2	1	11	29	5	6	4	2	17	34
25 - West 16th St [Outbound]	2	4	3	2	10		3	6	6	2	17	
26 - Keystone [Northbound]	3	7	4	2	16	44	4	14	4	2	24	47
26 - Keystone [Southbound]	2	6	5	3	17		3	8	6	6	23	
28 - St. Vincent [Inbound]	3	3	2	2	10	30	5	6	3	2	16	33
28 - St. Vincent [Outbound]	3	4	3	2	12		5	6	4	2	17	
30 - 30th Street Crosstown [Eastbound]	2	2	3	1	8	21	5	4	4	2	15	30
30 - 30th Street Crosstown [Westbound]	2	3	2	1	7		3	5	5	2	15	
31 - U S 31 [Inbound]	3	4	2	1	10	30	3	5	3	2	13	33
31 - U S 31 [Outbound]	3	5	3	2	12		3	9	5	3	20	
34 - ML King/Michigan Rd [Inbound]	7	10	7	5	28	72	10	18	7	5	40	79
34 - ML King/Michigan Rd [Outbound]	6	9	6	4	26		17	11	7	4	39	
37 - Park 100 [Inbound]	8	13	11	6	39	101	8	22	18	13	61	111
37 - Park 100 [Outbound]	11	13	7	5	36		12	19	9	10	50	
38 - West 38th St [Inbound]	4	8	5	3	21	54	4	13	6	3	26	54
38 - West 38th St [Outbound]	3	8	5	4	20		4	10	9	5	28	
39 - East 38th St [Inbound]	19	29	14	9	72	202	20	38	25	15	98	213
39 - East 38th St [Outbound]	10	28	21	19	78		28	35	32	20	115	
55 - English [Inbound]	1	1	0	0	3	12	1	3	3	5	12	23
55 - English [Outbound]	1	2	2	1	6		2	2	5	2	11	
86 - 86th St Crosstown [Eastbound]	2	3	2	2	9	22	3	3	3	3	12	28
86 - 86th St Crosstown [Westbound]	2	3	2	2	8		4	6	3	3	16	
87 - Eastside Circulator [Circular] LOOP	6	10	6	4	25	34	9	18	6	4	37	37
90 - Red Line [Northbound]	13	28	21	21	83	276	20	36	44	26	126	281
90 - Red Line [Southbound]	18	37	24	23	102		23	69	39	24	155	
901 - Route 90 - Nora [Northbound]	1	1	1	1	4	5	2	2	1	1	6	9
901 - Route 90 - Nora [Southbound]	0	0	0	0	0		1	1	1	0	3	
902 - Route 90 - Greenwood Extension [Northbound]	2	4	2	3	11	20	3	6	4	4	17	31
902 - Route 90 - Greenwood Extension [Southbound]	1	2	1	1	4		1	6	6	1	14	
Totals	321	531	347	250	1449	1976	475	797	555	353	2180	2180

Table 3-4: Weekday Sampling Plan (Continued)



Route Description	O2O SUMMARY						O2O GOAL					
	AM	MIDDAY	PM	EVE	Grand Total	Total Surveys	AM	MIDDAY	PM	EVE	Grand Total	Total Surveys
8 - Washington [Eastbound]	41	116	68	34	259	511	37	74	51	34	196	534
8 - Washington [Westbound]	70	105	40	37	252		47	77	44	34	202	
10 - 10th Street [Eastbound]	43	95	75	25	238	559	36	65	43	27	171	455
10 - 10th Street [Westbound]	85	107	102	27	321		41	63	39	27	170	
39 - East 38th St [Inbound]	36	49	64	45	194	403	35	55	26	17	133	375
39 - East 38th St [Outbound]	26	50	86	47	209		19	53	39	35	146	
90 - Red Line [Northbound]	111	79	69	36	295	557	20	42	31	31	124	369
90 - Red Line [Southbound]	30	124	61	47	262		26	56	36	34	152	
Totals	442	725	565	298	2030	2030	261	485	309	239	1294	1733

Table 3-5: On-to-off Counts Sampling Plan



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## 3.3 SURVEY PREPARATION

### 3.3.1 Survey Recruitment and Training

Assembling a team of high-quality survey staff was one of the most important steps for both the O2O and OD administration process. ETC collaborated with the staffing firms Stat Team and ANIK to provide interviewers and interviewers for the both the OD and O2O Survey. In addition, ETC had an experienced bi-lingual interviewer (English/Spanish) conducting interviews throughout the effort.

ETC conducted two training sessions. The first training for the O2O counts was conducted at the City-County Building across from the Carson Transit Center. The second training session for the OD survey collection was conducted in smaller groups at the Julia Carson Transit Center.

Maximizing participation and legitimizing the survey among passengers depended on the public response to the survey staff. To support a good public image, ETC imposed dress code standards that required survey staff to wear clean appropriate clothing to present a casual, yet neat, appearance that ensured professionalism and comfort. Survey staff were provided with survey badges and vests, identifying interviewers to the IndyGo agencies staff and passengers to further legitimize their appearance. The badge and dress code standards promoted a professional appearance and reinforced survey legitimacy, which increased passengers' trust in the interviewers and the process.

The ETC field manager created the necessary training materials for conducting the O2O and OD training. The classroom training session included a PowerPoint presentation to explain the purpose and objectives of the survey, procedures and requirements, survey logistics, how to maximize response rates (including difficult-to-survey passengers), and the data collection process in a step-by-step format. Other goals of the training included building interview staff confidence, helping interview staff feel that they are an important part of the survey's success, and helping them understand the importance of the survey and the long-term benefits to their community. The survey staff were instructed to understand that while they were not IMPO or IndyGo employees, they were representing these agencies while on transit vehicles or property and need to act in a manner that reflected positively.

For the OD training, ETC ensured that the training addressed the following details:

- Protocol for intercepting/interacting with non-English speakers and passengers with limited English proficiency.
- Cultural sensitivity.
- Importance of understanding the intent of the questions.
- Instructions on conveying the purpose of the survey to passengers.
- Importance of adhering to our random sampling protocol at the outset of every survey.
- Procedure for properly recording all refusals and completing a short observational assessment of the refusing passenger for internal purposes.
- Importance of data confidentiality and instruction on how to address passenger concerns regarding same.
- Overview of the transit system covering all topics covered in the tablet questionnaire with route-specific instruction as needed.
- How to handle passenger comments and complaints.
- Safety training.



