Houston-Galveston (H-GAC) Region Transportation Study

2022-2024 REGIONAL HOUSEHOLD ACTIVITY/TRAVEL SURVEY

SUMMARY REPORT



PREPARED BY:



TABLE OF CONTENTS

| Overview3 |
|--|
| Survey Implementation Plan3 |
| Selecting the Sample4 |
| Designing the Survey7 |
| Recruitment Procedure8 |
| Conducting the Household Activity Travel Survey8 |
| Conducting the Passive GPS Survey11 |
| Verifying and Editing Survey Data13 |
| App Algorithm Criteria14 |
| Lessons Learned |
| |
| Summary of Appendices to This Report16 |
| APPENDIX |
| |
| APPENDIX |
| APPENDIX Appendix A: Household Data17 |
| APPENDIX Appendix A: Household Data |

Overview

The Household/Activity Travel Survey for the H-GAC Region consisted of households in 8 counties:

Harris, Liberty, Chambers, Galveston, Brazoria, Fort Bend, Waller, and Montgomery. The primary objective of the survey was to gather accurate travel and activity data from residents living in the region. The results of the survey will be used to update the H-GAC regional travel demand model. A wide range of data was gathered, which can be used for a variety of modeling applications, including the determination of:



- trip distribution by time of day
- trip length frequency distributions
- modal share of travel
- auto occupancies

The Houston-Galveston
Study Area Includes 8 Counties

Montgomery
County
Liberty
County
Chambers
County
Fort Bend
County
Galveston
County

AMERICAN
TRAVEL
SURVEY

This report describes the survey sampling, design, recruitment, and data collection methods that were used for the H-GAC study area. Appendices at the end of the report include summary response data and survey instruments and materials used in the survey.

Survey Implementation Plan

Project Tasks

ETC Institute performed the following tasks as indicated in startup documentation provided by TxDOT:

- Designed the survey and the mobile app to be used for the 2022-24 H-GAC Region Household
 Travel Survey
- Conducted a pilot test
- Finalized survey instruments, materials, and procedures and provided them to TxDOT
- Coordinated and conducted surveys in the main data collection effort
- Verified, edited, and processed the survey data and provided interim submittals to TxDOT for the duration of the project
- Prepared survey documentation and reports

Kev Personnel

The key personnel that conducted the 2022-2024 H-GAC Regional Household Travel Survey were:

ETC:

- Chris Tatham CEO
- Nick Jones Vice President of Data Management

- Jason Jones Senior Research Analyst
- Christina Chafin Director of Household Research
- Terry Brooks Lead Supervisor of Data Management
- Mayank Gupta Supervisor of Data Management
- Mike Rich Call Center Supervisor

Texas A&M Transportation Institute (TTI):

- Ed Hard
- Mark Ojah

Project Schedule

ETC Institute was awarded the contract for the H-GAC Household Survey in the Summer of 2022 and began the pilot program in September of 2022. The full survey began in December 2022 and concluded in March 2024.

Selecting the Sample

At the beginning of the project, ETC Institute and representatives from Cambridge Systematics (CS), TxDOT and TTI met to review the data requirements for the region's travel demand model. Since the primary purpose of the regional household activity travel survey is to support regional travel demand forecasting models, this meeting served as a forum to ensure the research team had a clear understanding of the data requirements for the region's travel demand model.

CS was added to this project because of their expertise with the activity-based H-GAC travel demand model. In most metropolitan areas in Texas, TTI leads in managing the travel demand model. However, this is not the case for the H-GAC study area, which is why CS was included. The sample was primarily stratified by three variables: household size, number of persons employed in the households, and annual household income.

There were five categories for household size (1, 2, 3, 4 and 5+ persons) and five categories of household income (\$0-\$24,999, \$25,000-\$44,999, \$45,000-\$74,999, \$75,000-\$124,999, and \$125,000+). The total target number of complete and usable household surveys from the stratified sample was 8,104. Individual cell targets were determined based on the proportion of households in the study area that fell into each household size/income category. Table 1 shows the number of target household surveys to be completed for the project. In addition to stratified goals, there were also geographic goals based on the project counties. Table 2 shows the goals for each county. The county level goals were initially based on the household population percentage of that county in comparison to the entire set of project counties. To ensure a minimum goal number of 200 surveys from each county would be collected, some of the initial county goals were increased. Lastly, there were goals to survey groups of particular interest to the project team.

These goals included the following groups:

Households with at least 1 transit user

- Households with at least 1 shared-ride user (Uber/Lyft)
- Households that speak English less than Very Well
- Households with no vehicles
- Households with at least 1 University student
- Households with at least 1 bicycle user on the travel date

The goals for these special groups are shown in Table 3.

Table 1: Target Number of Surveys to be Completed by Household Income & Household Size

| Income Ranges | Si | sehold ize 1 Workers | Siz | sehold ze 2 /orkers | Siz | ehold *Household e 3 Size 4 orkers No. Workers | | *Household Size 5+ No. Workers | | TOTAL | |
|------------------------|-----|----------------------------|-----|---------------------------|-----|--|----|--------------------------------------|----|-------|-------|
| | 0 | 1 | 0 | 1+ | 0 | 1+ | 0 | 1+ | 0 | 1+ | |
| \$0- \$24,999 | 350 | 230 | 165 | 164 | 51 | 119 | | 200 | | 200 | 1,511 |
| \$25,000- \$44,999 | 138 | 248 | 118 | 203 | | 181 | | 258 | | 258 | 1,452 |
| \$45,000- \$74,999 | 90 | 295 | 106 | 305 | 64 | 256 | 79 | 259 | 79 | 259 | 1,618 |
| \$75,000- \$124,999 | 64 | 219 | 77 | 385 | 04 | 340 | | 334 | | 334 | 1,769 |
| \$125,000+ | 04 | 108 | 68 | 485 | | 337 | | 339 | | 339 | 1,754 |
| Total | 642 | 1,100 | 534 | 1,542 | 115 | 1,233 | 79 | 1,390 | 79 | 1,390 | 8,104 |

Table 2: Sampling Goals for 2022-23 by County (ensuring a minimum of 200 per county)

| County | Population | % of Region | # Surveys | Oversampling | Revised Goal |
|------------|------------|----------------|--------------|--------------|-----------------|
| Brazoria | 379,689 | 5.3% | 429 | 0 | 429 |
| Chambers | 48,865 | 0.7% | 55 | 145 | 200 |
| Fort Bend | 858,527 | 12.0% | 970 | 0 | 970 |
| Galveston | 355,062 | 4.9% | 401 | 0 | 401 |
| Harris | 4,728,030 | 65.9% | 5,339 | 0 | 5,339 |
| Liberty | 97,621 | 1.4% | 110 | 90 | 200 |
| Montgomery | 648,886 | 9.0% | 733 | 0 | 733 |
| Waller | 59,781 | 0.8% | 68 | 132 | 200 |
| TOTAL | 7,176,461 | 100.0% | 8,104 | 367 | 8,471 |

Table 3: FINAL SAMPLING PLAN with both Random (Table 1) and Oversampling Requirements

| Sampling Group | Goal |
|--|--------|
| Random Sample of the Region (Table 1) | 8,104 |
| Oversampling of Residents in Select Counties (Table 2) | 367 |
| Households with at least 1 transit user | 409 |
| Households with at least 1 shared-ride user (Uber/Lyft) | 240 |
| Households that speak English less than Very Well | 240 |
| Households with no vehicles | 240 |
| Households with at least 1 University student | 200 |
| Households with at least 1 bicycle user on the travel date | 200 |
| TOTAL | 10,000 |

Table 4 shows the actual number of completed surveys that were obtained for each household size, number of employed, and income category. In addition to the distribution of the results below, all county and "Groups of interest" goals were achieved except the following: Waller and Chambers Counties (pre-oversampling requirement goals completed), and households with at least one shared-ride user (197 collected - 82% of goal completed)

Table 4: Completed Surveys by Household Income, Size, and Number Employed (0 = no one employed, 1/1+ equals at least one person in household is employed)

| | | sehold ze 1 | | sehold ze 2 | | sehold ze 3 | | sehold ze 4 | | sehold e 5+ | Total |
|--------------------|-----|----------------|-----|----------------|-----|----------------|-----|----------------|----|----------------|--------|
| Income | 0 | 1 | 0 | 1+ | 0 | 1+ | 0 | 1+ | 0 | 1+ | |
| \$0-\$24,999 | 426 | 304 | 202 | 233 | 69 | 158 | 38 | 153 | 48 | 103 | 1,734 |
| \$25,000-\$44,999 | 202 | 328 | 138 | 288 | 51 | 253 | 36 | 301 | 16 | 261 | 1,874 |
| \$45,000-\$74,999 | 133 | 400 | 106 | 468 | 28 | 344 | 13 | 344 | 12 | 339 | 2,187 |
| \$75,000-\$124,999 | 75 | 310 | 68 | 577 | 22 | 466 | 15 | 463 | 9 | 400 | 2,405 |
| \$125,000+ | 55 | 178 | 54 | 691 | 9 | 452 | 6 | 418 | 3 | 318 | 2,184 |
| Total | 891 | 1,520 | 568 | 2,257 | 179 | 1,673 | 108 | 1,679 | 88 | 1,421 | 10,384 |

Designing the Survey

ETC Institute worked with TxDOT, TTI staff, and Cambridge Systematics to develop the household activity travel survey instrument that could be completed as a mail-out survey, an online web survey, or via an app downloaded to a mobile device. The survey was designed to be a 24-hour household activity travel diary that was recorded for each member of the household. The household survey and travel diaries were structured and



worded to allow participants to answer the questions easily.

