

# 2008 Tri-Rail On-board Survey

## Summary of Raw Data

Presented to

Southeast Florida FSUTMS Users Group Meeting

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# Tri-Rail System

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- 72 – mile commuter rail system
- 18 stations across 3 counties
- 1:45 min travel time
- 50 trains/day
- Daily ridership
  - 8,000 (2000)
  - 11,000 (March 2007)



# Purpose of the Survey

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- System Changes since March 2007
  - ▣ Double tracking & new schedule
  - ▣ New riders attracted to the system
- Development & Validation of Regional Model
  - ▣ South Florida Each Coast Corridor Transit Analysis Study (SFECCTA)
  - ▣ FTA requires current & system-wide transit rider data be collected for model testing if model forecasts will be used for New Starts applications

# Survey Instrument - English

**PLEASE HELP US IMPROVE YOUR TRI-RAIL SERVICE !**  
**Por favor ver al reverso para español • Souple mande pouyon fòm an Kreyòl**  
Tri-Rail is conducting a survey to help determine future service and station improvements. You can help by filling out this survey while you ride today. Please print clearly. **Return your completed Survey to a surveyor before leaving the train.** If you make another trip today on Tri-Rail, you may be given a survey **each** time you ride Tri-Rail. It is important that you **complete a survey each time** that you ride Tri-Rail today. **THANK YOU!**

**PLEASE TELL US ABOUT THE ONE-WAY TRIP YOU ARE MAKING NOW ON TRI-RAIL**  
*PLEASE CHECK ONLY ONE RESPONSE PER QUESTION*

1. BEFORE COMING TO TRI-RAIL, I ORIGINALLY **STARTED TODAY'S ONE-WAY TRIP AT:**  Home  Airport \_\_\_\_\_ Name  
 Work  College  School(K-12)  Other \_\_\_\_\_  
*Specify (for example: "Beach")*

2. WHICH IS LOCATED AT (IMPORTANT!):  
\_\_\_\_\_  
*Nearby Landmark (for example: Name of Building, Mall, Hospital or School)*  
\_\_\_\_\_  
*Nearby Intersection or Address City or Town Zip Code*

3. TO GET TO TRI-RAIL I:  Walked  Biked  
 Took a Taxi  Rode a School Bus  Rode a Metrorail Train  
 Rode a Transit Bus (Route #/Name) \_\_\_\_\_  
 Rode a Tri-Rail Shuttle Bus (Route #/Name) \_\_\_\_\_  
 Drove and parked at the station. Number of people in vehicle including me. (# of people) \_\_\_\_\_  
 Rode with someone that dropped me off at the station. Number of people dropped off including me. (# of people) \_\_\_\_\_  
 Rode with someone that parked his/her vehicle at the station. Number of people in vehicle including me. (# of people) \_\_\_\_\_  
 Other (Please specify) \_\_\_\_\_

4. I GOT ON THIS TRAIN AT: \_\_\_\_\_ Station Name

5. I WILL GET OFF THIS TRAIN AT: \_\_\_\_\_ Station Name

6. WHEN I LEAVE TRI-RAIL I WILL:  Walk  Bike  
 Take a Taxi  Ride a School Bus  Ride a Metrorail Train  
 Ride a Transit Bus (Route #/Name) \_\_\_\_\_  
 Ride a Tri-Rail Shuttle Bus (Route #/Name) \_\_\_\_\_  
 Drive a vehicle I parked at the station. Number of people that will get in the vehicle including me. (# of people) \_\_\_\_\_  
 Ride with someone that is picking me up at the station. Number of people that will be picked up including me. (# of people) \_\_\_\_\_  
 Ride with someone that parked his/her vehicle at the station. Number of people that will get in vehicle including me. (# of people) \_\_\_\_\_  
 Other (Please specify) \_\_\_\_\_

7. AFTER LEAVING TRI-RAIL, I WILL ULTIMATELY **FINISH TODAY'S ONE-WAY TRIP AT:**  Home  Airport \_\_\_\_\_ Name  
 Work  College  School(K-12)  Other \_\_\_\_\_  
*Specify (for example: "Beach")*

8. WHICH IS LOCATED AT (IMPORTANT!):  
\_\_\_\_\_  
*Nearby Landmark (for example: Name of Building, Mall, Hospital or School)*  
\_\_\_\_\_  
*Nearby Intersection or Address City or Town Zip Code*

9. TODAY I WILL MAKE ANOTHER TRI-RAIL TRIP TO GET BACK TO WHERE I STARTED.  
 Yes. What time will you board Tri-Rail again today? \_\_\_\_\_: \_\_\_\_\_ (am/pm)  
 No

10. I HAVE BEEN USING TRI-RAIL TO MAKE THIS TRIP FOR:  
 First Time/Occasional Trip (Skip to question 13)  
 Less than 6 months (Go to question 11)  
 6 months or more but less than 2 years (Skip to question 12)  
 Over 2 years (Skip to Question 12)

11. I BEGAN RIDING TRI-RAIL LESS THAN 6 MONTHS AGO BECAUSE:  
 Gas prices have increased  Tri-Rail trains come more often  
 New School/Job  Other (Please specify) \_\_\_\_\_

12. HOW OFTEN DO YOU RIDE TRI-RAIL:  
On a typical day  1  2  3  4 or more times per day.  
In a typical week  1  2  3  4  5  6  7 days per week  
or  less than one day per week.

13. IN MY GROUP THERE ARE (# of children) \_\_\_\_\_ CHILDREN AND/OR (# of adults) \_\_\_\_\_ ADULTS (ELDERLY OR OTHER) WHO CANNOT FILL OUT THIS SURVEY.



**PLEASE TELL US ABOUT YOURSELF**  
*THIS INFORMATION WILL BE KEPT STRICTLY CONFIDENTIAL*

14. I LIVE IN ZIP CODE:          
*Zip Code*

15. I LIVE/STAY IN SOUTH FLORIDA:  Less than 1 month per year  
 1 to 6 month(s) per year  More than 6 months per year

16. I AM:  MALE  FEMALE

17. MY AGE IS:  Under 16  16-24  25-34  
 35-44  45-54  55-64  65 or Over

18. MY RACE IS BEST DESCRIBED AS: (You can check more than one box.)  
 American Indian  Asian  Black/African American  
 Spanish/Hispanic/Latino  White  
 Other (Please specify) \_\_\_\_\_

19. I AM:  in Middle School  in High School  
 in College  Not in School

20. I GRADUATED:  Middle School  High School/GED  
 College  Not Applicable

21. I HAVE A DRIVER'S LICENSE:  Yes  No

22. MY HOME'S TOTAL ANNUAL INCOME IS:  Under \$25,000  
 \$25,001-35,000  \$35,001-50,000  \$50,001-75,000  
 \$75,001-100,000  Over \$100,000  I do not know.

23. INCLUDING ME, (# of people) \_\_\_\_\_ PEOPLE LIVE IN MY HOME AND OF THOSE (# of people) \_\_\_\_\_ HAVE A DRIVER'S LICENSE.

24. \_\_\_\_\_ VEHICLES ARE OWNED BY PEOPLE IN MY HOME.  
*# of vehicles (Including Vans, SUV's, Motorcycles, Scooters and Pick-Up Trucks)*

25. I COULD HAVE TRAVELED TODAY BY CAR BUT CHOSE TO RIDE TRI-RAIL INSTEAD:  Yes  No

26. I FILLED OUT ANOTHER SURVEY CARD EARLIER TODAY:  Yes  No

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Thank you for your participation!**



# Survey Instrument - Spanish

## ¡POR FAVOR AYÚDENOS A MEJORAR SU SERVICIO DE TRI-RAIL!

**Please turn page over for English • Souple mande pouyon fòm an Kreyòl**  
 Tri-Rail está realizando una encuesta para guiarnos en la planificación de servicios y mejoras a las estaciones. Usted puede ayudar completando esta encuesta mientras viaja. Por favor escriba claro. Use el espacio provisto a la derecha para comentarios adicionales. **Por favor devuelva su tarjeta al encuestador antes de bajarse del tren.** Si usted vuelve a usar el servicio de Tri-Rail hoy, se le entregará otra tarjeta de encuesta. Es importante que **complete cada tarjeta** cada vez que usted use el servicio de Tri-Rail hoy. **¡GRACIAS!**