At the end of the OD training, interviewers conducted mock interviews using the survey tablets. This allowed ETC staff to gauge each interviewer's comprehension of the survey instrument and provide feedback. Following classroom training, interviewers conducted interviews under the supervision of an ETC supervisor. Supervisors oversaw interviewers and provided feedback on performance throughout the day. Once an interviewer had demonstrated proficiency under direct supervision, he/she was deployed on vehicles to collect interviews. During this time the interviewer's productivity and data quality were remotely assessed by ETC's staff.

### 3.3.2 Pilot Test

ETC conducted a pilot test from August 15 through August 18, 2022. The purpose of the pilot test was to assess all aspects of the survey including survey design, sampling methodology, implementation, and data processing tasks. The overall goal was to complete 75 OD interviews, but 150 interviews were collected. The pilot test interviews were conducted on the Red Line/90, 10, 39, and other routes that interline, including the 12, 13, and 14. Route 10 was also selected since it contains a higher percentage of LEP riders. Based on the results of the pilot test, ETC recommended that the OD survey proceed as scheduled.

## 3.4 FULL SURVEY FIELD ADMINISTRATION

The full collection began September 6 and continued until October 3, 2022. Data was collected while both college and high school were in session and prior to the start of the Red Line Enhancement Project.

### 3.4.1 On-to-Off Counts Procedures

The bus O2O counts were collected using ETC's proprietary software running on GPS-capable tablets equipped with barcode scanners. Tablets onboard the same bus were paired before each data collection session began. The passengers' routes, directions of travel, and boarding and alighting information (time, latitude, and longitude) were captured via the following process:

- Transit passengers were asked to participate as they entered the transit vehicle.
- Each passenger entering the bus was handed a barcoded card once the card was scanned into the tablet.
- Passengers were asked to keep the bar-coded card for the duration of their trip on that transit vehicle.
- Passenger were asked to hand their cards back as they exited the vehicle at which point the cards were scanned as they exited the bus.

For the BRT Red Line (Route 90), counters asked passengers at which stops they entered, if not observed, and exited the bus.





### 3.4.2 OD Survey Procedures

The OD survey was conducted during weekdays (Monday through Thursday), Saturdays, and Sundays from 4:00am to 10pm.

#### Selection of OD Participants

For the OD interview the tablet generated a random number (shown in Figure 3-1) to determine which passengers were asked to participate in the survey after boarding the vehicle. If four people boarded a bus, the tablet randomly generated a number from 1 to 4. If the tablet responded 2, the second person who boarded the bus was asked to participate in the survey. If the tablet responded 1, the first person was asked to participate in the survey, and so forth. The selection was limited to the first six people who boarded a bus at any given stop to ensure the interviewer could keep track of the passengers as they boarded.

Figure 3-1: OD Survey Random Number generator



For example, if 20 people boarded a vehicle, the tablet program would randomly pick one of the first six people for the survey. If the interview was refused by the randomly selected passenger, then the passenger who boarded before the passenger selected would be attempted.

Interviewers will select riders at random to participate in the survey based on the sampling goals established for each route. Once an interviewer has randomly selected a rider for the survey, the interviewer will do the following:

- Approach the person who was selected and ask them to participate in the survey.
- If the person refuses, the interviewer will end the survey, but the refusal will be recorded on the tablet to help assess the overall response rate to the survey.
- If the rider agrees to participate, the interviewer will ask the respondent if he or she has at least five minutes to complete the survey.
- If a rider has at least five minutes and is willing to participate, the interviewer will administer the full survey to the respondent as a face-to-face interview using a tablet.
- If the rider does NOT have at least five minutes or the rider does not want to do the survey as an interview, the interviewer will give the respondent the option of providing their name, phone, and/or email and have an interviewer from ETC administer the survey by phone or text/email a link to the survey to be completed online. This methodology will ensure people who complete “short trips” on public transit are represented as well.
- If the rider does not speak English and the interviewer does not speak that foreign language, most likely Spanish, the following text addresses this process.



### OD Survey Foreign Language Administrative Procedures

ETC allowed for three options to capture non-English speaking individuals. To aid in identifying the language each rider is most comfortable with, the tablet was programmed with text in Spanish, French, Haitian Creole, and Hakha Chin. The tablet stated "This is the language I am most comfortable with" in each of the foreign languages with the English name of the language next to it. Once the language is selected the tablet will prompt the rider in their language: "We are conducting a survey for IndyGo to help improve transit in the Indianapolis area. Are you willing to participate?"

- "Yes, I'll take the paper survey in [language]."
- "Yes, I'd like to take an online survey."
- "Yes, I'd like to be interviewed by phone."
- "No, thank you." If selected then the engagement will end.

Options for riders that agree to take the survey are detailed below.

- Self-administered paper questionnaire – If the rider elected to participate by taking the paper questionnaire, then they were provided a paper questionnaire in their language. The rider attempted to complete and return the questionnaire on-board the vehicle. The interviewer reviewed the submitted questionnaire and asked the rider to complete any skipped questions by pointing to these questions on the paper form. Each paper questionnaire was entered into the online platform. The languages were English, Spanish, French, Haitian Creole, Hakha Chin.
- Self-administered online survey – If the rider elected to participate by taking the survey online in the language they are most comfortable with, and at a time of their choosing, they were sent a link to the online version either by text or email. The self-administered form were available in the following languages: English, Spanish, French Creole, Hakha Chin.
- Phone interview at a later date and time (CATI) – If the rider selected to participate by agreeing to be interviewed over the phone in the language they are most comfortable with, and at a time of their choosing, then it was facilitated by entering their name and phone number into a form on the tablet. Phone interviewers will possess the ability to conduct the interview in these possible languages: English, Spanish, French Creole, Hakha Chin.

## 3.5 DATA REVIEW PROCESS

Many of the monitoring processes described previously in the report are essential elements of the overall quality assurance/quality control (QA/QC) process that was implemented throughout the survey. The establishment of specific sampling goals and procedures for managing the goals ensured that a representative sample was obtained.

### 3.5.1 OD In-Field Quality Assurance/Quality Control

ETC field supervisors reviewed each interviewer's data assessing the following elements to ensure they were administering the interview properly:

- Distribution of interviews by demographics.
- Distribution of interviews by trip characteristics.
- Length of each interview in minutes.
- Percentage of refusals.

In addition to daily reviews of demographic responses, a comprehensive weekly report was created by the field manager.



### 3.5.2 Process For Identifying Complete Records

The geocoding tools embedded in Google map searches, ETC Visual Review program, and Caliper® Maptitude geographic information system (GIS) software, allowed for the geocoding accuracy that was achieved. The interviewer mapped the locations (origin, destination, boarding stop(s), and alighting stop(s) in real time while conducting the interview. By mapping the locations in real time, the interviewer utilized quality checks while capturing these locations. If the interviewer noticed a discrepancy, e.g. a missing transfer, the interviewer verified the accuracy of the information with the passenger. To classify a survey as being completed, the record must contain all elements of the one-way trip. ETC has classified required trip data as containing complete answers to the following: Route/Direction, Home address, Origin location and place type, Destination location and place type, Access and Egress mode, and the Boarding and Alighting location(s) for each route used.