A postcard mailer was sent out to households in the area to help explain the survey, confirm legitimacy, and encourage residents to participate. The postcard also directed interested participations to the project website to learn more or sign up. ETC Institute worked with TxDOT and TTI to develop the postcard and survey materials. The main postcard used to recruit participants (shown above) along with tailored postcards for smaller project counties are provided in Appendix D, and Appendix E.

Pilot Survey. ETC Institute conducted the pilot in September 2022 using the approach provided by TxDOT in the project specifications. The pilot requirements were to fully complete 300 households. The pilot survey included a complete pretest and evaluation of the full survey methodology, including:

- sample generation
- telephone and postcard recruitment
- reminder call

- retrieval call
- data entry
- trip geocoding
- edit checks

Recruitment Procedure

ETC Institute utilized a sample of randomly-selected households from the H-GAC study area to recruit participants for the pilot and main survey data collection efforts. Approximately 320,000 postcards were mailed out across study area, yielding a response rate of around 3.25%. Note: During this project, a local Houston news outlet picked up on a story regarding the

Conducting the Household Activity Travel Survey

One factor that can greatly influence the quality and quantity of the data collected is the percentage of households recruited that participate in the survey. A low response rate can inherently bias the survey results. Consequently, a great deal of emphasis was placed on measures that would maximize the response rate to the survey.

Building Awareness of the Household Survey. Given the private nature of the data to be collected, public awareness was a key factor in the success of the survey. Persons who participated in the pilot survey indicated that the postcard was important because they knew the survey was legitimate.

ETC Institute worked with TxDOT to develop and administer an awareness campaign to inform the community about the survey. The campaign involved a two-tiered strategy.

- Tier 1-General Awareness: This tier involved building general awareness about the study in the region through newspaper and other general media sources. Press releases were sent by TxDOT to newspapers, radio stations, and television stations in the region. Prior to the survey, articles were published in area newspapers to promote the survey. Representatives from ETC Institute also met with representatives from the H-GAC Region. These meetings included discussions regarding how to boost legitimacy and response to outreach efforts. One of the solutions used for this project was to create a video that would be used to promote awareness and legitimacy of the survey efforts. Staff at H-GAC created a video that helped explain the importance of the survey effort while also helping to promote legitimacy and clarify branding by displaying the postcard that would be received from ETC along with appropriate logos. H-GAC displayed this video on their social media pages as well as their website. Additionally, ETC added the video to the project website.
- Tier 2-Detailed Awareness: The second tier involved direct communication with each of the households that were recruited to participate in the study. ETC Institute worked with TxDOT and TTI to design a series of direct mailings. In addition, ETC Institute established local and toll-free numbers that allowed households in the study area to contact ETC Institute if they had questions about the study.

Survey Administration Procedures. ETC Institute administered the Household Activity Travel Survey to a randomly-selected household in the H-GAC study area in 2022-24. The data collection effort took two full school years for several reasons:

1) the pilot test was larger than normal and included 300 households

- 2) The total of 10,000 households was larger than normal and included various geographic goals to help ensure a better representation of all counties involved
- 3) The 10,000 households also included the various secondary groups mentioned previously (extransit users, bicycle users, etc)

Surveys were not administered when school was not in session (e.g., holiday periods such as winter break and spring break). Each of the major elements of the survey administration process are briefly described below:

- **Postcard.** ETC Institute mailed a postcard to all households that were randomly-selected to participate in the survey. The letter was in both English and Spanish.
- Initial Solicitation. A few days after the postcards were mailed, ETC Institute called each of the households that received a postcard to confirm their address and collect or confirm household level data from all households that agreed to participate in the study. Households that received the postcard and signed up online were contacted based on the phone number they provided on the signup form. Meanwhile, households that received a postcard but had not yet signed up were called based on the phone number from the purchased sample. Households that agreed to participate were assigned a travel day for the survey and were given instructions on how the information would be retrieved. This data included, but was not limited to, the following:
 - Number of people in the household.
 - o Annual household income and type of residence.
 - <u>Vehicle Information</u> number owned, number available, make, model, commercial or private use.
 - <u>Person information</u> age, sex, ethnicity, employment/student status, occupation by employment category.
 - <u>Employment Information</u> self-employed, employer name and address, home office/business, telecommuting.

Information that was gathered from each of the participating households was entered into a Household Database as soon as the household was recruited. Each household that was recruited was assigned a unique PIN to monitor the household's participation in the survey throughout the survey administration process.

• Instructional Email. After call center employees contacted respondents, they emailed instructions for how they need to participate in the travel survey based on how they indicated they would be participating in the sure. The three following methods for survey participation included: over-the-phone collection with an ETC Institute call center employee, online collection where the participating household could fill out member travel information via the internet, or app participation enabled by downloading the smartphone application and passively collecting travel information. Spanish versions of

the online survey instrument and app were provided for households that did not speak English.

- Reminder Messages. ETC Institute placed reminder call/emails/text messages to each household the day before they were scheduled to begin the travel survey. The pre-travel day reminder messages were used to confirm the household's participation. The messages were also used to (1) review the procedures for recording travel information to ensure participants understood the importance of recording specific addresses, (2) answer any questions that the household had regarding the survey, (3) schedule a callback time for the data retrieval call, (4) stress the importance of the survey, and (5) emphasize the anonymity of the data provided.
- Data Retrieval. ETC Institute placed a follow-up call at a pre-arranged callback time within two days after travel diary activity was scheduled. This call was used to retrieve household activity and trip data. Every attempt was made to personally interview each member of the household who completed a travel diary. In some cases, a proxy provided information for household members who were not available. Adult members of the household usually reported the activities and trips for minors in the household. These data retrieval calls were arranged for all households participating in the survey regardless of the method of completion to either confirm trip data or to complete the survey with the responding household over the phone.
- Reporting of Income. 100% of the households that participated in the household activity survey provided annual household income data. ETC Institute's interviewers explained the importance of providing the household income data during the initial recruitment call and informed them about being ineligible to participate in the survey without the information.
- Thank You Email. After ETC Institute had received all completed surveys from a household, ETC Institute emailed the household thanking them for their participation and informing them they were done with the survey.

Incentivizing the Survey Process. During the pilot portion of the survey process, it was determined that incentivizing the survey would greatly benefit a higher response rate. ETC Institute began offering \$25 for the pilot survey and then gradually changed the incentive amount to either \$20 or \$40 depending on the survey method (i.e., over the phone with ETC Institute's call center (\$20), or downloading the app for at least 1 adult household family member (\$40)) for completed surveys. Respondents were informed that incentives were being offered at the sole discretion of ETC Institute and had no direct affiliation with TxDOT.

All incentives were distributed by ETC Institute by form of an e-gift card mailed to the participating household.

Conducting the App-Based Survey

In addition to collecting travel diary data over the phone and online, ETC Institute collaborated with TxDOT to create a mobile app for the collection of passive GPS data from household members that would participate via that means. During the initial recruitment call with households, participants were asked if they were willing to download the app onto their mobile device and allow it to collect travel information for their designated travel date.

Household Travel App. The app that was created by ETC Institute for TxDOT's household travel survey was designed to capture an individual's travel information for one 24-hour period. Respondents were asked to log on either during their travel day or on the day after their assigned travel day to verify their trip information and provide missing details such as the name of locations and how many people traveled to that location with them. At that time, respondents were able to add in any missing stop information or remove incorrect stop information.

Recruitment. Participants that were asked to participate in the household travel survey were also asked during the initial recruitment call if at least one of the adult members (age 18+) of their household would also agree to participate via app. If at that time an adult household member agreed to participate via app, they were walked through the process of downloading the app on their mobile device during the recruitment call.

Mobile App Process. Households that participated in the app data collection method were involved in the data collection process for three days:

- Day 1: The recruited households were given instructions on how to download the app on their mobile device for everyone over the age of 16 in the household, or with parental consent for those under 16 that had a mobile device (min age requirement for app use was 13 years with parental consent). If participants needed additional help, an ETC Institute call center employee walked them through the process of downloading the app while on the phone with them during the initial recruitment call.
- Day 2: All household members who had downloaded the app on their mobile device were asked to let it run in the background for a full 24-hours (3am-3am).
- Day 3: Households were asked to go back to the app on their mobile device after their 24-hour survey period had concluded and fill out basic information regarding their travels from the previous day.

App Data Elements. The following types of app survey data were collected by ETC Institute:

- The position of the vehicle by longitude and latitude in five second increments and the time and date at each position.
- Distance and direction traveled since the last position.
- Vehicle's distance, speed, elevation, and heading.

Survey Completion by Data Retrieval Mode?

Request that ETC consider adding a brief section on the breakdown of mode used by HGAC survey participants to complete the survey...