### DÍGANOS SOBRE EL VIAJE QUE ESTA REALIZANDO EN EL SERVICIO DE TRI-RAIL EN ESTE MOMENTO (EN UNA SOLA VÍA) POR FAVOR, Elija SELECCIONE SOLO UNA CASILLA

1. ANTES DE ABORDAR EL TREN ¿DÓNDE **COMENZÓ** ESTE VIAJE (UNA SOLA VÍA):  Casa  Aeropuerto  Trabajo  Universidad  Escuela(K-12)  Otro

2. LOCALIZADO EN (¡¡IMPORTANTE!):

3. LLEGUÉ A LA ESTACIÓN DE TRI-RAIL:  Caminando solamente  Bicicleta  Taxi  Autobús de escuela  Usando el tren de Metrorail  Usando un autobús de tránsito  Usando el servicio de autobús de Tri-Rail  En un carro que yo dejé en la estación. Número de personas en el vehículo incluyéndome a mí.  En un carro que me dejó en la estación. Número de personas dejadas, incluyéndome a mí.  En un carro con alguien que dejo su carro en la estación. Número de personas en el vehículo incluyéndome a mí.  Otro

4. YO ABORDÉ ESTE TREN EN: ESTACIÓN

5. ME BAJARÉ DEL TREN EN: ESTACIÓN

6. DEJARÉ LA ESTACIÓN DE TRI-RAIL:  Caminando solamente  Bicicleta  Taxi  Autobús de escuela  Usando el tren de Metrorail  Usando un autobús de tránsito  Usando el servicio de autobús de Tri-Rail  En un carro que yo dejé en la estación. Número de personas que viajarán en el vehículo incluyéndome a mí.  En un carro con alguien que me recogerá en la estación. Número de personas que serán recogidas en el vehículo incluyéndome a mí.  En un carro que alguien parqueó en la estación. Número de personas que viajarán en el vehículo incluyéndome a mí.  Otro

7. DESPUÉS DE DEJAR LA ESTACIÓN DEL TREN, **CONCLUIRÉ** MI VIAJE EN (UNA SOLA VÍA):  Casa  Aeropuerto  Trabajo  Universidad  Escuela(K-12)  Otro

8. LOCALIZADO EN (¡¡IMPORTANTE!):

9. USARÉ TRI-RAIL OTRA VEZ PARA VOLVER AL LUGAR DE PARTIDA:  Sí. ¿A qué hora abordará Tri-Rail hoy nuevamente?  No

10. HE ESTADO USANDO EL SERVICIO DE TRI-RAIL PARA HACER ESTE VIAJE POR:  Primera Vez/Viaje Ocasional  Menos de 6 meses  6 meses o más, pero menos de 2 años  Más de 2 años

11. EMPECÉ A USAR EL SERVICIO DE TRI-RAIL HACE MENOS DE 6 MESES:  Porque los precios de la gasolina han subido  Tri-Rail tiene trenes que pasan más seguido  Nueva escuela/trabajo  Otro

12. NORMALMENTE USO TRI-RAIL: En un día normalmente lo uso  1  2  3  4 o más veces por día. En una semana normalmente lo uso  1  2  3  4  5  6  7 días por semana o  menos de un día por semana.

13. CONMIGO VIAJAN (# de niños) NIÑOS Y/O (# de adultos) ADULTOS (ANCIANOS U OTROS) QUE NO PUEDEN LLENAR ESTA ENCUESTA.

## POR FAVOR INFÓRMENOS SOBRE USTED

TODAS LAS RESPUESTAS SE MANTENDRÁN ESTRICTAMENTE CONFIDENCIALES

14. MI CÓDIGO POSTAL ES:

15. VIVO/RESIDO EN EL SUR DE LA FLORIDA:  Menos de un mes al año  1-6 meses al año  Más de 6 meses al año

16. SEXO:  MASCULINO  FEMENINO

17. EDAD:  MENOR DE 16  16-24  25-34  35-44  45-54  55-64  65 o más

18. LA RAZA QUE ME CARACTERIZA ES: (Puede marcar más de una casilla.)  Indio Americano  Asiático  Negro/Afro-Americano  Español/Hispano/Latino  Raza Blanca  Otro

19. YO SOY UN ESTUDIANTE DE:  Middle School  High School  Universidad  Ninguno

20. YO TENGO UN DIPLOMA DE:  Middle School  High School/GED  Universidad  Ninguno

21. TENGO LICENCIA DE CONDUCIR:  Sí  No

22. INGRESO ANUAL EN MI HOGAR:  Menos de \$25,000  \$25,001-35,000  \$35,001-50,000  \$50,001-75,000  \$75,001-100,000  Más de \$100,000  No se.

23. INCLUYÉNDOME A MÍ, VIVE(N) EN MI HOGAR, Y DE ELLOS PERSONA(S) TIENE(N) LICENCIA DE CONDUCIR.

24. TENEMOS VEHÍCULOS PROPIOS EN USO EN MI HOGAR.  Sí  No

25. PODRÍA HABER VIAJADO EN CARRO HOY, PERO PREFERÍ MONTAR TRI-RAIL:  Sí  No

26. HOY LLENÉ OTRA TARJETA DE ENCUESTA ANTERIORMENTE:  Sí  No

Comentarios:

¡Gracias por su participación!



# Survey Implementation

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- Pretest
  - ▣ Instrument, schedule, staffing, safety, etc.
- Training
  - ▣ October 21, 2008
  - ▣ Three sessions for 25 professionals & 150 temps
  - ▣ Train/Car Captains – professionals
  - ▣ Door Counts and Survey Distributions – temps
- Survey
  - ▣ October 22, 2008: 4:00 am – 11:05 pm
  - ▣ Survey forms: 4:00 am – 2:00 pm
  - ▣ Door Counts: 4:00 am – 11:05 pm

# Survey Sample and Response

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- Survey Sample
  - ▣ Half-day on-board survey forms – 30 trains
  - ▣ Full-day door counts – 50 trains
  - ▣ Both directions
- Response Rate
  - ▣ Total boardings – 15,662
  - ▣ Surveys distributed – 8,403 (54%)
  - ▣ Surveys collected – 6,103 (73%)





# Response Rate for Questions

## About Rider's One-way Trip (Question 1 – 9, and Question 13)

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q13
5985	*	5830	5656	5606	5119	5827	*	5515	1570

## About Rider's Recent Travel Behavior (Questions 10 – 12)

Q10	Q11	Q12
5604	3873	4764

## Socio-demographic Characteristics (Questions 14 – 26)

Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26
5548	5180	5518	5577	5633	4936	5149	5545	5153	5075	5223	5522	5322

## About Rider's One-way Trip (Question 1 – 9, and Question 13)

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q13
98%	*	96%	93%	92%	84%	95%	*	90%	26%

## About Rider's Recent Travel Behavior (Questions 10 – 12)

Q10	Q11	Q12
92%	63%	78%

## Socio-demographic Characteristics (Questions 14 – 26)

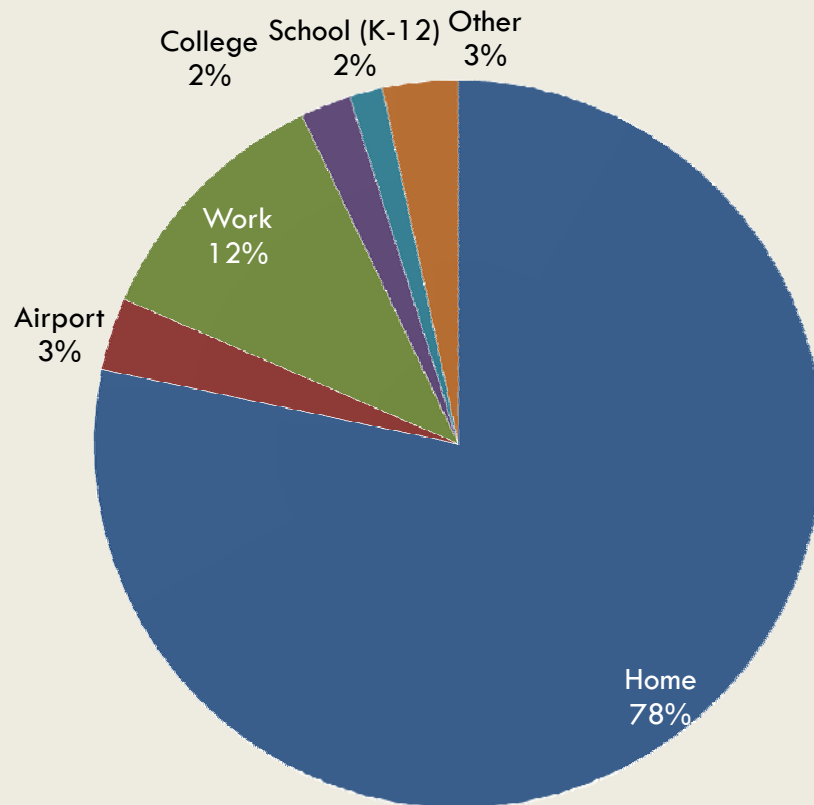
Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26
91%	85%	90%	91%	92%	81%	84%	91%	84%	83%	86%	90%	87%