### 3.5.3 Online Visual Review Tool

ETC online visual review tool allowed for the review of all completed records. The tool displayed all elements of the one-way trip, as well as a series of distance ratio checks. After directions were finalized, each record went through speed/distance/time checks. Figure 3-2 shows an example of the online visual review tool.

**Figure 3-2: Online Visual Review Tool (Editable Version)**

The screenshot displays the 'Elvis - Read Only INDYGO 2022 TRANSIT' interface. On the left, there are several input fields and dropdown menus for 'Location Search', 'BOARDING STOP', 'STOP ID / SEQUENCE / CLIENT ID', 'ACCESS MODE', and 'FROM TRANSFERS'. The central part of the screen shows a map of Indianapolis with a blue line indicating a transit route. On the right, there is a 'ROUTE LIST' table with columns for route number, name, and direction. The table lists various routes such as '2 - East 34th St [Inbound]', '3 - Michigan Street [Eastbound]', and '4 - Fort Harrison [Inbound]'. At the bottom, there is a 'Remark:' field and a status dropdown menu.

Route	Direction
2	East 34th St [Inbound]
2	East 34th St [Outbound]
3	Michigan Street [Eastbound]
3	Michigan Street [Westbound]
4	Fort Harrison [Inbound]
4	Fort Harrison [Outbound]
5	East 25th St [Inbound]
5	East 25th St [Outbound]
6	Harding [Inbound]
6	Harding [Outbound]
8	Washington [Eastbound]
8	Washington [Westbound]
10	10th Street [Eastbound]
10	10th Street [Westbound]
11	East 16th St [Inbound]
11	East 16th St [Outbound]
12	Minnesota [Inbound]
12	Minnesota [Outbound]
13	Raymond Street [Inbound]
13	Raymond Street [Outbound]
14	Prospect [Inbound]
14	Prospect [Outbound]
15	West 34th St [Inbound]
15	West 34th St [Outbound]
16	Beech Grove [Inbound]
16	Beech Grove [Outbound]
18	Broad Ripple [Inbound]
18	Broad Ripple [Outbound]
19	Castleton [Inbound]
19	Castleton [Outbound]



### 3.5.4 Pre-Distance Checks

The series of distance and ratio checks were contained in the online visual review tool for ETC's Transit Review Team (TRT) to systematically approach the reviewing of completed records. The TRT process for editing surveys is described later in this section. Note: The distance and ratio checks described are meant to alert the reviewer that closer evaluation may be needed. However, this does not indicate the record was inaccurate or unusable.

The distances for the checks are created using the great-circle distance formula that is based on a straight line from point A to point B that considers the curvature of the earth. Some of the distance checks are listed below:

- Access/Egress-Mode Distance Check (distances from origin to boarding and alighting to destination).
- Origin-to-Destination Check (distance from origin to destination).
- Boarding-and-Alighting Distance Check (distance checks from boarding to alighting location).

### 3.5.5 Transit Review Team

The TRT reviewed all completed records, paying special attention to records that were flagged by the previously described checks. Typically, around 10 percent of all records receive an automatic flag. The issues listed in Table 3-6 result in actions that allow about 50 percent of those records that are flagged to be retained.

### 3.5.6 Post-Processing Additional Checks

After records were reviewed by the TRT, the next step involves the application of QA/QC non-trip checks. Non-trip related checks included:

- Ensuring the respondents who indicated they were employed reported that at least one member of the household was employed.
- Ensuring the time-of-day a survey was completed was reasonable given the published operating schedule for the route.
- Ensuring that the appropriate fare type was used given the age of respondent.
- Removing personal information to protect the anonymity of the respondents.

Once all records complete the pre-processing and post-processing QA/QC checks, those deemed complete and usable are appended to the completion report to ensure that goals are met. After the final review is completed, a data dictionary was created to describe the data in the database.



Issue	Description of Issue	Action
Origin/Destination Condition 1	Origin/Destination appears incorrect because the wrong location of a multiple-location organization was selected	If, for example, an Origin/Destination appears illogical based on the college campus that was selected, but an appropriate campus of the same college does appear logical given the other points and answer choices of the trip, then the appropriate campus will be selected.
Origin/Destination Condition 2	Origin/Destination appears to have been geocoded to the incorrect city/state	If for example, an Origin/Destination appears illogical based on the city/state that was geocoded, but the address/intersection is logical within the trip if the city/state are changed. This occurs occasionally because the interviewer selects the wrong choice from the list of address choices that appear in the online survey instrument, then the appropriate address information will be inserted.
Access/Egress Mode	Access/Egress Mode seems illogical based on trip	If the access/egress mode involves the use of a vehicle and the distance from either origin to boarding or alighting to destination is less than 0.2 miles, then the access/egress mode is recoded to walk/walked and that change will be reflected in the database.
Directionality of Record	Boarding and alighting locations indicate that the trip is going in the opposite direction of what was selected by the interviewer	Change direction of route selected and, if necessary, update boarding and alighting locations based on appropriate direction.

Table 3-6: TRT General Issues



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## CHAPTER 4

# SURVEY WEIGHTING AND EXPANSION

The purpose of developing survey goals is to collect an appropriate number of survey records to be “expanded” to represent the total average ridership of each route by time period (AM Peak (3:00am-9:00am), Midday (9:01am-3:00pm), PM Peak (3:01-6:00pm), and Night (6:01pm-2:59am)) and direction for weekdays. For weekends, the ridership is only expanded at the route level.

To further benefit the expansion process, segments were created for each route. Stops were grouped into segments along that route so that boarding segments could be paired with alighting segments when creating the expansion factor. Segmentation allows for the trip path to be considered in the expansion rather than just expanding records based on time of day and direction for each route.

### 4.1 ROUTE SEGMENTATION

#### 4.1.1 Route segmentation with APC DATA and O2O Collection

ETC created segments using boarding percentages of the route from Automatic Passenger Counting (APC) data. Routes with Stop-Level Ridership data were separated based on direction, then divided into three segments based on the total boardings. After approximately one-third of the route’s total ridership had boarded, a new segment began. After approximately two-thirds of the route’s total ridership had boarded the final third segment began. Figure 4-1 is a simplified example of segmentation with stop-level ridership.