- mail-out survey
- on-line web survey
- via an app downloaded to a mobile device
- retrieval by phone at the Call-In Center

Request that ETC show the breakdown at the person level and perhaps age and gender of participants for each mode. Also, breakdown on HH's that had a HH member using the app versus those that did not would be useful info. Thx

Verifying and Editing Survey Data

ETC Institute prepared five data files for the household travel survey including:

- Household Information file
- Personal Information file
- Vehicle Information file
- Activity/Trip Information file
- Smartphone GPS location file

ETC Institute conducted data processing and geocoding activities concurrently with the data collection task. This allowed a higher level of control on the quality of the completed data, since the daily attention to completed households allows for quick identification of where interviewer training may need to be strengthened. ETC Institute utilized an online version of the survey for this project to further increase legibility and accuracy of the data retrieved. The online version of the survey also allowed ETC Institute's data review team to check the travel diary data obtained from the recruited households to help ensure the data was logical and to determine if a household needed to be called back due to illogical or missing information. Screenshots of the online survey are included in Appendix F.

As data were compiled into the database, they were edited and corrected. A data analyst from ETC Institute conducted ongoing verification of this aggregate, cumulative data file. ETC Institute used a specialized program to perform routine and customized quality checks on the data to confirm that submitted data met TxDOT's standards as well as the project requirements. The edit check program was used to check the following:

- Data range checks to ensure data are not outside the expected ranges;
- Data checks for missing data, including a flag for persons who report no travel (this will be done by a combination of computerized queries and direct data viewing);
- File consistency (household size matches number of person records, etc.);
- Consistency between arrival and departure times;
- Employment data for all respondents reporting a "work" activity; and
- Consistency among shared trips within the household.

Data validation was accomplished by comparing each record in the database against the criteria for a completed household established at the beginning of the project. ETC Institute sent "interim" datasets to TxDOT for review against the criteria for a completed household that were established at the beginning of the project. By allowing TxDOT an opportunity to review the format of the data early in the project, ETC Institute was able to adjust the structure of the database to ensure that the final datasets were in the required format.

ETC Institute then coded and entered all data into pre-specified data file formats and forwarded the data to TxDOT. ETC Institute ensured that all text and data files were free of viruses.

App Algorithm Criteria

The algorithm used by our apps to detect the locations where the smartphone user has stopped utilizes the phone's GPS and motion sensor data. Generically, the goal is to differentiate between stationary periods (when the user has stopped) and moving periods (when the user is on the move). Here's a high-level outline of the algorithm:

1. Data Collection

The user's phone continuously collects GPS and motion sensor data. The motion sensor provides information about the phone's acceleration, rotation, and orientation.

2. Preprocessing

The raw GPS and motion sensor data can be noisy and inconsistent. Preprocessing involves filtering and smoothing the data to improve its accuracy. Some of the smoothing is typically done by the phone's firmware; for the remaining cases/data, we use various techniques like moving averages.

3. Speed Estimation

We use the point speed values provided by the GPS data stream. Where those values appear erratic or unreliable, we calculate the speed directly from the GPS points' location and timestamp data, receding back in time as far as reasonable to bypass erratic data.

4. Define Thresholds

We use a threshold value for the user's speed, above which the user is considered to be moving, and below which the user is considered to be stationary. The threshold value may change depending on the granularity of desired location detection and the accuracy of the GPS data.

5. Identify Stops

The app analyzes the preprocessed speed data to detect periods when the user's speed falls below the defined threshold. These periods indicate that the user has potentially stopped. This test is combined with motion flags provided by the phone's sensors to confirm (or reject) a stopped condition.

6. Temporal Check

To reduce the chances that brief pauses or slow movements would be recorded as stops (e.g., during traffic), the app checks that the "stopped" condition occurred for a minimum duration before considering it as a stop. This time duration can be customized.

7. Location Clustering

The app groups the locations identified as stopped together based on proximity, creating clusters which represent the locations where the user has stopped.

8. Post-processing

A stopped location is tested against proximity to known traffic control devices and is tagged as an "intraffic stop" if stop duration is also less or equal to a specified time as discussed with the client.

A flow chart of this process can be found in Appendix H.

Lessons Learned

Overall, this project proceeded quite smoothly. The larger population of the study area provided more opportunities and a greater margin of error for recruitment compared to smaller study areas, making the process easier.

A significant contributor to the project's success was the assistance from H-GAC and its staff. They recorded an outreach video, which we placed on our project website. This video played a crucial role in addressing concerns over the survey's legitimacy. Concerns about legitimacy are one of the biggest obstacles we face with potential respondents. The video not only promoted the survey and explained its importance but also introduced ETC and its American Travel Survey division, thereby reducing concerns and improving participation. (Click the image below to watch the video)



The Project team participated twice on the H-GAC TAC meetings to provide details to important officials.

ETC had also just completed an on-board transit survey project for H-GAC when the household travel survey project began. The list of transit users was used to help target those in the secondary target group "transit users". Without having that transit survey data, it would have been much more difficult to capture that group, as that group is typically underrepresented in household travel surveys.

One unexpected item that helped improve the response to the survey was a local television news affiliate that caught wind of the survey project. The news organization then interviewed TxDOT officials and ran a story on the local evening news about it. The unexpected promotion of the survey temporary increased signups to the project website form.

There was some issue with getting some of the smaller outlying areas to participate. To help with this we designed county specific postcards that were more tailored to residents in those areas. These postcards helped to improve the response rate by residents in those areas.

Summary of Appendices to This Report

This report contains six appendices. A brief description of each appendix is provided below:

Appendix A. This appendix contains tables that show the *household data* for the H-GAC Region Study Area. The types of household data that are provided in this appendix include: household occupancy, vehicle availability, type of residency, years of residency, annual income, and raw (unadjusted) household trip rates.

Appendix B. This appendix contains tables that show the *person data* for the H-GAC Region Study Area. The types of person data that are provided in this appendix include: age, ethnicity, employment status, bicycle use, and other personal information.

Appendix C. This appendix contains tables that show the *vehicle data* for H-GAC Region Study Area. The types of vehicle data that are provided in this appendix include: types of vehicles, year of vehicles, vehicle make, type of fuel used, and other vehicle information.

Appendix D. This appendix contains the *postcard* that was used to solicit participation in the survey.

Appendix E. This appendix contains tailored *postcards* that were used to solicit participation in the survey from smaller counties in the study area.

Appendix F. This appendix contains the *lucid chart* for the survey process.

Appendix G. This appendix contains documentation of online household tools and app tools.

Appendix H. This appendix contains a flow chart of the *app algorithm criteria*.

Appendix A: Household Data

| Household Occupancy | | | | | | |
|---------------------|--------|----------|--|--|--|--|
| Number of Persons | Number | (%) Area | | | | |
| 1 | 2271 | 25.24% | | | | |
| 2 | 2517 | 27.98% | | | | |
| 3 | 1700 | 18.90% | | | | |
| 4 | 1430 | 15.89% | | | | |
| 5 | 701 | 7.79% | | | | |
| 6 | 239 | 2.66% | | | | |
| 7 | 87 | 0.97% | | | | |
| 8 | 33 | 0.37% | | | | |
| 9 | 14 | 0.16% | | | | |
| 11 | 2 | 0.02% | | | | |
| 10 | 3 | 0.03% | | | | |
| Grand Total | 8997 | 100.00% | | | | |

| Number of Vehicle Available | | | | | |
|-----------------------------|--------|----------|--|--|--|
| Vehicle Available | Number | (%) Area | | | |
| 0 | 503 | 5.59% | | | |
| 1 | 3711 | 41.25% | | | |
| 2 | 3165 | 35.18% | | | |
| 3 | 1135 | 12.62% | | | |
| 4 | 378 | 4.20% | | | |
| 5 | 85 | 0.94% | | | |
| 6 | 14 | 0.16% | | | |
| 7 | 2 | 0.02% | | | |
| 8 | 1 | 0.01% | | | |
| 9 | 2 | 0.02% | | | |
| 10 | 1 | 0.01% | | | |
| Grand Total | 8997 | 100.00% | | | |

| Number of Vehicle Owned/Leased | | | | | |
|--------------------------------|--------|----------|--|--|--|
| Vehicle Owned/Leased | Number | (%) Area | | | |
| 0 | 1175 | 13.06% | | | |
| 1 | 3459 | 38.45% | | | |
| 2 | 2907 | 32.31% | | | |
| 3 | 1036 | 11.51% | | | |
| 4 | 334 | 3.71% | | | |
| 5 | 68 | 0.76% | | | |
| 6 | 13 | 0.14% | | | |
| 7 | 1 | 0.01% | | | |
| 8 | 1 | 0.01% | | | |
| 9 | 2 | 0.02% | | | |
| 10 | 1 | 0.01% | | | |
| Grand Total | 8997 | 100.00% | | | |

| Number of Bicycles Available | | | | | |
|------------------------------|--------|----------|--|--|--|
| Bikes | Number | (%) Area | | | |
| 0 | 4603 | 51.16% | | | |
| 1 | 1964 | 21.83% | | | |
| 2 | 1392 | 15.47% | | | |
| 3 | 520 | 5.78% | | | |
| 4 | 309 | 3.43% | | | |
| 5 | 102 | 1.13% | | | |
| 6 | 45 | 0.50% | | | |
| 7 | 18 | 0.20% | | | |
| 8 | 8 | 0.09% | | | |
| 9 | 5 | 0.06% | | | |
| 10 | 2 | 0.02% | | | |
| 98 | 20 | 0.22% | | | |
| 99 | 9 | 0.10% | | | |
| Grand Total | 8997 | 100.00% | | | |