# Preliminary Analysis Results

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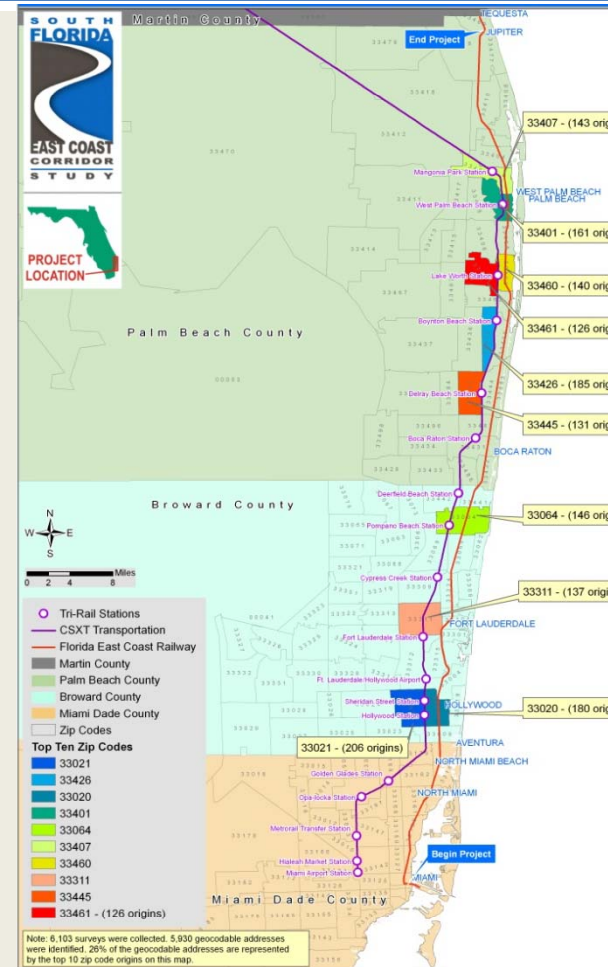
# Trip Origin