*(Note: Iterative Proportional Fitting (IPF) is used in multiple types of expansion discussed later in this document. In order for IPF to work properly, the boarding totals must match the alighting totals. For this reason, Ridership alightings are adjusted using a multiplying factor in order to make sure their totals match the boarding totals. These are typically nominal alterations, however, if there are significant differences in boarding and alighting totals by direction of a route, it may require additional review of the functionality of the route to ensure that the surveys are both collected and expanded appropriately.)*



Figure 4-1: Segmentation with Stop Level Ridership Example

Segmentation with Stop Ridership Example					
Direction: Eastbound	APC DATA		Segmentation		
Stops	Boardings	Alightings	Running Total of Boardings	Running Percentage of Total Boardings	Segment
Stop 1	35	0	35	23.0%	1
Stop 2	20	10	55	36.2%	1
Stop 3	20	5	75	49.3%	2
Stop 4	15	10	90	59.2%	2
Stop 5	5	12	95	62.5%	2
Stop 6	4	4	99	65.1%	2
Stop 7	19	4	118	77.6%	3
Stop 8	12	3	130	85.5%	3
Stop 9	15	5	145	95.4%	3
Stop 10	3	10	148	97.4%	3
Stop 11	2	15	150	98.7%	3
Stop 12	2	11	152	100.0%	3
Stop 13	0	10	152	100.0%	3
Stop 14	0	15	152	100.0%	3
Stop 15	0	38	152	100.0%	3
	152	152			

### 4.1.2 Route Segmentation with APC DATA Without O2O Collection

If O2O counts were not collected for a route, those routes are segmented into two segments by time and direction boarding totals. Those routes are segmented similarly to the process with O2O collection with the difference being that the second segment begins after approximately half of the route's total APC ridership has boarded. When a route is segmented in half, you have the possibility of three boarding to alighting cell combinations: board segment 1 to alight segment 1, board segment 1 to alight segment 2, board segment 2 to alight segment 2.

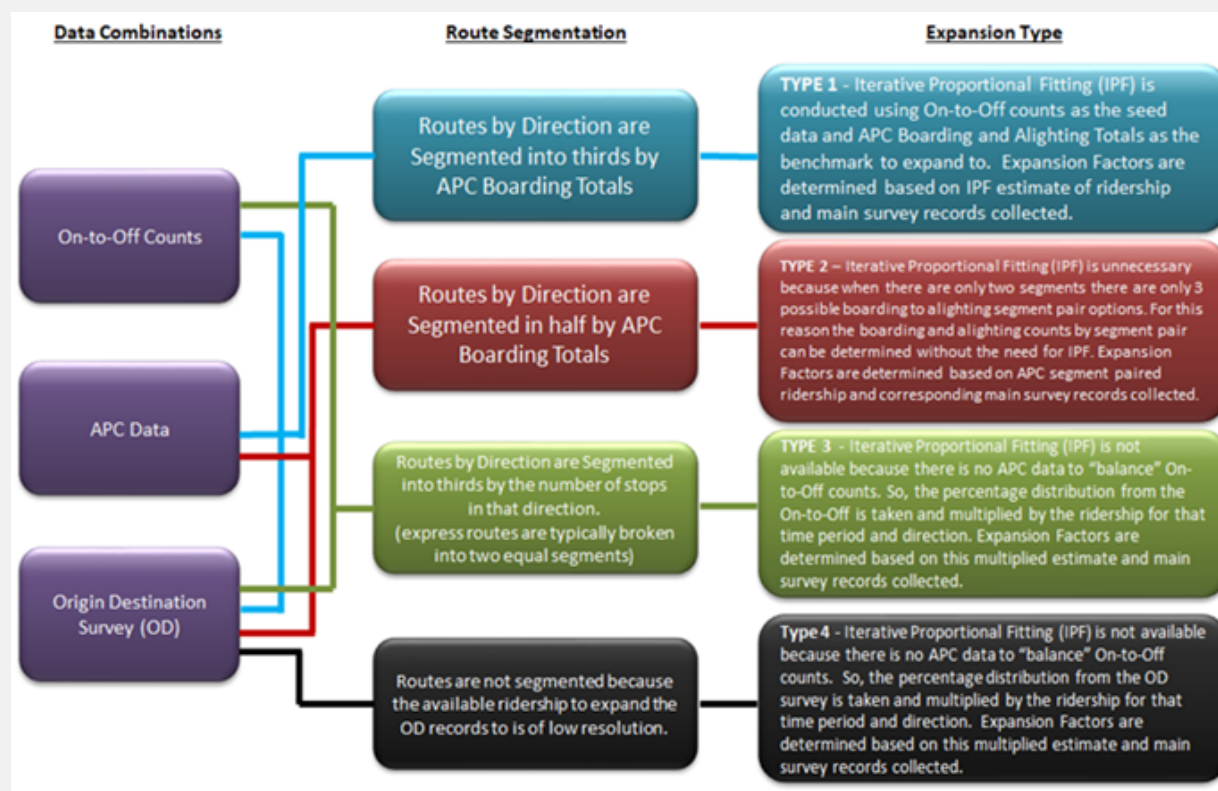
Figure 4-2 shows the data type (O2O counts, APC data, OD data) combinations along with the corresponding types of route segmentation and type of expansion used.

In the subsequent explanation of expansion types, Iterative Proportional Fitting (IPF) is utilized where possible. IPF is an algorithm ETC utilizes to balance the differences between the ridership projected from the O2O counts and the APC ridership for each segment. Further detail on the IPF process is explained under Type 1 expansion.