| Types of Residence | | | | |
|-------------------------------|--------|---------|--|--|
| Residence | Number | (%) Per | | |
| Unattached Single Family Home | 5603 | 62.3% | | |
| Condo | 223 | 2.5% | | |
| Duplex | 181 | 2.0% | | |
| Apartment | 2643 | 29.4% | | |
| Mobile Home | 233 | 2.6% | | |
| Other | 110 | 1.2% | | |
| Don't know | 3 | 0.0% | | |
| Refused | 1 | 0.0% | | |
| Grand Total | 8997 | 100.0% | | |

| Tenure | | | | | | |
|--------------------|--------|---------|--|--|--|--|
| Tenure | Number | (%) Per | | | | |
| One Year or Less | 1988 | 22.1% | | | | |
| Two Years | 1234 | 13.7% | | | | |
| Three Years | 967 | 10.7% | | | | |
| Four Years | 537 | 6.0% | | | | |
| Five or More Years | 4258 | 47.3% | | | | |
| Don't know | 8 | 0.1% | | | | |
| Refused | 5 | 0.1% | | | | |
| Grand Total | 8997 | 100.0% | | | | |

| Annual Household Income | | | | | | |
|-------------------------|--------|---------|--|--|--|--|
| Income | Number | (%) Per | | | | |
| \$0-\$19,999 | 1951 | 21.7% | | | | |
| \$20,000-\$39,999 | 2732 | 30.4% | | | | |
| \$40,000-\$59,999 | 1204 | 13.4% | | | | |
| \$60,000-\$99,999 | 1095 | 12.2% | | | | |
| \$100,000+ | 2015 | 22.4% | | | | |
| Grand Total | 8997 | 100.0% | | | | |

| Number of Day Visitors on the Household's Travel Day | | |
|--|--------|---------|
| Day Visitor | Number | (%) Per |
| 1 | 1238 | 13.8% |
| 2 | 6075 | 67.5% |
| 98 | 1676 | 18.6% |
| 99 | 8 | 0.1% |
| Grand Total | 8997 | 100.0% |

| Total Trips Per Household | | |
|---------------------------|--------|---------|
| Trips | Number | (%) Per |
| 0 | 24117 | 23.88% |
| 1 | 19170 | 18.98% |
| 2 | 18978 | 18.79% |
| 3 | 10916 | 10.81% |
| 4 | 8089 | 8.01% |
| 5 | 5365 | 5.31% |
| 6 | 3856 | 3.82% |
| 7 | 2676 | 2.65% |
| 8 | 1910 | 1.89% |
| 9 | 1381 | 1.37% |
| 10 | 1031 | 1.02% |
| 11 | 749 | 0.74% |
| 12 | 560 | 0.55% |
| 13 | 428 | 0.42% |
| 14 | 348 | 0.34% |
| 15 | 271 | 0.27% |
| 16 | 205 | 0.20% |
| 17 | 162 | 0.16% |
| 18 | 126 | 0.12% |
| 19 | 99 | 0.10% |
| 20 | 89 | 0.09% |
| 21 | 76 | 0.08% |
| 22 | 65 | 0.06% |
| 23 | 53 | 0.05% |
| 24 | 46 | 0.05% |
| 25 | 42 | 0.04% |
| 26 | 31 | 0.03% |
| 27 | 23 | 0.02% |
| 28 | 17 | 0.02% |
| 29 | 13 | 0.01% |

| 13 | 0.01% |
|--------|--|
| 11 | 0.01% |
| 9 | 0.01% |
| 6 | 0.01% |
| 6 | 0.01% |
| 5 | 0.00% |
| 5 | 0.00% |
| 5 | 0.00% |
| 4 | 0.00% |
| 4 | 0.00% |
| 4 | 0.00% |
| 4 | 0.00% |
| 2 | 0.00% |
| 2 | 0.00% |
| 2 | 0.00% |
| 2 | 0.00% |
| 2 | 0.00% |
| 2 | 0.00% |
| 1 | 0.00% |
| 1 | 0.00% |
| 1 | 0.00% |
| 1 | 0.00% |
| 1 | 0.00% |
| 1 | 0.00% |
| 1 | 0.00% |
| 1 | 0.00% |
| 1 | 0.00% |
| 1 | 0.00% |
| 1 | 0.00% |
| 1 | 0.00% |
| 1 | 0.00% |
| 1 | 0.00% |
| 1 | 0.00% |
| 1 | 0.00% |
| 1 | 0.00% |
| 100997 | 100.00% |
| | 11 9 6 6 5 5 5 5 4 4 4 4 2 2 2 2 2 1 1 1 1 1 1 1 1 1 1 1 |

Appendix B: Person Data

| Gender of Survey Participants | | |
|-------------------------------|--------|---------|
| Sex | Number | (%) Per |
| Male | 11269 | 46.7% |
| Female | 12806 | 53.1% |
| Don't know | 1 | 0.0% |
| Refused | 44 | 0.2% |
| Grand Total | 24120 | 100.0% |

| Ethnicity of Survey Participants | | | |
|----------------------------------|--------|---------|--|
| Ethnicity | Number | (%) Per | |
| Black/African American | 6644 | 29.8% | |
| Hispanic/Mexican American | 5321 | 23.9% | |
| Asian/Pacific Islander | 1347 | 6.0% | |
| Native American | 96 | 0.4% | |
| White/Caucasian | 8492 | 38.1% | |
| Other | 219 | 1.0% | |
| Don't Know | 60 | 0.3% | |
| Refused | 125 | 0.6% | |
| Multiple Ethnicity | 1816 | 8.1% | |
| Grand Total | 24120 | 100.0% | |

| Age of Survey Participants | | |
|----------------------------|--------|---------|
| Age | Number | (%) Per |
| 0 to 4 years old | 1387 | 5.8% |
| 5 to 12 years old | 2563 | 10.6% |
| 13 to 15 years old | 1103 | 4.6% |
| 16 to 17 years old | 712 | 3.0% |
| 18 to 44 years old | 10425 | 43.2% |
| 45 to 64 years old | 6063 | 25.1% |
| 65 years old or older | 1736 | 7.2% |
| Don't Know | 47 | 0.2% |
| Refused | 84 | 0.3% |
| Grand Total | 24120 | 100.0% |

| Licensed Driver Status | | |
|------------------------|--------|---------|
| Licensed Driver | Number | (%) Per |
| Yes | 16964 | 70.3% |
| No | 7081 | 29.4% |
| Don't know | 49 | 0.2% |
| Refused | 26 | 0.1% |
| Grand Total | 24120 | 100.0% |

| Employment Status | | |
|-------------------|--------|---------|
| Employment | Number | (%) Per |
| Yes | 12374 | 51.3% |
| No | 11647 | 48.3% |
| Don't know | 43 | 0.2% |
| Refused | 56 | 0.2% |
| Grand Total | 24120 | 100.0% |

| Type of Employment | | | |
|---|--------|---------|--|
| Employment Status | Number | (%) Per | |
| Employed full time 30 or more hours per week | 10232 | 82.3% | |
| Employed part time less than 30 hours per week | 2185 | 17.6% | |
| Self employed full time 30 or more hours per week | 0 | 0.0% | |
| Self employed part time less than 30 hours per week | 0 | 0.0% | |
| Don't Know | 21 | 0.2% | |
| Refused | 2 | 0.0% | |
| Grand Total | 12440 | 100.0% | |

| Hours Employed Per Week | | |
|-------------------------|--------|---------|
| Hours | Number | (%) Per |
| 1-10 Hours | 293 | 2.4% |
| 11-20 Hours | 831 | 6.7% |
| 21-30 Hours | 1104 | 8.9% |
| 31-35 Hours | 510 | 4.1% |
| 36-40 Hours | 6334 | 50.8% |
| 41 or More Hours | 3362 | 27.0% |
| 996 | 0 | 0.0% |
| 998 | 32 | 0.3% |
| 999 | 0 | 0.0% |
| Grand Total | 12466 | 100.0% |

| Reasons Not Employed | | |
|----------------------|--------|---------|
| Not Employed | Number | (%) Per |
| Retired | 1663 | 23.6% |
| Volunteer | 53 | 0.8% |
| Disability Status | 1071 | 15.2% |
| Homemaker | 822 | 11.7% |
| Looking for Work | 1413 | 20.0% |
| Not Looking for Work | 176 | 2.5% |
| Student (any age) | 1702 | 24.1% |
| Other | 61 | 0.9% |
| Don't Know | 77 | 1.1% |
| Refused | 13 | 0.2% |
| Grand Total | 7051 | 100.0% |

| Delivery Drivers | | | |
|-----------------------|--------|---------|--|
| Commercial Veh Driver | Number | (%) Per | |
| Yes | 548 | 4.4% | |
| No | 11741 | 94.8% | |
| Don't know | 90 | 0.7% | |
| Refused | 2 | 0.0% | |
| Grand Total | 12381 | 100.0% | |

| Work Schedule | | | |
|-------------------|--------|---------|--|
| Flex Time | Number | (%) Per | |
| Flexible/Variable | 5386 | 43.5% | |
| Fixed/Unchanging | 6862 | 55.5% | |
| Don't Know | 115 | 0.9% | |
| Refused | 11 | 0.1% | |
| Grand Total | 12374 | 100.0% | |

| Percentage of Employed Participants with More than One Job | | |
|--|--------|---------|
| More than 1 job | Number | (%) Per |
| Yes | 709 | 5.7% |
| No | 11705 | 93.5% |
| Don't know | 95 | 0.8% |
| Refused | 7 | 0.1% |
| Grand Total | 12516 | 100.0% |