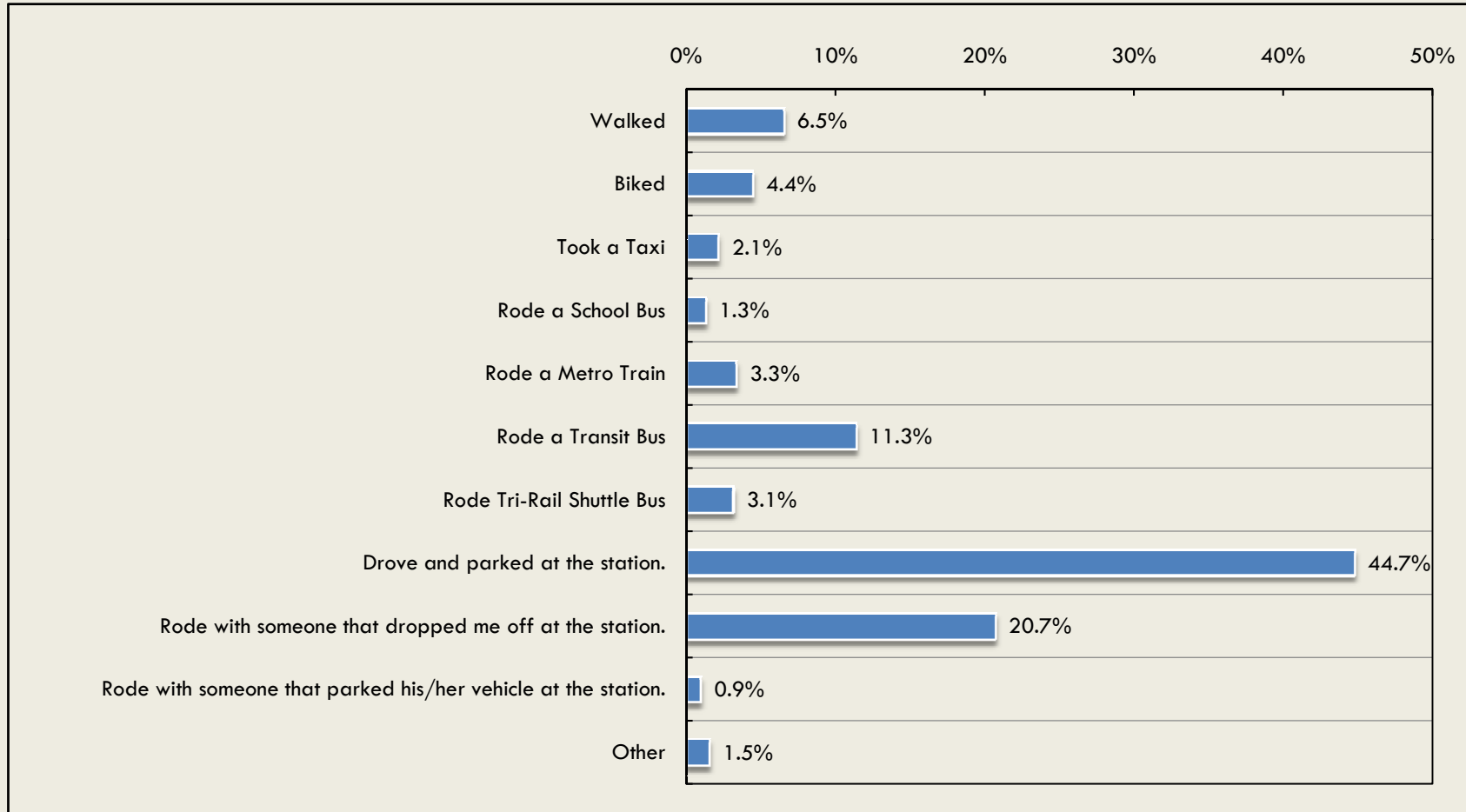
# Top 10 Origin Zip Codes

13

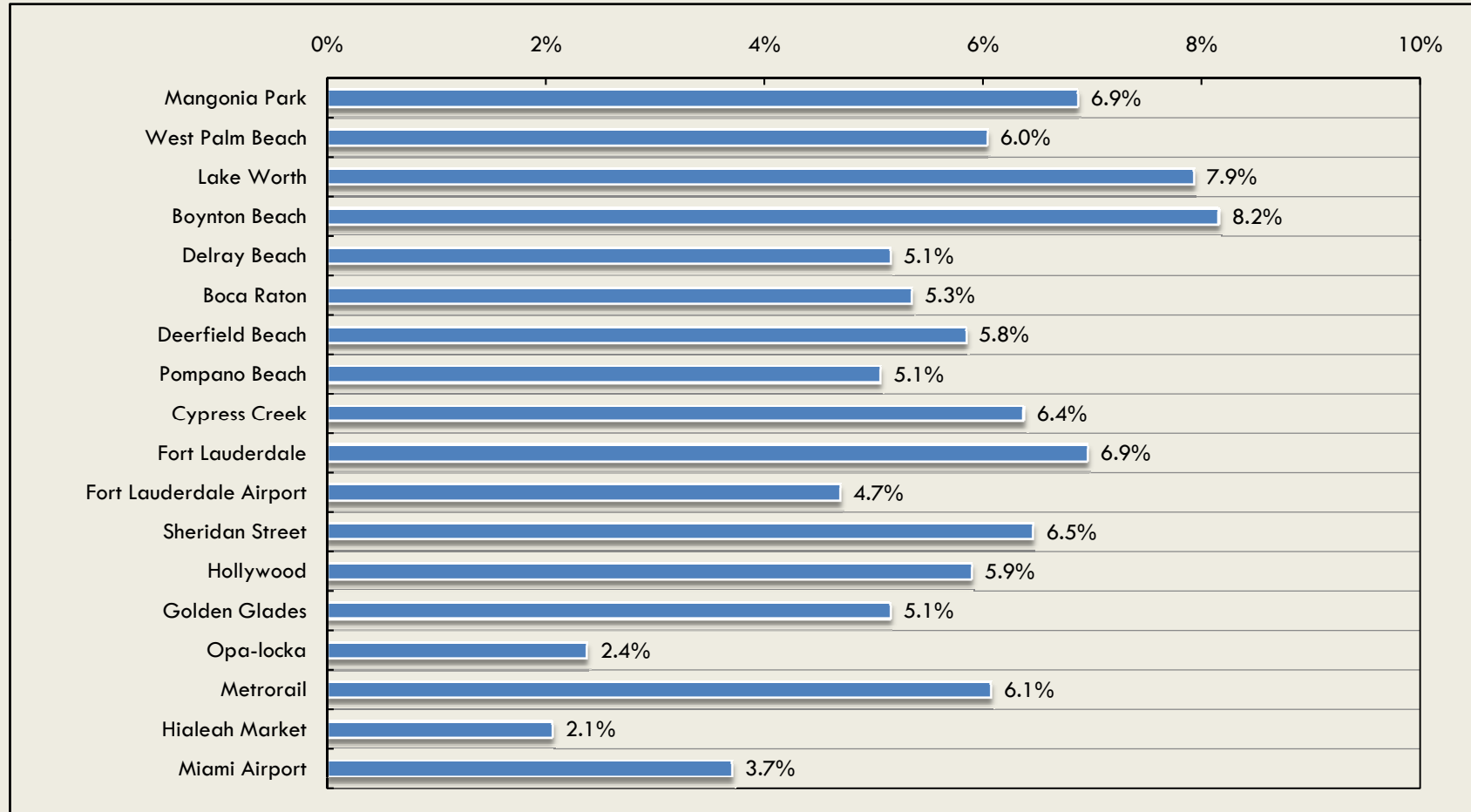
- 5,930 of 6,103 geocodable addresses were identified
- 26% of the addresses are represented by the top 10 origin zip codes.