Figure 4-2: Data Combination, Route Segmentation, and Expansion Type





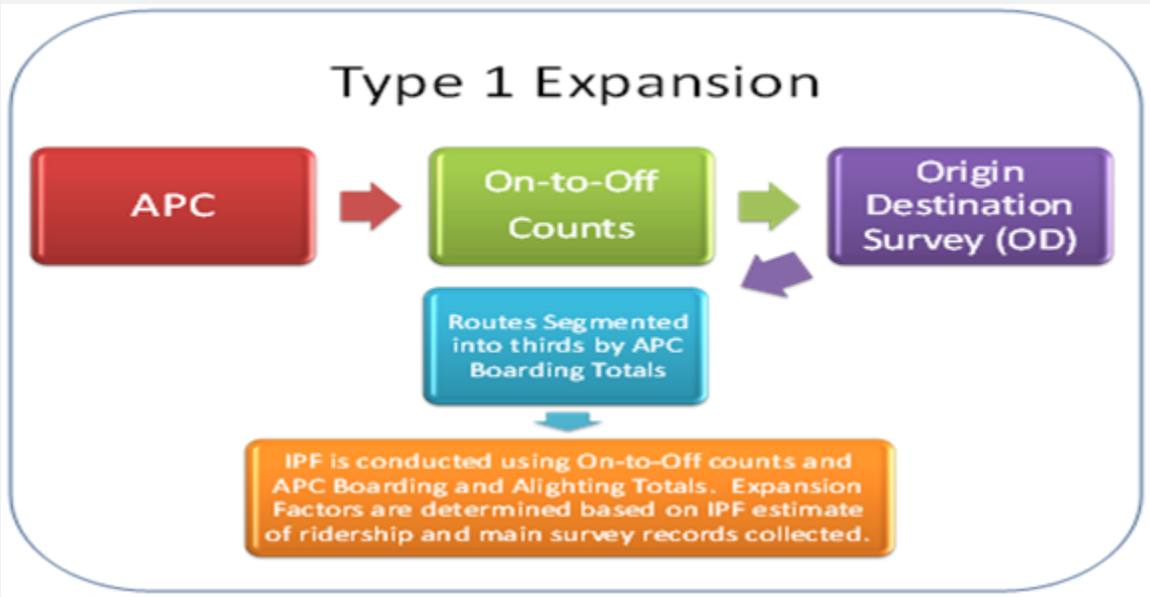
## 4.2 EXPANSION

### 4.2.1 Type 1 Expansion: Routes with APC Data, On-to-Off Counts, and OD Survey Data

Of the four types of bus expansion discussed, Type 1 Expansion is the preferred method as it incorporates all three types of data available. Typically, O2O data collection is reserved for more heavily traveled routes, so this type of expansion was conducted on the more heavily traveled routes in the system and occurred after route stops were divided into three segments based on total boarding distribution by direction.

Figure 6 shows the segmented results for the O2O counts that were administered for a certain route, direction, and time.

Figure 4-3: Type 1 Expansion



Once the segments were appended to the O2O counts, APC data, and OD Survey databases, the records were ready for expansion. Each row in the table identifies the segment where passengers boarded the bus. The columns in the table identify where passengers alighted the bus.

*Note: The O2O counts serve as the seed data in the IPF process while the APC boarding totals and alighting totals serve as the “Benchmark” totals that the O2O counts are expanded to.*

Table 4-1 shows the distribution of the data in Table 4-2 expressed as a percentage of all boardings for the specific time and direction. Table 4-2 was created by dividing each O2O cell in Table 4-1 by the sum of all O2O counts in Table 4-1, which is 115. For example, 20/115 (17.4%) of all trips boarded in segment 2 and alighted in segment 3 as shown in Table 4-2. The total ridership for the route, time, and direction was applied to the O2O distribution percentages shown in Table 4-2.

This produces an initial estimate of the ridership flow for the boarding segment to the alighting segment as shown in Table 4-3. Applying the actual ridership of 320 creates an initial estimate of 56 trips (17.4% x 320) boarding in segment 2 and alighting in segment 3.



Route: Example Eastbound (6am-9am)		ACTUAL RIDERSHIP COUNTS FROM THE ON/OFF SURVEY		
Segment	Total	1	2	3
1	60	5	15	40
2	45		25	20
3	10			10
Total	115	5	40	70

Table 4-1: Results of the On-to-Off County

Route: Example Eastbound (6am-9am)		PERCENTAGE DISTRIBUTION OF RIDERSHIP COUNTS FROM THE ON/OFF SURVEY		
Segment	Total	1	2	3
1	52.2%	4.3%	13.0%	34.8%
2	39.1%	0.0%	21.7%	17.4%
3	8.7%	0.0%	0.0%	8.7%
Total	100.0%	4.3%	34.8%	60.9%

Table 4-2: Distribution of the On-to-Off Counts

(percentages in table 2 were applied to the total boardings for this time period in this direction)				
Route: Example Eastbound (6am-9am)		PROJECTED RIDERSHIP BASED ON THE ON-TO-OFF SURVEY		
Segment	Total	1	2	3
1	167	14	42	111
2	125	0	70	56
3	28	0	0	28
Total	320	14	111	195

Table 4-3: Initial Estimate of Ridership Flows Between Stations



To develop a more accurate estimate of the ridership flows between segments on each route, ETC developed an Iterative Proportional Fitting (IPF) Algorithm to balance the differences between the ridership projected from the O2O counts (shown in Table 4-2) and the APC ridership for each segment (shown in Table 4-3).

The IPF process is described below:

**Step 1: Correction for the Boardings.** The estimated ridership from the O2O counts for each line was multiplied by the ratio of the actual boardings from Stop-Level Ridership/ APC Data for each segment by the estimated boardings for each segment. For example, if the actual boardings for Segment 1 were 120 and the estimated boardings were 100, each cell associated with Segment 1 would have been multiplied by 1.2 ( $120 / 100$ ) to adjust the estimated boardings to actual boardings.

**Step 2: Correction for the Alightings.** Once the correction in Step 1 was applied, the estimated boardings would be equal to the actual boardings. However, the adjustment to the boardings total may have changed the alighting estimates. To correct the alighting estimates, the new values calculated in Step 1 were adjusted by multiplying the ratio of the actual alightings from the Stop-Level Ridership/ APC Data for each stop by the estimated alightings for each segment from Step 1. For example, if the actual alightings for Segment 2 were 220 and the estimated alightings from Step 1 were 200, each cell associated with Segment 2 would have been multiplied by 1.1 ( $220 / 200$ ) to adjust the estimated alightings from Step 1 to actual alightings.

The processes described in Steps 1 and Steps 2 were repeated sequentially until the difference between the actual and estimated boardings and alightings was zero. Table 4-5 shows that after seven balancing iterations in this algorithm, there were no differences between the projected distribution and the actual boardings and alightings.

The final estimate for ridership flows is shown in Figure 12.