| Primary Workplace Type | | |
|--|--------|---------|
| Workplace Type | Number | (%) Per |
| Office (non-government) | 2319 | 18.7% |
| Office (government) | 550 | 4.4% |
| Home Office/Residential Workplace | 1338 | 10.8% |
| Coworking Space | 61 | 0.5% |
| Industrial Warehouse/Manufacturing | 1077 | 8.7% |
| Medical Offices/Hospital | 1165 | 9.4% |
| School; Daycare/Preschool | 120 | 1.0% |
| School; Elementary | 300 | 2.4% |
| School; Middle/Junior High | 179 | 1.4% |
| School; High School | 231 | 1.9% |
| School; College/University/Trade School | 221 | 1.8% |
| Restaurant/Fast Food, Café, Bar & Grill | 767 | 6.2% |
| Convenience/Drug Store/Gas Station | 102 | 0.8% |
| Grocery Store | 236 | 1.9% |
| Recreational facility/Fitness Club | 91 | 0.7% |
| Other Retail /Shopping | 608 | 4.9% |
| Other Personal Business (i.e. Bank, Automotive Dealer, Beauty Salon, etc.) | 413 | 3.3% |
| Outdoor Park/Beach/Sports Field/Open Space | 129 | 1.0% |
| Hotel/Motel/Campsite | 82 | 0.7% |
| Airport | 102 | 0.8% |
| Other | 2194 | 17.7% |
| Don't Know | 80 | 0.6% |
| Refused | 16 | 0.1% |
| Grand Total | 12381 | 100.0% |

| Percentage of Employed Participants Who Have a Home Office | | |
|--|--------|---------|
| Home Office | Number | (%) Per |
| Yes | 3444 | 27.8% |
| No | 8890 | 71.8% |
| Don't know | 26 | 0.2% |
| Refused | 14 | 0.1% |
| Grand Total | 12374 | 100.0% |

| Percentage of Employed Participants Who Telecommute | | |
|---|--------|---------|
| Telecommunicate | Number | (%) Per |
| Yes | 987 | 58.6% |
| No | 634 | 37.7% |
| Don't know | 62 | 3.7% |
| Refused | 0 | 0.0% |
| Grand Total | 1683 | 100.0% |

| Secondary Job Status | | | |
|---|--------|---------|--|
| Second Job Employment Status | Number | (%) Per | |
| Employed full time 30 or more hours per week | 338 | 47.7% | |
| Employed part time less than 30 hours per week | 366 | 51.6% | |
| Self employed full time 30 or more hours per week | 0 | 0.0% | |
| Self employed part time less than 30 hours per week | 0 | 0.0% | |
| Don't know | 4 | 0.6% | |
| Refused | 1 | 0.1% | |
| Grand Total | 709 | 100.0% | |

| Primary Occupation | | |
|--|--------|---------|
| Management Occupations | Number | (%) Per |
| Business and Financial Operations Occupations | 1114 | 9.0% |
| Computer and Mathematical Occupations | 616 | 5.0% |
| Architecture and Engineering Occupations | 361 | 2.9% |
| Life, Physical, and Social Science Occupations | 259 | 2.1% |
| Community and Social Service Occupations | 114 | 0.9% |
| Legal Occupations | 153 | 1.2% |
| Educational Instruction and Library Occupations | 184 | 1.5% |
| Arts, Design, Entertainment, Sports, and Media Occupations | 893 | 7.2% |
| Healthcare Practitioners and Technical Occupations | 244 | 2.0% |
| Healthcare Support Occupations | 571 | 4.6% |
| Protective Service Occupations | 770 | 6.2% |
| Food Preparation and Serving Related Occupations | 166 | 1.3% |
| Building and Grounds Cleaning and Maintenance Occupations | 810 | 6.5% |
| Personal Care and Service Occupations | 208 | 1.7% |
| Sales and Related Occupations | 312 | 2.5% |
| Office and Administrative Support Occupations | 923 | 7.5% |
| Farming, Fishing, and Forestry Occupations | 605 | 4.9% |

| Construction and Extraction Occupations | 37 | 0.3% |
|---|-------|--------|
| Installation, Maintenance, and Repair Occupations | 355 | 2.9% |
| Production Occupations | 430 | 3.5% |
| Transportation and Material Moving Occupations | 187 | 1.5% |
| Military Specific Occupations | 801 | 6.5% |
| Something else | 27 | 0.2% |
| Other (please specify) | 2189 | 17.7% |
| Don't Know | 33 | 0.3% |
| Refused | 12 | 0.1% |
| Grand Total | 12374 | 100.0% |

| Primary Industry | | |
|---|--------|---------|
| Primary Industry | Number | (%) Per |
| Agriculture, Forestry, Fishing and Hunting | 83 | 0.7% |
| Mining, Quarrying, and Oil and Gas Extraction | 269 | 2.2% |
| Utilities | 278 | 2.2% |
| Construction | 623 | 5.0% |
| Wholesale Trade | 125 | 1.0% |
| Information | 347 | 2.8% |
| Finance and Insurance | 615 | 5.0% |
| Real Estate and Rental and Leasing | 215 | 1.7% |
| Professional, Scientific, and Technical Services | 760 | 6.1% |
| Management of Companies and Enterprises | 501 | 4.0% |
| Administrative and Support and Waste Management and | | |
| Remediation Services | 294 | 2.4% |
| Educational Services | 997 | 8.1% |
| Health Care and Social Assistance | 1537 | 12.4% |
| Arts, Entertainment, and Recreation | 288 | 2.3% |
| Accommodation and Food Services | 819 | 6.6% |
| Other Services (except Public Administration) | 547 | 4.4% |
| Public Administration | 212 | 1.7% |
| Something else | 1997 | 16.1% |
| Manufacturing | 301 | 2.4% |
| Transportation and Warehousing | 852 | 6.9% |
| Retail Trade | 667 | 5.4% |
| Other (please specify) | 28 | 0.2% |
| Don't Know | 19 | 0.2% |
| Refused | 0 | 0.0% |
| Grand Total | 12374 | 100.0% |

| Secondary Occupation | | |
|--|--------|---------|
| Secondary Occupation | Number | (%) Per |
| Management Occupations | 29 | 4.1% |
| Business and Financial Operations Occupations | 30 | 4.2% |
| Computer and Mathematical Occupations | 12 | 1.7% |
| Architecture and Engineering Occupations | 3 | 0.4% |
| Life, Physical, and Social Science Occupations | 4 | 0.6% |
| Community and Social Service Occupations | 9 | 1.3% |
| Legal Occupations | 7 | 1.0% |
| Educational Instruction and Library Occupations | 32 | 4.5% |
| Arts, Design, Entertainment, Sports, and Media Occupations | 39 | 5.5% |
| Healthcare Practitioners and Technical Occupations | 23 | 3.2% |
| | | |
| Healthcare Support Occupations | 37 | 5.2% |
| Protective Service Occupations | 10 | 1.4% |
| Food Preparation and Serving Related Occupations | 72 | 10.2% |
| Building and Grounds Cleaning and Maintenance Occupations | 15 | 2.1% |
| Personal Care and Service Occupations | 33 | 4.7% |
| Sales and Related Occupations | 63 | 8.9% |
| Office and Administrative Support Occupations | 17 | 2.4% |
| Farming, Fishing, and Forestry Occupations | 1 | 0.1% |
| Construction and Extraction Occupations | 5 | 0.7% |
| Installation, Maintenance, and Repair Occupations | 22 | 3.1% |
| Production Occupations | 1 | 0.1% |
| Transportation and Material Moving Occupations | 60 | 8.5% |
| Military Specific Occupations | 3 | 0.4% |
| Something else | 167 | 23.6% |
| Other/Not applicable (unemployed/student/retired) | 3 | 0.4% |
| Don't Know | 12 | 1.7% |
| Refused | 0 | 0.0% |
| Grand Total | 709 | 100.0% |

| Secondary Industry | | |
|---|--------|---------|
| Secondary Industry | Number | (%) Per |
| Agriculture, Forestry, Fishing and Hunting | 2 | 0.3% |
| Mining, Quarrying, and Oil and Gas Extraction | 3 | 0.4% |
| Utilities | 3 | 0.4% |
| Construction | 14 | 2.0% |
| Wholesale Trade | 7 | 1.0% |

| Information | 16 | 2.3% |
|--|-----|--------|
| Finance and Insurance | 20 | 2.8% |
| Real Estate and Rental and Leasing | 17 | 2.4% |
| Professional, Scientific, and Technical Services | 22 | 3.1% |
| Management of Companies and Enterprises | 15 | 2.1% |
| | | |
| Administrative and Support and Waste Management and Remediation Services | 11 | 1.6% |
| Educational Services | 42 | 5.9% |
| Health Care and Social Assistance | 66 | 9.3% |
| Arts, Entertainment, and Recreation | 41 | 5.8% |
| Accommodation and Food Services | 75 | 10.6% |
| Other Services (except Public Administration) | 43 | 6.1% |
| Public Administration | 9 | 1.3% |
| Something else | 170 | 24.0% |
| Manufacturing | 3 | 0.4% |
| Transportation and Warehousing | 64 | 9.0% |
| Retail Trade | 53 | 7.5% |
| Other (please specify) | 1 | 0.1% |
| Don't Know | 12 | 1.7% |
| Refused | 0 | 0.0% |
| Grand Total | 709 | 100.0% |