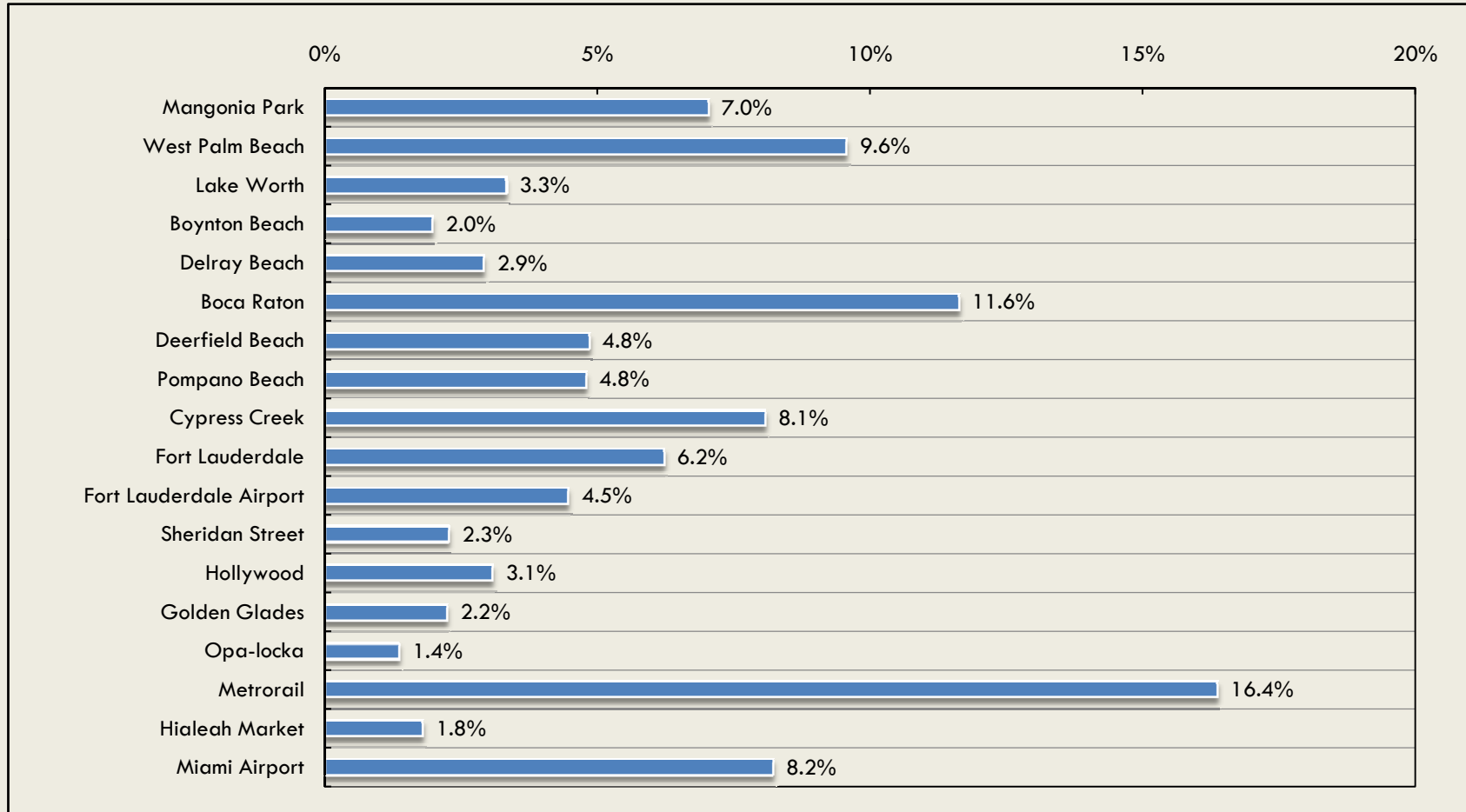
# Access Mode



# Boarding Station



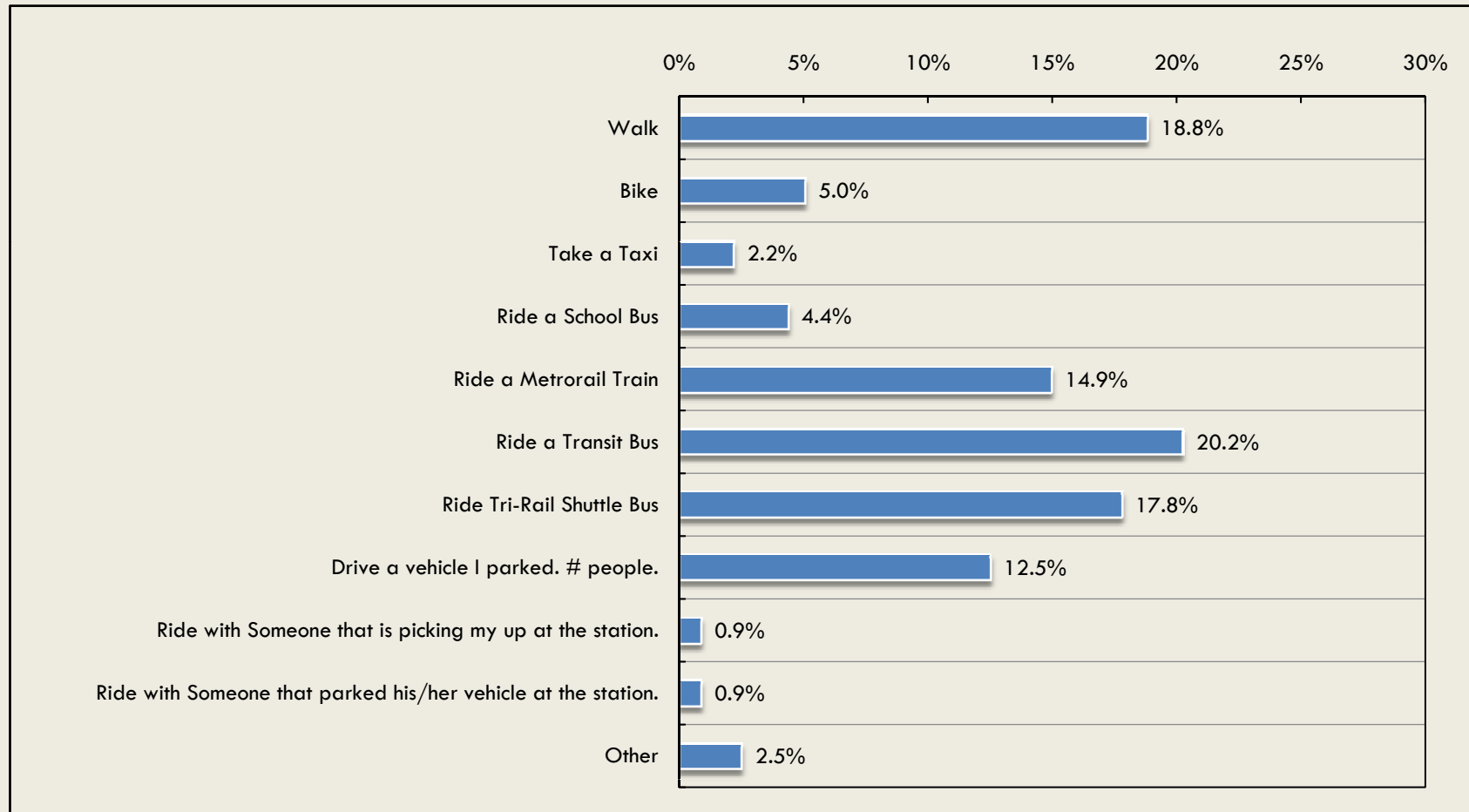
# Alighting Station



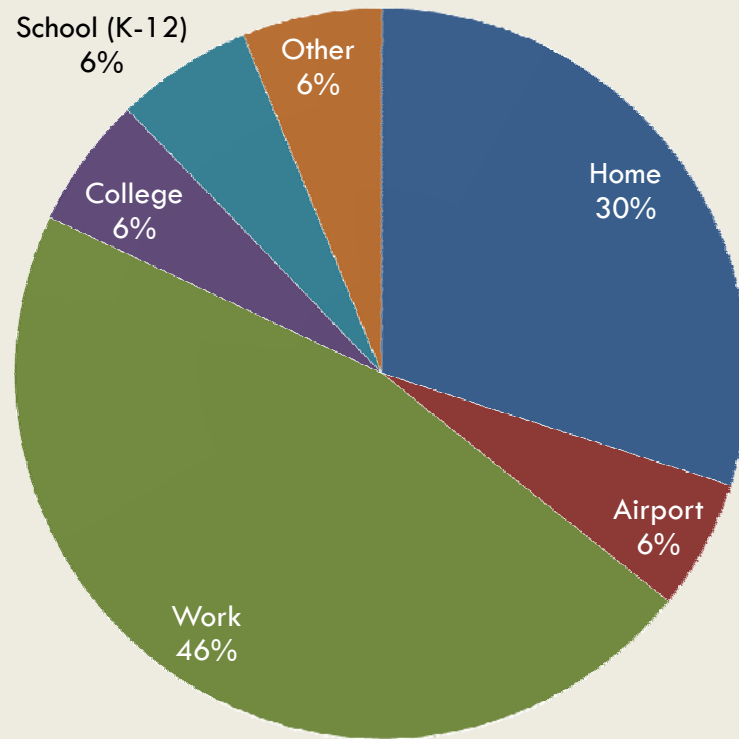


# Egress Mode

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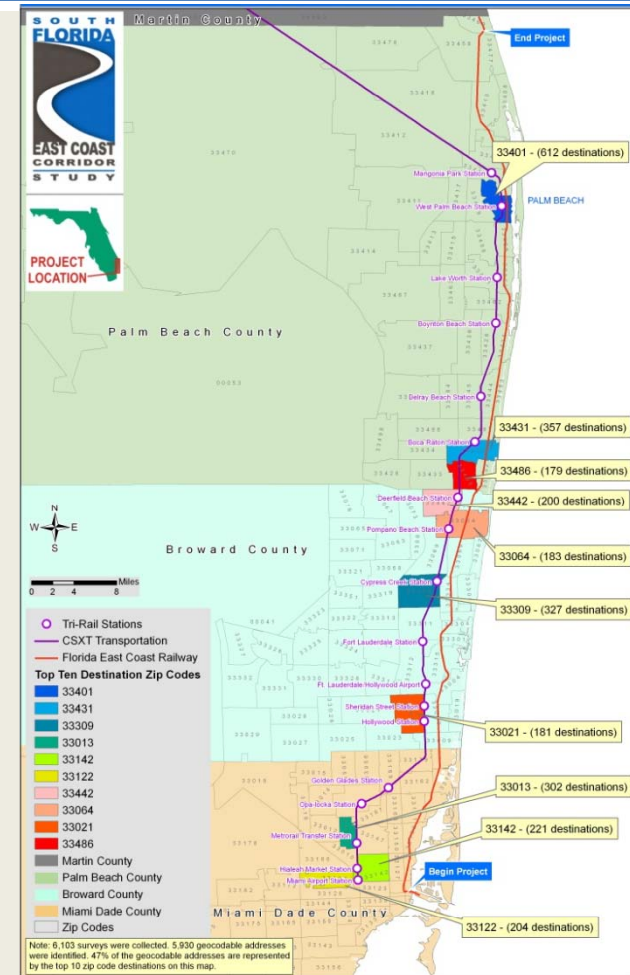


# Trip Destination



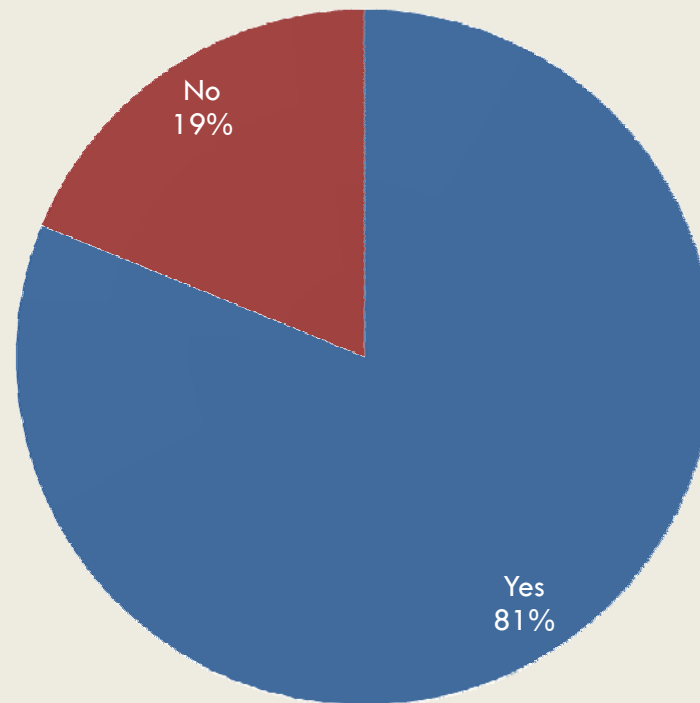
# Top 10 Destination Zip Codes

- ❑ 5,930 of 6,103 geocodable addresses were identified
- ❑ 47% of the addresses are represented by the top 10 destination zip codes.