Route: Example Eastbound (6am-9am)				
Average Weekday Ridership	Total	1	2	3
BOARDINGS	320	100	100	120
ALIGHTINGS	320	20	100	200
DIFFERENCE FROM PROJECTED				
BOARDINGS	0	-67	-25	92
ALIGHTINGS	0	6	-11	5

Table 4-4: Boardings and Alightings by Station



Segment	Total	DIFFERENCE FROM ACTUAL BOARDINGS	1	2	3
1	100	0	20	32	49
2	100	0	0	68	32
3	120	0	0	0	120
<b>Total</b>	<b>320</b>	<b>0</b>	<b>20</b>	<b>100</b>	<b>200</b>
<b>DIFFERENCE FROM ACTUAL ALIGHTINGS</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>
<b>7th STEP of ITERATIVE BALANCING TO CORRECT DISTRIBUTION OF RIDERSHIP BY BOARDING LOCATION</b>					
Segment	Total	DIFFERENCE FROM ACTUAL BOARDINGS	1	2	3
1	100	0	20	32	48
2	100	0	0	68	32
3	120	0	0	0	120
<b>Total</b>	<b>320</b>	<b>0</b>	<b>20</b>	<b>100</b>	<b>200</b>
<b>DIFFERENCE FROM ACTUAL ALIGHTINGS</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>

Table 4-5: Boardings and Alightings by Station

<b>Route: Example Eastbound (6am-9am)</b>				
Segment	Total	1	2	3
1	100	20	32	48
2	100	0	68	32
3	120	0	0	120
<b>Total</b>	<b>320</b>	<b>20</b>	<b>100</b>	<b>200</b>
<b>DIFFERENCE FROM ACTUAL ALIGHTINGS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Table 4-6: Final Estimate of Ridership Flows Between Stations



The actual number of OD records completed for each boarding to alighting segment pair is shown in Table 4-7. To calculate the expansion factors, the final estimate of ridership between segments shown in Table 4-6 was divided by the actual number of OD records collected. This calculation produces the expansion factors shown in Table 4-8. For example, the 32 estimated riders projected to board in segment 2 and alight in segment 3 were divided by the 10 OD records to produce an expansion factor of 3.15 to be applied to records who board in segment 2 and alighting in segment 3.

Route: Example Eastbound (6am-9am)				
Segment	Total	1	2	3
1	32	3	9	20
2	17		7	10
3	8			8
Total	57	3	16	38

Table 4-7: Number of Completed Surveys

Route: Example Eastbound (6am-9am)				
Segment	Total	1	2	3
1	3.13	6.67	3.50	2.42
2	5.88	0.00	9.78	3.15
3	15.00	0.00	0.00	15.00
Total	5.61	6.67	6.25	5.26

Table 4-8: Weighting Factors



### 4.2.2 Type 2 Expansion: Routes with APC Data, OD Survey Data, without On-to-Off Counts

This type of expansion also divided stops into segments based on total boarding distribution by direction, but only two segments are created. These segments were then appended to the OD records based on the boarding and alighting locations.

#### General Rule for Expansion Factors

While there are no specific guidelines for the expansion factor values, ETC uses a guideline of keeping expansion factors below 3 times the average expansion factor based on the sampling percentage. This is done to keep any one record from representing a markedly high number of riders in the system. The formula for determining this guideline is:

$$1 / (\text{Sampling \%}) \times 3 = \text{Guideline Weight Factor}$$

If the expansion factor for a boarding segment to alighting segment pair is greater than 3 times the average expansion factor, then it is aggregated into the adjacent boarding to alighting segment where it will have the least impact on the previously existing expansion factors. This guideline is standard for all the various expansion types.



## 4.3 LINKED TRIP DECOMPOSITION ANALYSIS

Following the expansion, ETC performed a linked trip decomposition analysis to understand how the linked-trip weights represent actual ridership. On a typical OD study, an unlinked-trip weight is calculated based on the average weekday ridership on the route in which the respondent was surveyed and does not consider whether they transferred to or from other routes during their trip. A second weight is calculated (the linked-trip factor) which does consider the number of transfers made. The decomposition analysis reviewed all transit routes used by survey respondents and looked to see how many riders transferred to each route and from each route.

route_name	agency_name	Route Surveyed	Transfer Route	Total Summed Linked	Observed Boardings	Total Difference	% Difference
2 - East 34th St	IND	190.36	44.93	235.29	242.27	6.98	2.88%
3 - Michigan Street	IND	686.00	181.00	867.00	845.68	-21.32	-2.52%
4 - Fort Harrison	IND	208.23	63.89	272.12	238.73	-33.40	-13.99%
5 - East 25th St	IND	269.64	110.03	379.67	366.41	-13.26	-3.62%
6 - Harding	IND	173.72	32.22	205.94	242.14	36.20	14.95%
8 - Washington	IND	2511.43	512.24	3023.67	2950.18	-73.48	-2.49%
10 - 10th Street	IND	1776.87	363.90	2140.77	2127.68	-13.09	-0.62%
11 - East 16th St	IND	105.32	10.79	116.12	129.59	13.47	10.40%
12 - Minnesota	IND	75.62	20.77	96.39	100.64	4.24	4.22%
13 - Raymond Street	IND	47.61	11.49	59.10	74.86	15.76	21.05%
14 - Prospect	IND	118.23	51.98	170.21	203.73	33.52	16.45%
15 - West 34th St	IND	258.26	97.96	356.22	317.36	-38.86	-12.24%
16 - Beech Grove	IND	218.81	112.53	331.34	288.95	-42.39	-14.67%
18 - Broad Ripple	IND	99.11	46.90	146.01	138.09	-7.91	-5.73%
19 - Castleton	IND	447.80	111.19	558.99	561.18	2.19	0.39%
21 - East 21st St	IND	304.16	105.45	409.61	392.68	-16.93	-4.31%
24 - Mars Hill	IND	222.18	81.92	304.10	304.41	0.31	0.10%
25 - West 16th St	IND	238.08	25.64	263.72	266.09	2.37	0.89%
26 - Keystone	IND	339.06	121.99	461.05	463.64	2.59	0.56%
28 - St. Vincent	IND	205.43	72.71	278.14	252.95	-25.19	-9.96%
30 - 30th Street Crosstown	IND	158.39	30.27	188.66	192.05	3.39	1.76%
31 - U S 31	IND	206.80	132.97	339.77	293.41	-46.36	-15.80%
34 - ML King/Michigan Rd	IND	521.64	121.60	643.24	674.95	31.71	4.70%
37 - Park 100	IND	711.98	182.89	894.87	908.86	13.99	1.54%
38 - West 38th St	IND	297.72	99.41	397.13	458.18	61.05	13.33%
39 - East 38th St	IND	1537.65	261.10	1798.76	1925.73	126.97	6.59%
55 - English	IND	75.65	31.97	107.62	101.73	-5.90	-5.80%
86 - 86th St Crosstown	IND	163.08	43.40	206.48	215.05	8.57	3.98%
87 - Eastside Circulator	IND	278.12	97.82	375.94	313.00	-62.94	-20.11%
90 - Red Line	IND	2456.17	394.70	2850.87	2925.77	74.90	2.56%
901 - Route 90 - Nora	IND	18.14	34.20	52.34	33.43	-18.91	-56.58%
902 - Route 90 - Greenwood Extension	IND	110.95	91.71	202.66	184.36	-18.29	-9.92%
Total		15032.22	3701.57	18733.79	18733.79	0.00	0.00%

Table 4-9: Linked Decomposition Analysis





## APPENDIX A INDYGO TRAINING

### INDYGO OD SURVEY TRAINING SLIDES

# WELCOME

## IndyGo On-Board Transit Survey

*OD Survey Training*

*IndyGo*<sup>SM</sup>



## Introductions

- ▶ ETC Staff

2

## Agenda

- ▶ Overview of the project
- ▶ What you will be doing
- ▶ Expectations for conduct
- ▶ How to use the equipment
- ▶ How to conduct the survey
- ▶ Practical exercise for conducting the survey
- ▶ Adjourn

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## Overview of the Survey

The overall purpose of the survey is to collect information on the travel patterns of bus and BRT passengers to inform transportation planning and forecasting, leading to a better transit system.