| Student Status | | | |
|--------------------|--------|---------|--|
| Student Status | Number | (%) Per | |
| Yes | 6828 | 28.3% | |
| No | 17220 | 71.4% | |
| Don't know | 35 | 0.1% | |
| Refused | 37 | 0.2% | |
| Grand Total | 24120 | 100.0% | |

| School Type | | |
|----------------------------------|--------|---------|
| School Type | Number | (%) Per |
| Daycare / Preschool | 455 | 6.7% |
| Elementary School | 1957 | 28.7% |
| Middle School/Junior High | 1140 | 16.7% |
| High School | 1421 | 20.8% |
| Post Secondary / College / Trade | 1729 | 25.3% |
| Other | 77 | 1.1% |
| Don't Know | 42 | 0.6% |
| Refused | 7 | 0.1% |
| Grand Total | 6828 | 100.0% |

| Number of Days Used Bike in Past Week | | |
|---------------------------------------|--------|---------|
| Bike Use | Number | (%) Per |
| 0 | 19736 | 81.8% |
| 1 | 1008 | 4.2% |
| 2 | 1046 | 4.3% |
| 3 | 724 | 3.0% |
| 4 | 366 | 1.5% |
| 5 | 326 | 1.4% |
| 6 | 81 | 0.3% |
| 7 | 538 | 2.2% |
| 98 | 234 | 1.0% |
| 99 | 59 | 0.2% |
| Grand Total | 24118 | 100.0% |

| Purpose for Using Bike | | |
|------------------------|--------|---------|
| Bike Purpose | Number | (%) Per |
| Work | 186 | 4.5% |
| School | 202 | 4.9% |
| Shopping | 177 | 4.3% |
| Visiting | 73 | 1.8% |
| Recreation/Exercise | 3360 | 82.2% |
| Other | 82 | 2.0% |
| Don't know | 9 | 0.2% |
| Refused | 0 | 0.0% |
| Grand Total | 4089 | 100.0% |

| Disability Status | | | |
|--------------------|--------|---------|--|
| Disability | Number | (%) Per | |
| Yes | 1425 | 5.9% | |
| No | 22608 | 93.7% | |
| Don't know | 61 | 0.3% | |
| Refused | 26 | 0.1% | |
| Grand Total | 24120 | 100.0% | |

| Travel on Designated Travel Day | | |
|---------------------------------|--------|---------|
| Travel | Number | (%) Per |
| Yes | 19156 | 79.4% |
| No | 4903 | 20.3% |
| Out of Area | 61 | 0.3% |
| Grand Total | 24120 | 100.0% |

Appendix C: Vehicle Data

| Type of Vehicle | | | |
|-------------------------------|--------|---------|--|
| Type of Vehicle | Number | (%) Per | |
| Motorcycle (includes mopeds) | 198 | 1.3% | |
| Car (includes station wagons) | 8405 | 54.2% | |
| Van (mini and passenger) | 426 | 2.7% | |
| Sport Utility Vehicle | 4046 | 26.1% | |
| Pickup Truck | 2327 | 15.0% | |
| Cargo Van | 25 | 0.2% | |
| Service Vehicle | 10 | 0.1% | |
| Other | 50 | 0.3% | |
| Don't know | 12 | 0.1% | |
| Refused | 14 | 0.1% | |
| Grand Total | 15513 | 100.0% | |

| Make of Vehicle | | |
|------------------|--------|---------|
| Make | Number | (%) Per |
| Honda | 1390 | 9.0% |
| Volvo | 72 | 0.5% |
| Toyota | 2210 | 14.2% |
| Ford | 2052 | 13.2% |
| Chevrolet | 1854 | 12.0% |
| Cadillac | 210 | 1.4% |
| GMC | 399 | 2.6% |
| Lexus | 334 | 2.2% |
| Mercedes-Benz | 290 | 1.9% |
| Dodge | 890 | 5.7% |
| Mazda | 311 | 2.0% |
| Subaru | 201 | 1.3% |
| Nissan/Datsun | 1258 | 8.1% |
| Jeep | 516 | 3.3% |
| Hyundai | 633 | 4.1% |
| Buick | 178 | 1.1% |
| Chrysler | 208 | 1.3% |
| KIA | 603 | 3.9% |
| Volkswagen | 312 | 2.0% |
| Infiniti | 180 | 1.2% |
| Mitsubishi | 114 | 0.7% |
| Audi | 117 | 0.8% |
| Mercury | 44 | 0.3% |
| Other (specify) | 253 | 1.6% |
| Pontiac | 47 | 0.3% |
| Lincoln | 121 | 0.8% |
| Acura | 163 | 1.1% |
| Range/Land Rover | 31 | 0.2% |
| Saturn | 31 | 0.2% |
| Oldsmobile | 5 | 0.0% |
| BMW | 246 | 1.6% |
| Suzuki | 23 | 0.1% |
| Porsche | 33 | 0.2% |
| Don't Know | 5 | 0.0% |
| Yamaha | 12 | 0.1% |
| Harley Davidson | 68 | 0.4% |
| Fiat | 34 | 0.2% |
| Jaguar | 20 | 0.1% |
| Kawasaki | 15 | 0.1% |

| Peterbuilt | 1 | 0.0% |
|-------------------------|-------|--------|
| Isuzu | 5 | 0.0% |
| Kenworth | 1 | 0.0% |
| Freightliner | 3 | 0.0% |
| Triumph | 2 | 0.0% |
| Saab | 1 | 0.0% |
| White/Autocar-White GMC | 5 | 0.0% |
| Alfa Romeo | 3 | 0.0% |
| Austin/Austin Healey | 2 | 0.0% |
| Peugeot | 1 | 0.0% |
| Geo | 2 | 0.0% |
| Plymouth | 3 | 0.0% |
| Moto-Guzzi | 1 | 0.0% |
| Total | 15513 | 100.0% |

| Type of Fuel Used | | | |
|---------------------|--------|---------|--|
| Type of Fuel | Number | (%) Per | |
| Gasoline | 14897 | 96.0% | |
| Diesel | 250 | 1.6% | |
| Propane | 5 | 0.0% | |
| Natural Gas | 20 | 0.1% | |
| Electricity | 97 | 0.6% | |
| Gas/Electric Hybrid | 186 | 1.2% | |
| Don't Know | 24 | 0.2% | |
| Refused | 10 | 0.1% | |
| Other | 24 | 0.2% | |
| Grand Total | 15513 | 100.0% | |

| Percentage of Vehicles Used for Commercial Purposes | | |
|---|--------|---------|
| Commercial Use | Number | (%) Per |
| Yes | 408 | 2.6% |
| No | 14990 | 96.6% |
| Don't know | 106 | 0.7% |
| Refused | 9 | 0.1% |
| Grand Total | 15513 | 100.0% |

| Vehicle Ownership | | | |
|---|--------|---------|--|
| Ownership | Number | (%) Per | |
| Owned or leased by a member of HH | 15150 | 97.7% | |
| Owned or leased by a non-household member or business | 237 | 1.5% | |
| Don't know | 101 | 0.7% | |
| Refused | 25 | 0.2% | |
| Grand Total | 15513 | 100.0% | |

Appendix D: Recruitment Postcard

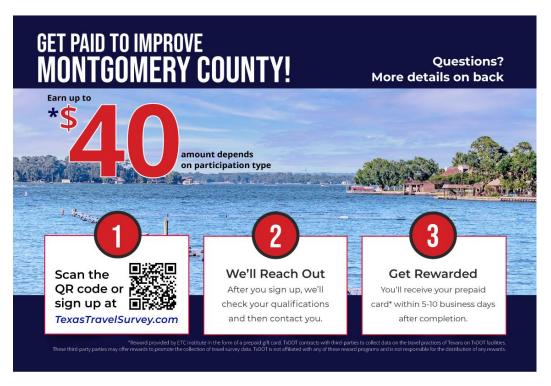
Below is the postcard that was used for the survey project. Later, specific postcards were developed for individual counties with lower populations to tailor the survey outreach to those residents.



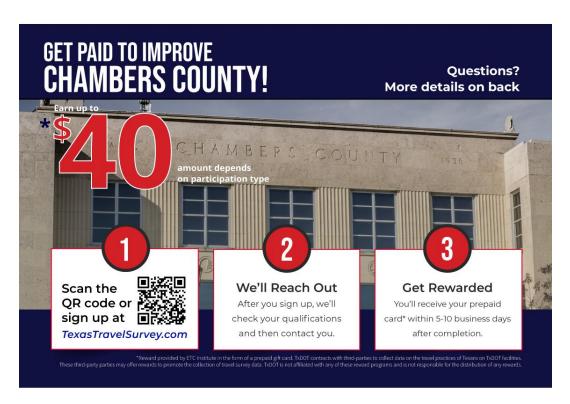


Appendix E: Tailored Recruitment Postcards for Smaller Project Counties

During the project it was noticed that the counties outside of Harris and Galveston counties seemed to be responding at a lower percent. To try and combat this, more tailored postcards were developed specifically for these areas. Those postcards are shown on subsequent pages. Note: The back of the postcard changed only slightly so it is displayed once.