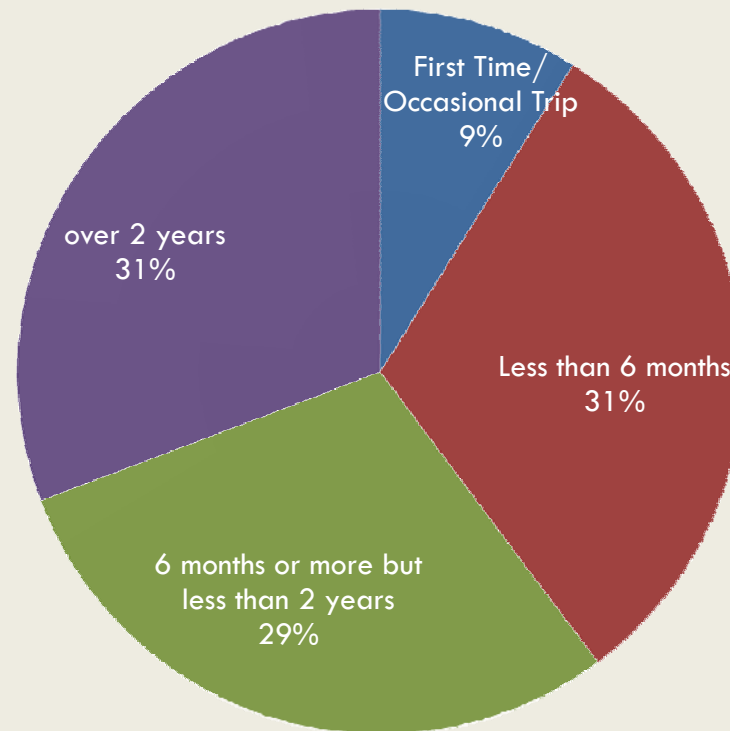
# Return Trip by Tri-Rail

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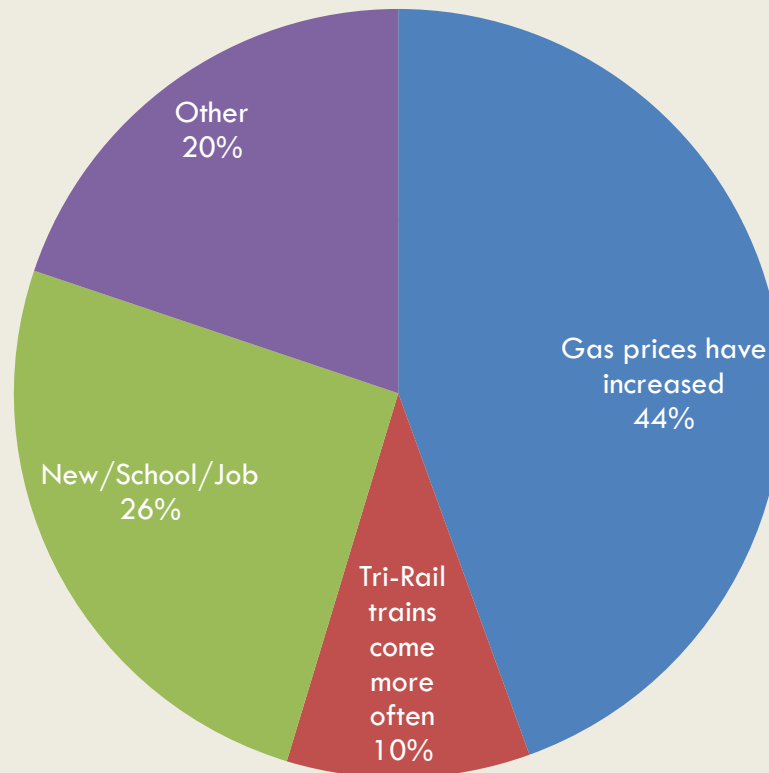
# Duration of Tri-Rail Use

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# Reasons for Using Tri-Rail

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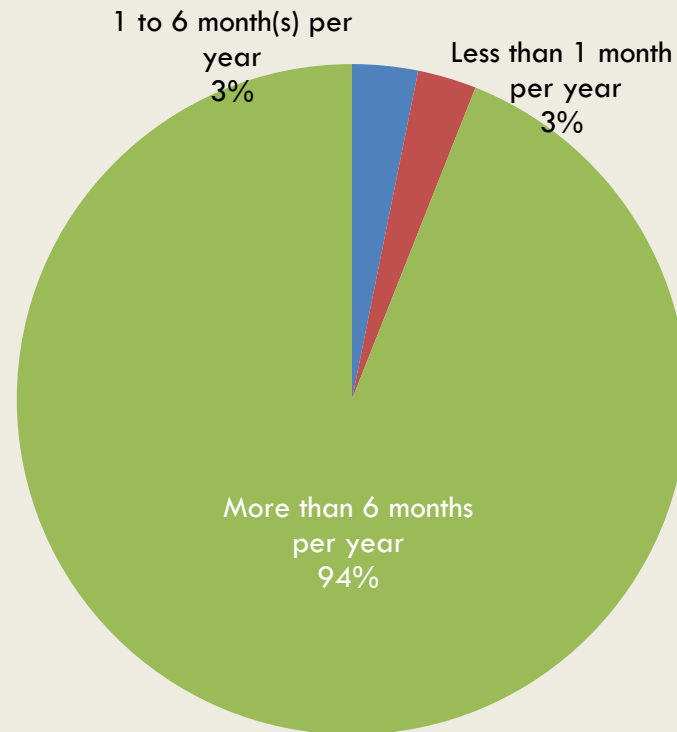
# Tri-Rail Rider Demographics

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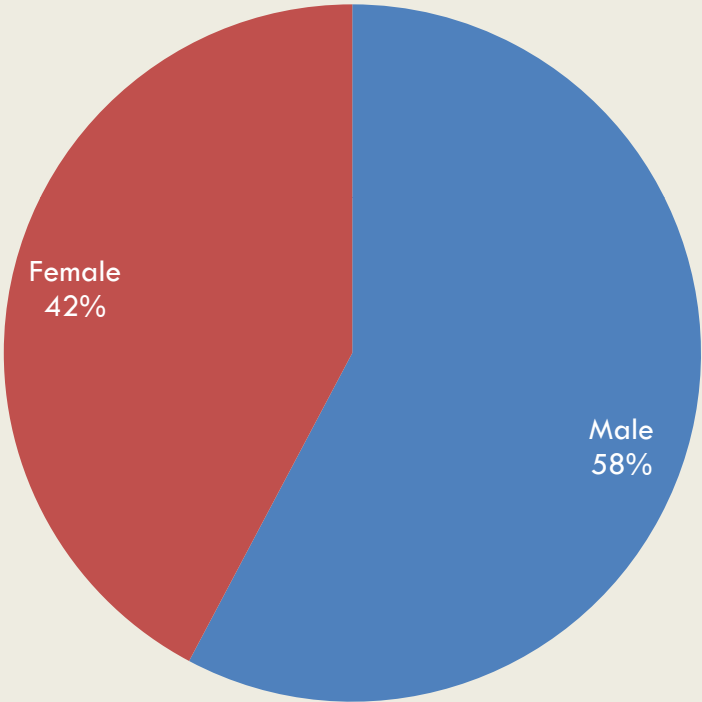
# Residency