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## Overview of the Survey

Most importantly, the data you will be collecting is important and will benefit the Indianapolis region for years to come.

For each selected passenger you need to attempt the interview. It is very important to get that individuals information so that they and others are represented



## Interviewer Position

As an interviewer, your job will consist of riding on board IndyGo vehicles/buses and conducting in-person interviews with passengers.

You will approach passengers using a random selection method (to be described later in training), politely explain who you are and what IndyGo is doing, ask for participation, and conduct the survey using a personal tablet loaded with the survey.

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## Expectations for Conduct: General

- ▶ **Bus Operators and Transit employees are ALWAYS right!!!!**
- ▶ Be on-time
- ▶ Business Casual Attire – Jeans are okay but make sure jeans are appropriate (no tears, excessively baggy). No saggy pants.
- ▶ Be polite and courteous to everyone (Employees/Passengers).
- ▶ Good hygiene is important.
- ▶ Do not bring headphones to listen to music.
- ▶ Do not use the internet on the tablets for personal use.

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## Expectations for Conduct: Continued

- ▶ Cell phone calls from the bus should only be to supervisors or other survey staff and for work purposes only. Personal cell phone calls should be made on break and should not involve foul language if on any of the transit systems property including bus stop shelters.
- ▶ No asking for phone numbers on the bus.
- ▶ No disrespectful behavior of any kind will be tolerated.
- ▶ No cheating...you will get caught

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## Conduct on Trains & Buses

- ▶ Do **NOT** hold up the line when people are getting on or off the bus or train
- ▶ The survey is **ALWAYS** voluntary. There is never a good reason to argue with anyone who doesn't want to participate in the survey.
- ▶ No eating / drinking / chewing tobacco / smoking / E cigarettes / vaping on the bus. No tobacco products while in your vest/near transit facilities including shelters, because that is against the law.
- ▶ **Some one is always watching you**

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## Administrative Issues

- ▶ Bus Operator / Customer Interaction
  - No arguments with bus operators / riders (**remove yourself from the situation**)
  - Even though you do not work for the IndyGo or any of the IMPO which is sponsoring this project, your behavior reflects on these agencies.
  - “Thank you very much for your suggestions / ideas, I will pass them along to my supervisor.

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## Safety

Your personal safety comes first.

- Always cross transit center streets at appropriate crossing
- Always look both ways when crossing streets
- Always wear your vest (identifies you as an interviewer to security)
- Always have your hand on the handrail if you are standing/walking on a moving vehicle



## Conduct Statement

### **QUESTIONS ABOUT CONDUCT or SAFETY?**

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## Data We are Collecting

The main elements we will be collecting during the interview is the passenger's one-way trip. A **one-way** trip is shown in the example below and differs from a **round trip**. A one-way trip is getting from point A to point B such as traveling from work to home, home to work, school to shopping, etc.



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## Data We are Collecting

The one-way trip information collected includes:

- ▶ Origin (where the passenger is coming from, both the type of place and location)
- ▶ Destination (where the passenger is going to, both type of place and location)
- ▶ All routes the passenger has and will take to make the current trip they are on (routes/lines prior to the vehicle the survey is being conducted on and the routes/lines that will be used after the passenger exits the vehicle that they are surveyed on)

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## Data We are Collecting

- ▶ Boarding and alighting locations for all routes used for the one-way trip (where the respondent got on the train/bus and is getting off the train/bus for all routes used)
- ▶ How passengers get to their first transit stop from their origin and how they will get to their destination from their last transit stop (if transfers are made, these routes will be the bus/train that we are referring to).

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## Data We are Collecting

We will also collect the passenger's home address. If a passenger is uncomfortable providing their precise home address, ask if they can provide the nearest cross streets or intersection.

Other data we will collect includes:

- ▶ Additional personal and household demographic data
- ▶ The time that the passenger boarded the bus that they are being surveyed on
- ▶ If the passenger will be making their return trip using the same exact routes (opposite direction)

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## Interview Length

The interview should take no longer than 7 minutes. Depending on number of transfers used and other items, it may take a minute or two more. Once familiarized with the survey and program, you may be able to complete a survey in 4-5 minutes. Our expectations for interviewer productivity are no less than 5 completed surveys per hour that are accurate.

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## How to Approach Passengers

- ▶ Approach passengers with a smile and introduce yourself as a interviewer for IndyGo.
- ▶ Make sure to approach the passenger with enthusiasm and do not be afraid when asking questions relating to demographics.
- ▶ Be polite even if the passenger declines the interview.
- ▶ Always thank the passenger at the end of the survey or if the passenger refuses.

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## Passengers with Disabilities

### Visually Impaired Passengers

- ▶ Conduct the survey as usual but ensure the passenger thoroughly understands each question since we can not show them the tablet screen.

### Hearing Impaired Passengers

- ▶ Conduct the survey showing each question on the tablet and let the respondent point to each answer. If the rider isn't comfortable with the interview a paper survey can be offered.

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## Turning Refusals

If a passenger refuses to take the survey, quickly state the importance of the survey and how their individual input will contribute to transportation improvement. It is very important to capture that individual's trip and demographic information so that they may be counted in regional planning.

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## Capturing Accurate Locational Data

It is of utmost importance that the correct address or cross streets are input into the survey. Address information must include:

- ▶ Complete address with correct city (you must verify city or zip code)
- ▶ If a passenger only gives an intersection (cross streets), we must have **two cross streets**. If the passenger only provides one cross street, you must ask for another intersecting street and then verify the city.
- ▶ If the passenger provides a place name, then you must verify the exact location of that place (streets and city).

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## How to Conduct Survey

### ▶ Selecting Participants

- Everyone who boards the bus is eligible participate.
- The tablet will select the rider to be interviewed.
- DO NOT skip children or persons with disabilities.
- If you encounter a child who is accompanied by an adult, ask the parent or adult with him/her for permission or have the parent answer on behalf of the child.
- Always introduce the interview in English!
- VERY IMPORTANT – the selection process must ALWAYS BE RANDOM.