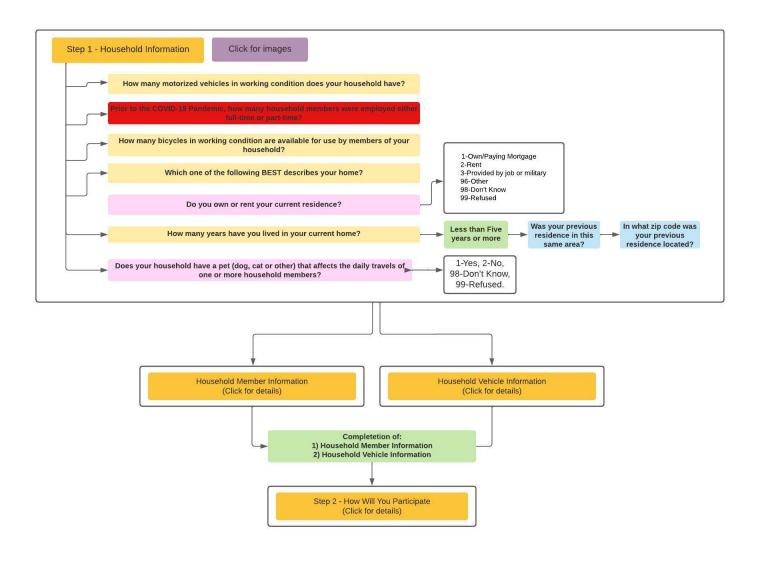




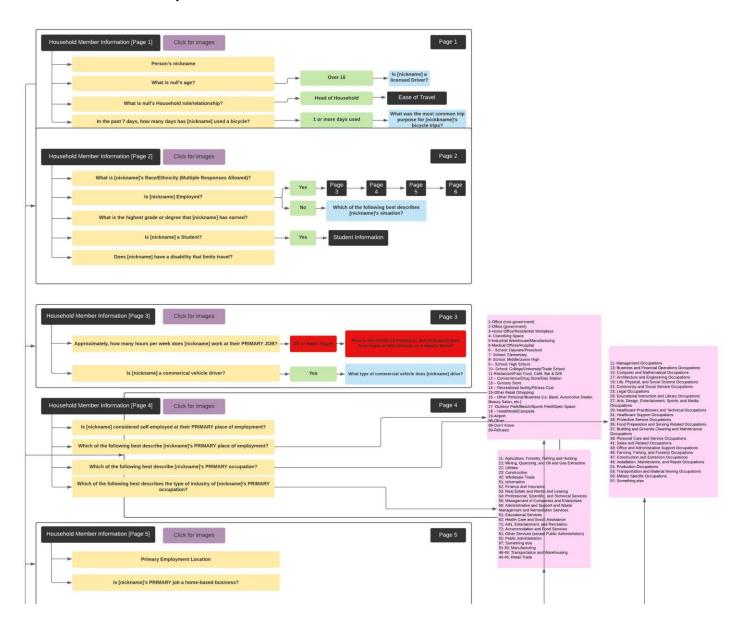


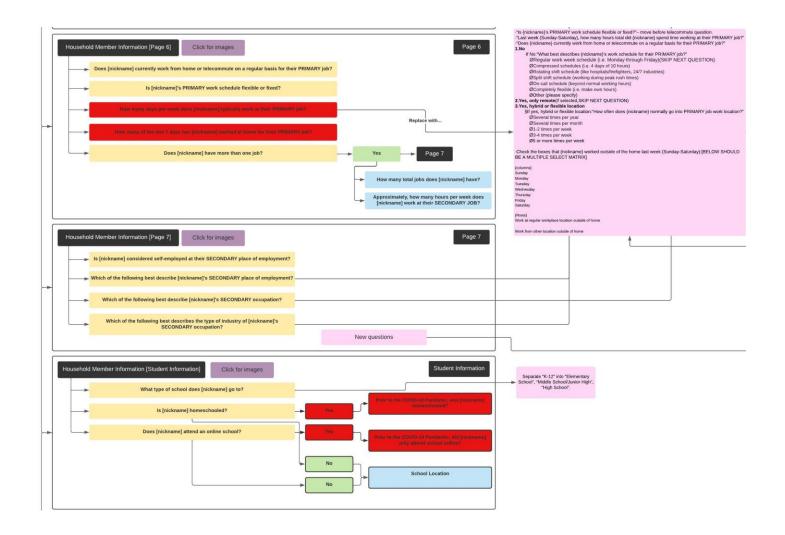
Appendix F: Lucid Chart

Step 1: Household Information

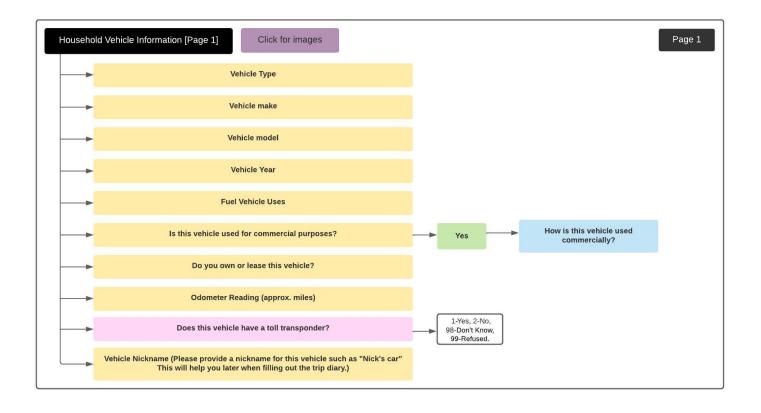


Household Member Information

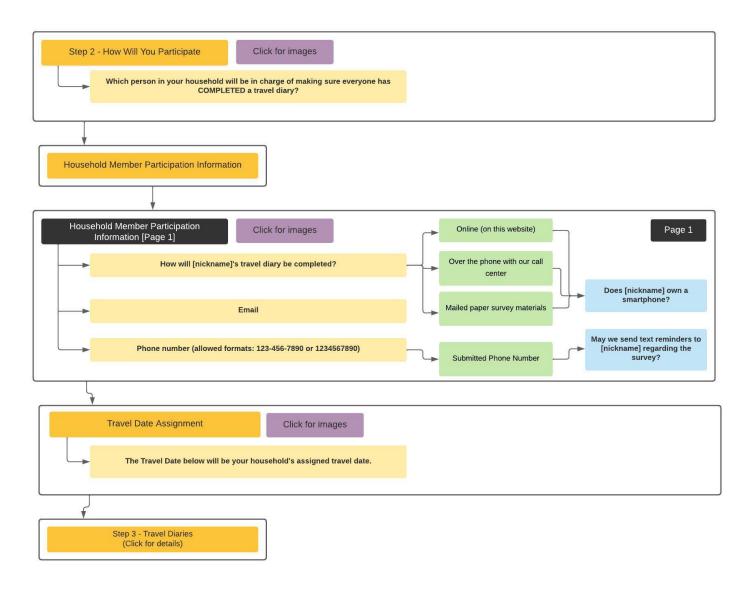




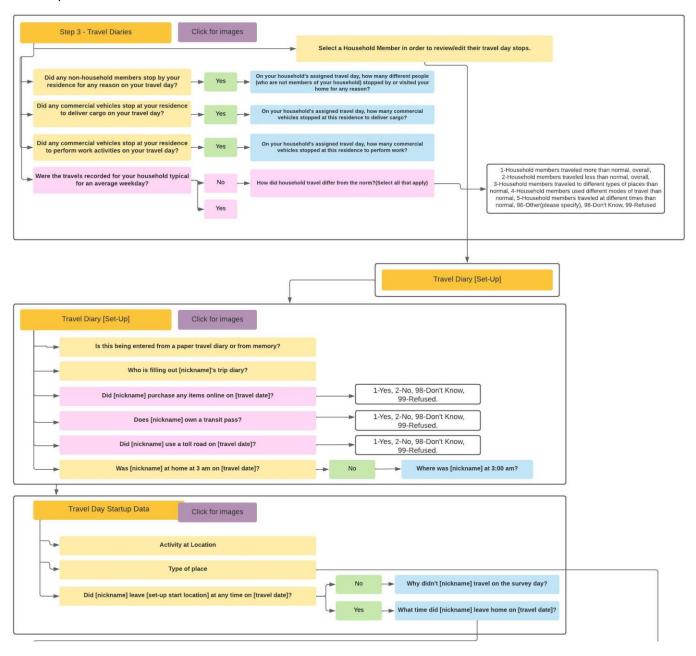
Household Vehicle Information

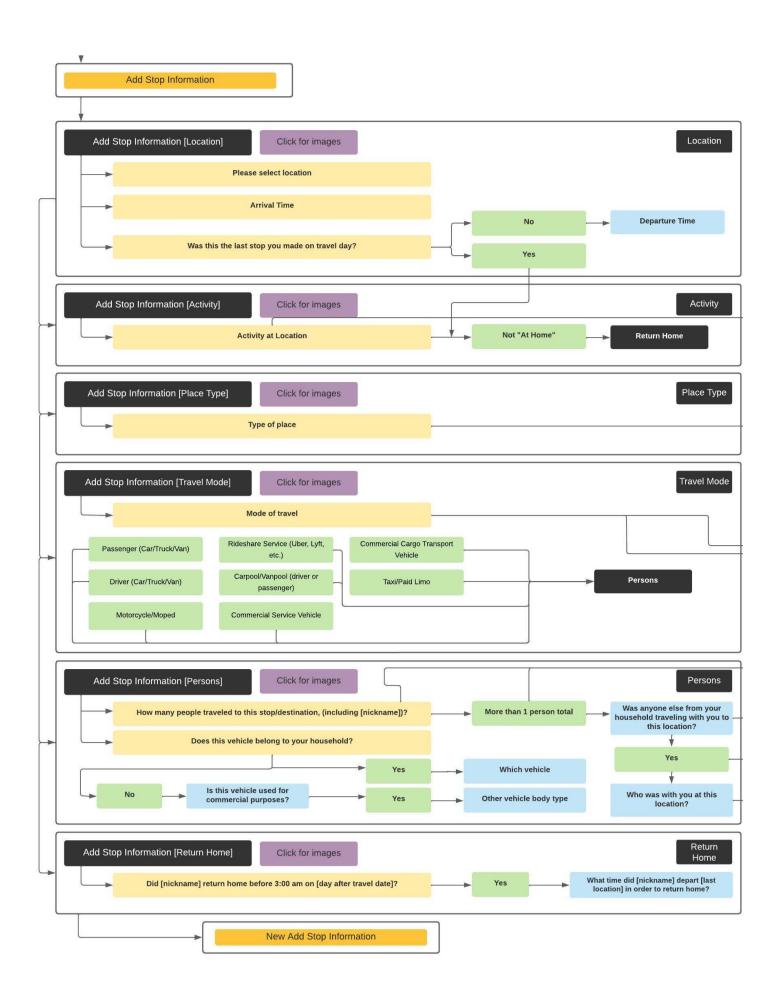


Step 2: How Will you Participate



Step 3: Travel Diaries





Appendix G: Online Survey Data & Review Tool & App Data

For the purpose of this Online Survey Data a test PIN has been created to depict the questionnaire.

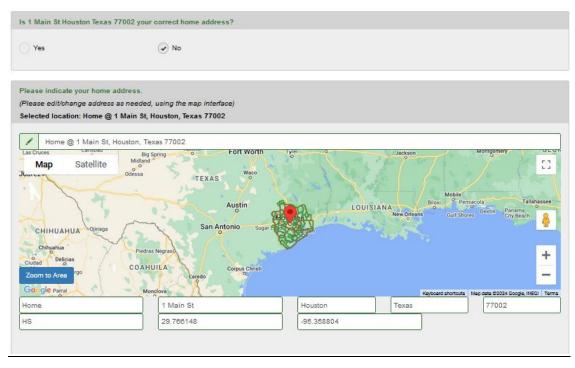
Household Qualification Information



Thank you for your interest in this important survey. The information you provide will help local planning organizations better understand the transportation needs of your community.

Answer the questions below to see if you qualify.

| Is 1 Main St Houston Texas 77002 yo | ur correct home address? | | |
|---|---|--|--|
| Yes | No | | |
| Counting yourself, how many people Type number | are in your household? (Excluding or | ollege students or military personnel who | do not currently live at this address.) |
| Including yourself, how many people | are employed in your household? | | |
| None | One or More | | |
| Please indicate the combined annua | l income for your household? | | |
| Less than \$9,999 \$10,000 to \$14,999 \$15,000 to \$19,999 \$20,000 to \$24,999 \$25,000 to \$29,999 \$30,000 to \$34,999 \$35,000 to \$39,999 | \$40,000 to \$44,999 \$45,000 to \$49,999 \$50,000 to \$54,999 \$55,000 to \$59,999 \$80,000 to \$64,999 \$865,000 to \$69,999 \$70,000 to \$74,999 | \$75,000 to \$79,999 \$80,000 to \$84,999 \$85,000 to \$89,999 \$90,000 to \$94,999 \$95,000 to \$99,999 \$100,000 to \$104,999 \$105,000 to \$114,999 | \$115,000 to \$124,999 \$125,000 to \$134,999 \$135,000 to \$149,999 \$150,000 to \$199,999 \$200,000 or more Don't Know Refused |



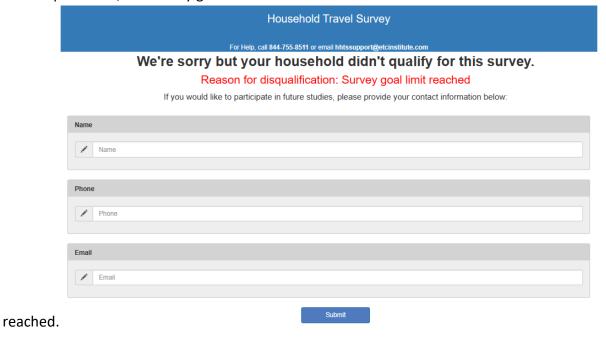
| | Household Travel Survey Household PIN: ZAYJW 1 Main St, Houston, Texas, 77002 Home |
|---------|--|
| ENGLISH | For Help, call 844-755-8511 or email hhtssupport@etcinstitute.com |

Please review your answers and go back to change them or click Next to proceed with the initial survey questions.

| Your Home Address | 1 Main St Houston Texas 77002 |
|---|-------------------------------|
| | |
| Counting yourself, how many people are in your household? (Excluding college students or military personnel who do not currently live at this address.) | 1 |
| | |
| Including yourself, how many people are employed in your household? | None |
| | |
| Please indicate the combined annual income for your household? | Less than \$9,999 |
| Go Back Next | |