24

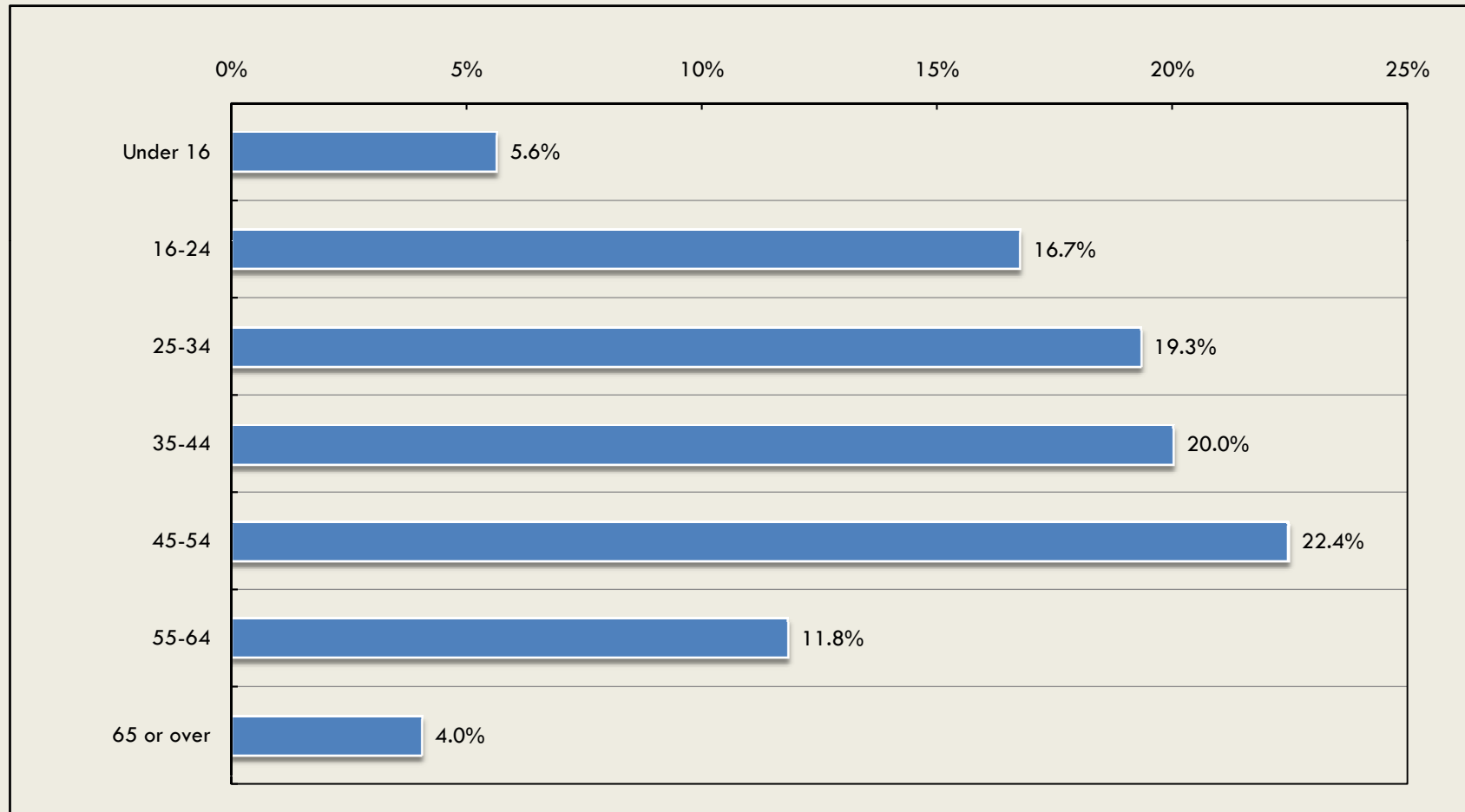




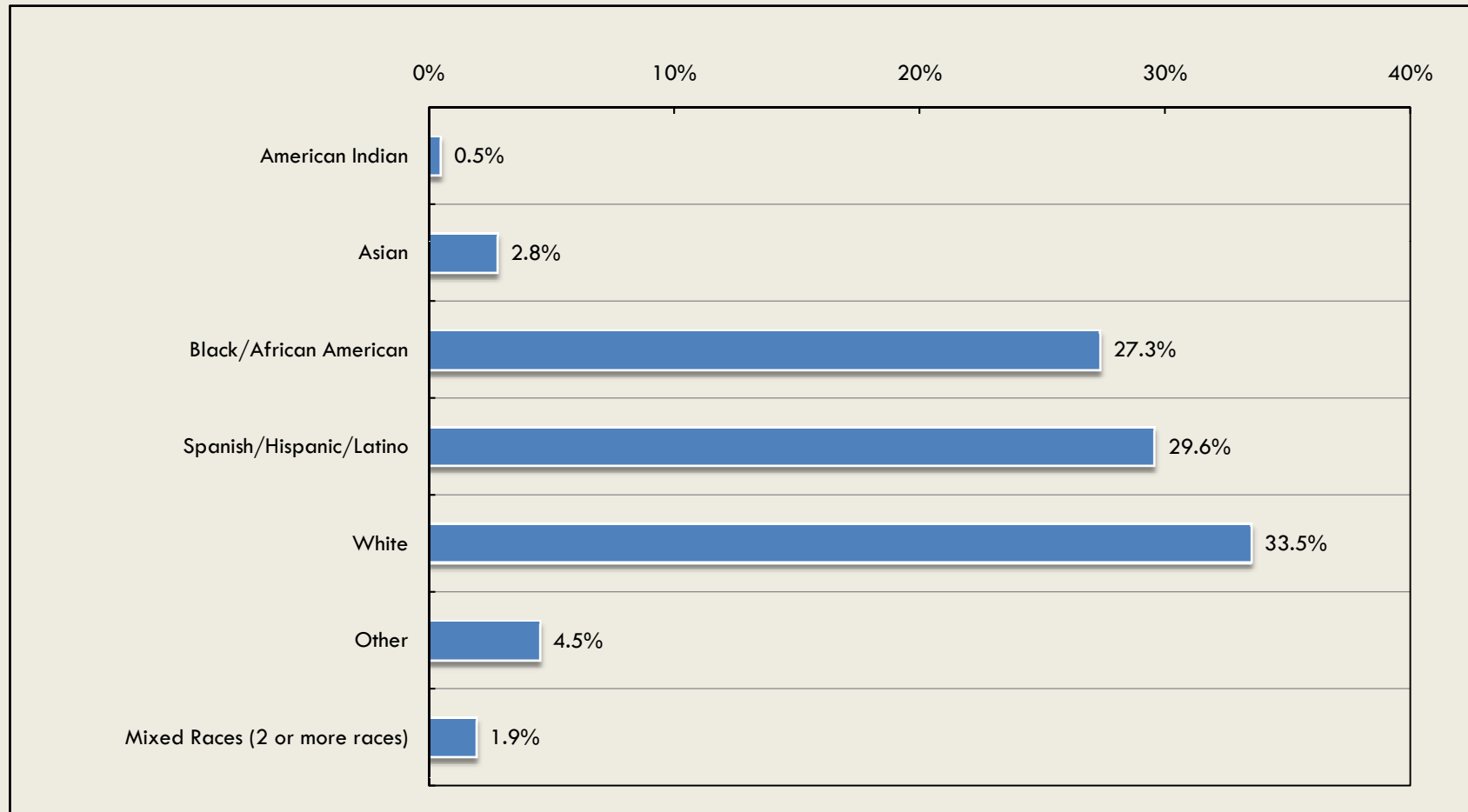
# Gender



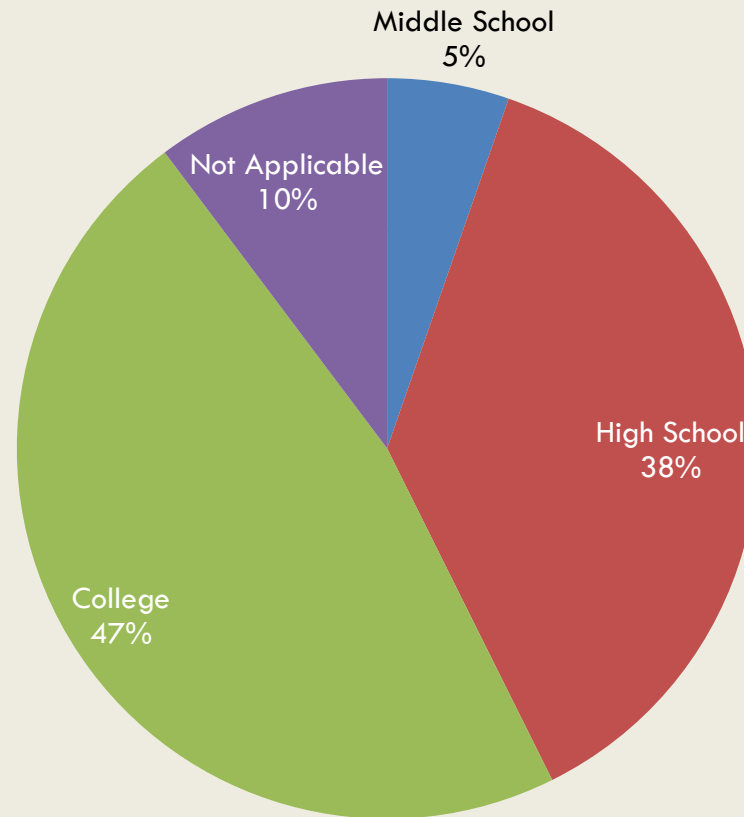
# Age



# Race

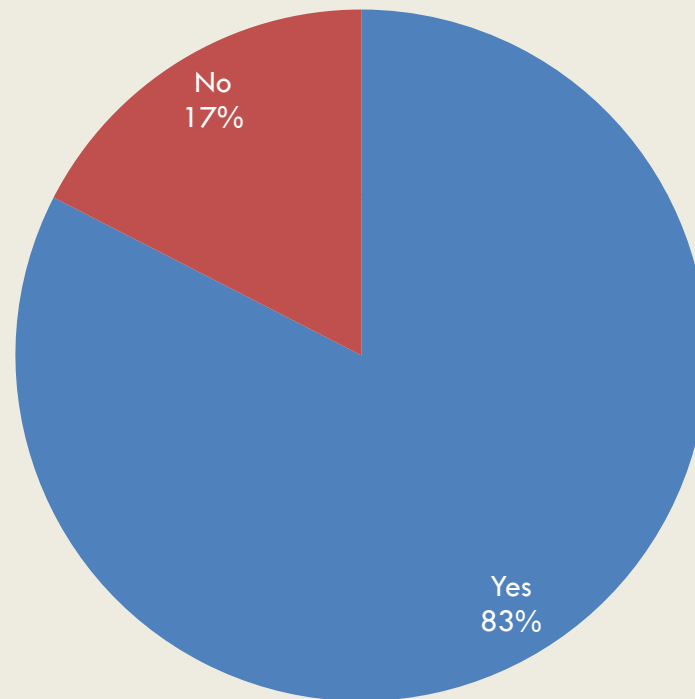


# Education

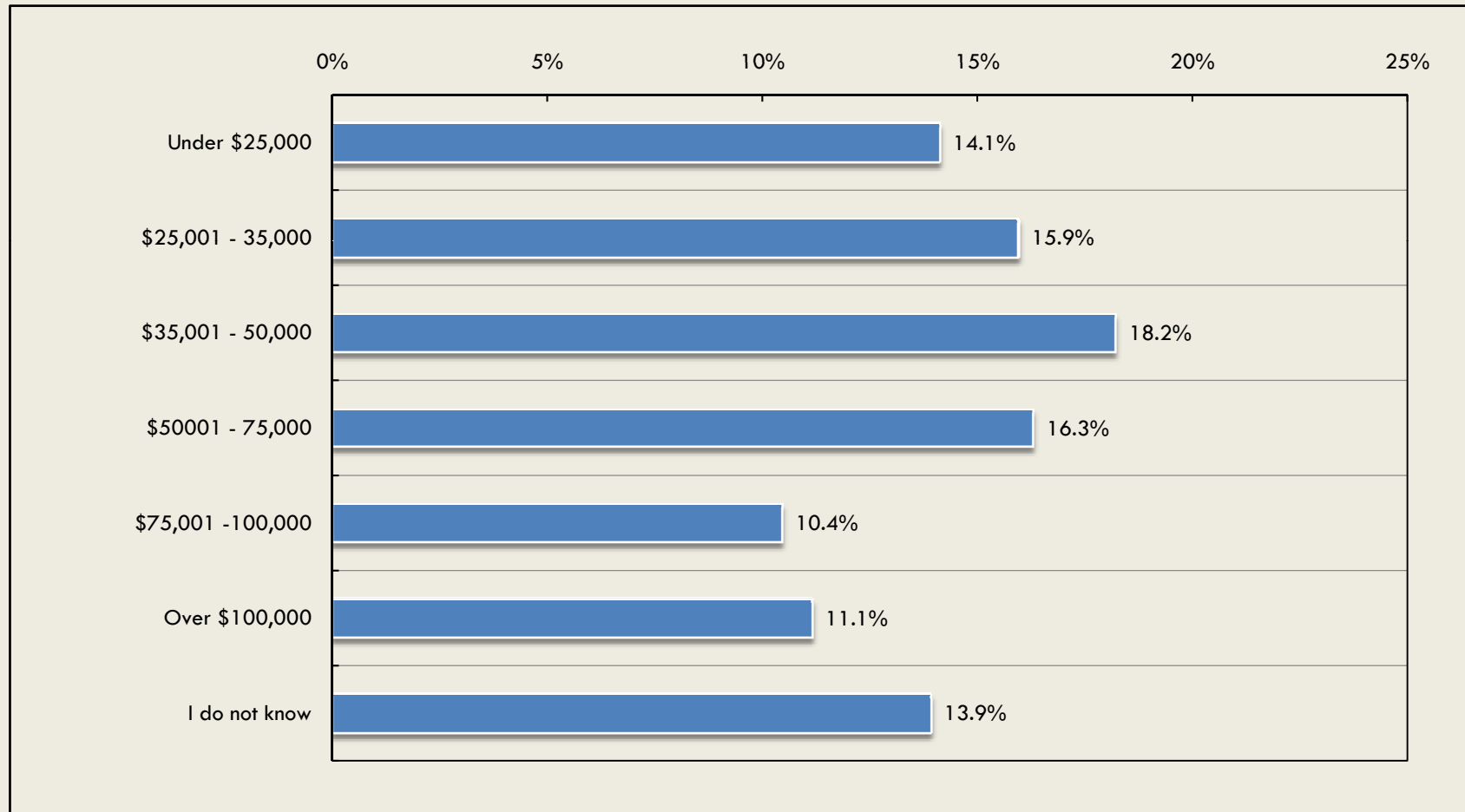


# Driver's License

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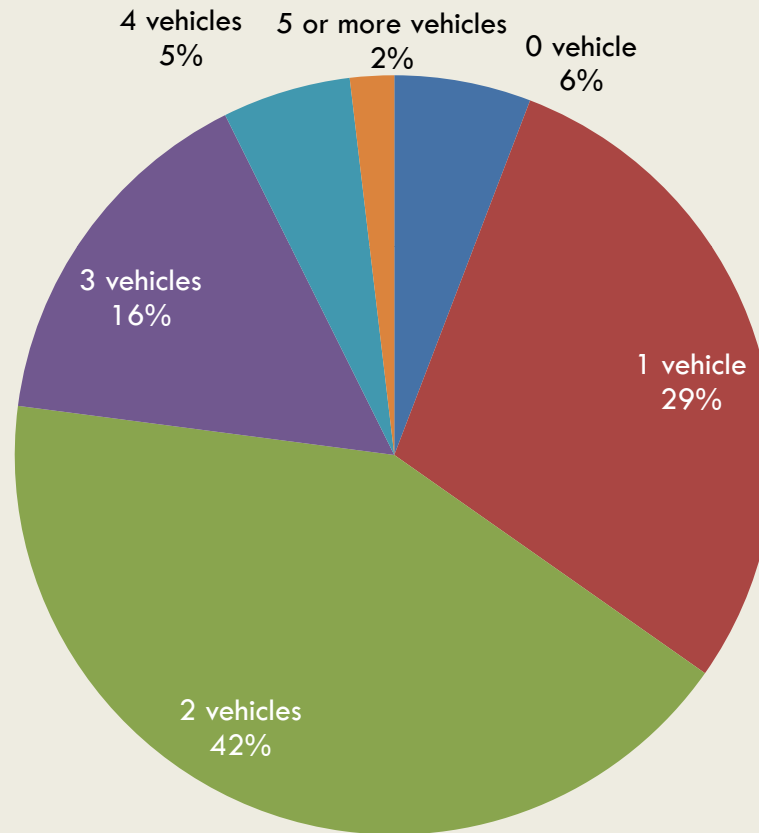


# Income

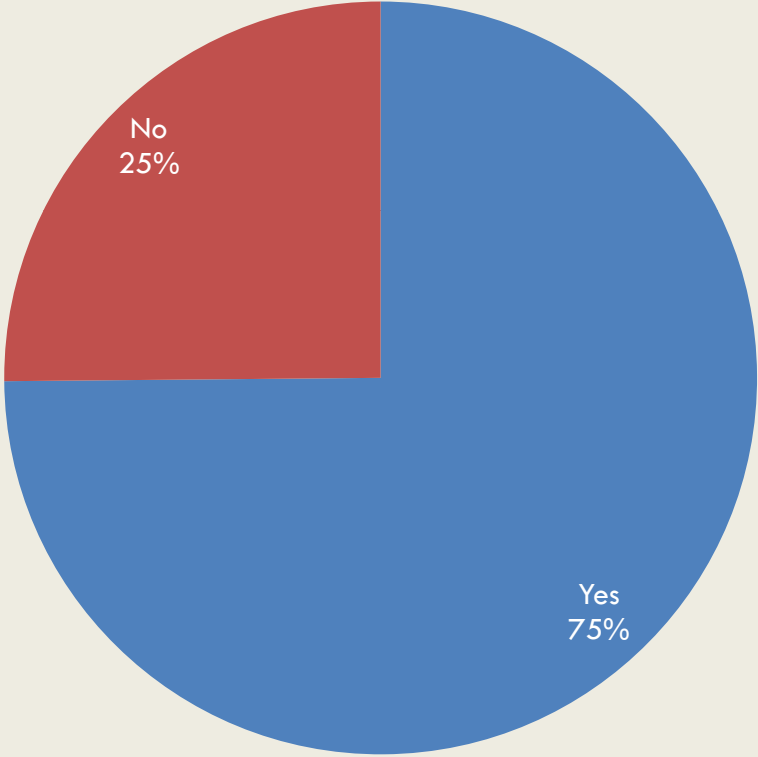


# Auto Ownership

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# Could've traveled by car?





# Next Steps

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- Expand survey as disaggregately as possible
- Verify expansion & survey data by preparing several different cross-tabulations and compare with auxiliary count information
- Prepare survey data for mode choice calibration
- Compare estimated results to survey results across many dimensions to verify model reflects rider patterns
- Re-expand survey or re-calibrate if needed

# Questions?

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