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## How to Conduct Survey

### ▶ Selecting Participants (continued)

- **Selecting boarding riders** – Select the number of riders boarding, up to the first 6, and attempt to interview the rider selected by the random generator. If that rider refuses, then attempt to interview the rider boarding PRIOR to this rider.
- **Selecting riders already on vehicle** – Use the random generator twice. First, break up the vehicle into six portions to selected the zone with first generator. Second, within the selected zone organize the riders in a clockwise fashion and use the generator a second time to determine who to survey. If the rider refuses, go to the prior rider within the zone.

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## How to Conduct Survey

### ▶ Getting People to Do the Survey

- “Hi, I’m Brad, you were randomly selected to participate in a short interview to improve service on route XX.”
- “Please help us by answering a few questions?”

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## How to Conduct Survey

### ▶ Four Response Options:

- YES – you will ask if they have at least five minutes to determine whether you will administer
  - Full Survey
  - Full Survey until passenger has to exit
- NO – refusal, follow question
- NO – language barrier - paper version, text version, call back options

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## How to Administer in a Foreign Language

- ▶ Determine the language being used by the rider using the languages in the tablet.
- ▶ First option – Attempt to hand the rider a questionnaire in their language. Once the rider has completed the paper questionnaire review to make sure all required locations are provided and all categorical questions are answered.
- ▶ Second – Attempt to text a link to the self-administered questionnaire in their language.
- ▶ Third – Attempt to collect their contact information for a call.
  - A text will be immediately sent to rider
  - A second text will occur just before call
  - Calls will be attempted to reach the respondent.

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## Break

We will now be taking a short break. Please return to the meeting room in approximately 10 minutes.



## Survey Assignments

For all bus routes, we will also be conducting some survey assignments by utilizing “Blocks.”

A block is a series of trips made by a single bus and may includes multiple routes.

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## Survey Assignments

The Block will always be represented on the front of the bus but always double check with the bus operator. On occasions you will have to get off your vehicle and wait to catch another block so we can get you back to a starting location or back on track to get back to the starting location.

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## How to Conduct Survey

- ▶ **Let's Walk Thru the Survey**

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## How to Conduct Survey

- ▶ **Questions**
- ▶ **Breakout in Small Groups**

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## INDYGO ON-TO-OFF COUNTS TRAINING SLIDES

# WELCOME

**IMPO / IndyGo Transit Survey**  
*On-to-Off Counts Training*

*IndyGo*<sup>SM</sup>



## Introductions

- ▶ Brad Carlson (ETC)
- ▶ Ethan Dillion (ETC)

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## Agenda

- ▶ Overview of the project
- ▶ What you will be doing
- ▶ Administrative issues
- ▶ Roles on the bus
- ▶ How to administer the counts
- ▶ Schedule
- ▶ Questions

3



## Overview of the Counts

The Indianapolis Metropolitan Planning Organization (IMPO) is conducting an on-board survey to improve regional travel.

Data gathered will be used to improve the quality of regional transportation in the Indianapolis area and will be used for future transportation planning.

4

## What You Will Be Doing

- ▶ On-to-Off Counts
- ▶ Collecting information from IndyGo bus riders using a tablet, scanner, and survey cards.
- ▶ The data you gather will help us develop the expansion plan for the OD survey by understanding passenger flows through the system.

5



## Expectations for Conduct: General

- ▶ Be on-time
- ▶ Bus Operators (IndyGo) employees are ALWAYS right.
- ▶ Business Casual Attire – Jeans are okay but make sure jeans are appropriate (no tears, excessively baggy, etc.).
- ▶ Be Polite and Courteous to EVERYONE (Employees/Passengers).
- ▶ Good hygiene is important.
- ▶ No headphones on the bus/rail. If you want to listen to headphones, keep them hidden and use them only on break.
- ▶ Phone calls from the bus should be to supervisors or other survey staff for work purposes only. Personal phone calls should be made on break and should not involve cussing if on IndyGo property including bus stop shelters.
- ▶ Do not use the internet on the tablets for personal use.
- ▶ No asking for phone numbers on the bus.
- ▶ No disrespectful behavior of any kind will be tolerated.

6

## Administrative Issues

- ▶ **Bus Operator / Customer Interaction**
  - No arguments with bus operators / riders (remove yourself from the situation)
  - “I don’t work for IndyGo, we are just collecting this data”
  - “Thank you very much for your suggestions / ideas, please call the customer service line to give your feedback.”
- ▶ **Contact Information: 913-343-1294**
  - No VM, texts encouraged
  - Identify yourself and your issues quickly
- ▶ **DO NOT BRING VALUABLES THAT DON’T FIT IN YOUR POCKET OR CARRYABLE BAG**

7



## Roles on the Bus

- ▶ Front Door – as riders enter scan and distribute survey cards (ENTER SIDE)
- ▶ Back Door – as riders exit collect and scan survey cards (EXIT SIDE)
- ▶ Interaction – if riders exit the front door the front person collects the cards to give to the back door staff

8

## Language Barriers

- ▶ Cards are printed in English on the front of the card and Spanish on the back.
- ▶ You will be provided a script with additional languages for distributing cards to non-English speaking riders.

9



## How to Administer the Survey

- ▶ Select the On-to-Off Icon
- ▶ Position yourself based on your role, front or back doors of the bus
- ▶ Front door – Distribute
- ▶ Back door – “Thank you very much”

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## Assignments

Block	Route	Direction	Start Time	Start Loc	End Time	End Loc	Start DCT
3904	39	Outbound	05:53 AM	Transit Center	06:41 AM	via 38th	C
3904	39	Inbound	06:58 AM	via 42nd	07:58 AM	Transit Center	
3904	39	Outbound	08:08 AM	Transit Center	09:03 AM	via 42nd	C
3904	39	Inbound	09:18 AM	via 42nd	10:13 AM	Transit Center	
3904	39	Outbound	10:23 AM	Transit Center	11:19 AM	via 38th	C
3904	39	Inbound	11:30 AM	via 42nd	12:28 PM	Transit Center	
				lunch			
3902	39	Outbound	02:08 PM	Transit Center	03:07 PM	via 42nd	C
3902	39	Inbound	03:19 PM	via 42nd	04:13 PM	Transit Center	
3902	39	Outbound	04:23 PM	Transit Center	05:24 PM	via 38th	C
3902	39	Inbound	05:34 PM	via 42nd	06:28 PM	Transit Center	
3902	39	Outbound	06:38 PM	Transit Center	07:32 PM	via 42nd	C
3902	39	Inbound	07:48 PM	via 42nd	08:40 PM	Transit Center	

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# Stop Selection