For disqualified participants, a reason would be given as to why they were disqualified. In the example below, the survey goal limit for that size household and that income had been

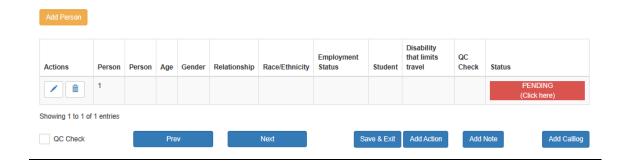


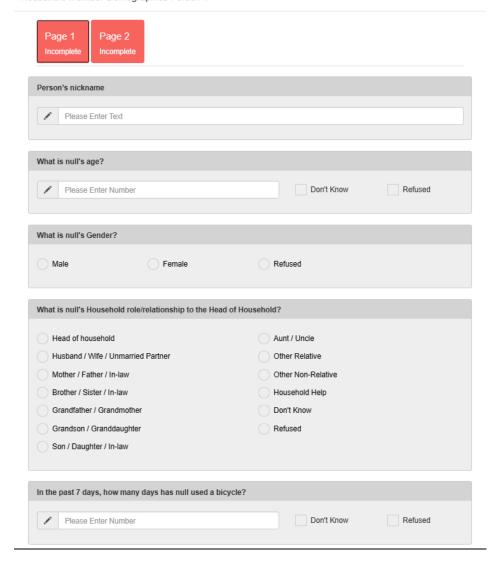
Household Information

| | | | | usehold P | | | | |
|--|-------------------------|--------------------|------------------------------------|---------------|-----------|----------------|-----------|--------------------------|
| | | | , , | T 15: | 0.1 | | | support@etcinstitute.com |
| Household Info | Household Men | nber Info V | /ehicles | Travel Dia | ry Set-up | Household Deta | ails | |
| Click here to revie | | | | | | | | |
| How many motorize | d vehicles in working o | condition does y | our household | l have? | | | | |
| ✓ Type number | | | | | | Don't Know | R | efused |
| How many bicycles | in working condition a | re available for u | use by member | rs of your ho | ousehold? | | | |
| ✓ Type number | | | | | | Don't Know | R | efused |
| Which one of the fol | lowing BEST describe | s your home? | | | | | | |
| Single-Family Ho | ome (unattached) | Duplex | | | Mobile Ho | ome | Don't Kno | w |
| Condo | | Apartment | | | Other | | Refused | |
| One year or less Two years Three years | re you lived in your cu | rrent home? | Four years Five years o Don't Know | or more | | R | efused | |
| | | | | | | | | |
| How many years have | you lived in your curr | ent nome? | | | | | | |
| One year or less Two years | | | Four years Five years or | r more | | 0 | Refused | |
| Three years | | | Don't Know | - Hole | | | | |
| Was your previous res | idence in this same a | rea? | | | | | | |
| Yes No | | | | | Don't Kn | | | |
| In what zip code was y | our previous residen | ce located? | | | | | | |
| ✔ Enter zipcode | | | | | | Don't Know | | Refused |

| | How many years | have you lived in your current home | ? | | | |
|------|------------------|-------------------------------------|-----------|---------------------------------|------------|---------------------------------|
| | One year or le | ess | Four year | s | Refused | |
| | Two years | | Five year | s or more | | |
| | Three years | | Don't Kno | w | | |
| | | | | | | |
| | Do you own or re | nt your current residence? | | | | |
| | Own/Paying N | Nortgage | Provided | by job or military | Don't Know | |
| | Rent | | Other | | Refused | |
| | | | | | | |
| Hous | ahald May | mbar Informati | ion | | | |
| TOUS | enoia iviei | mber Informati | OH | | | |
| | | | Hous | ehold Travel Sur | vey | |
| | | | | ousehold PIN: 17EC7 | | |
| | | | | cott St, Houston, Texas Home | , 77007 | |
| | | | | cott St, Houston, Texas | | mail hhtssupport@etcinstitute.c |
| | Household Info | Household Member Info | | cott St, Houston, Texas | | mail hhtssupport@etcinstitute.c |

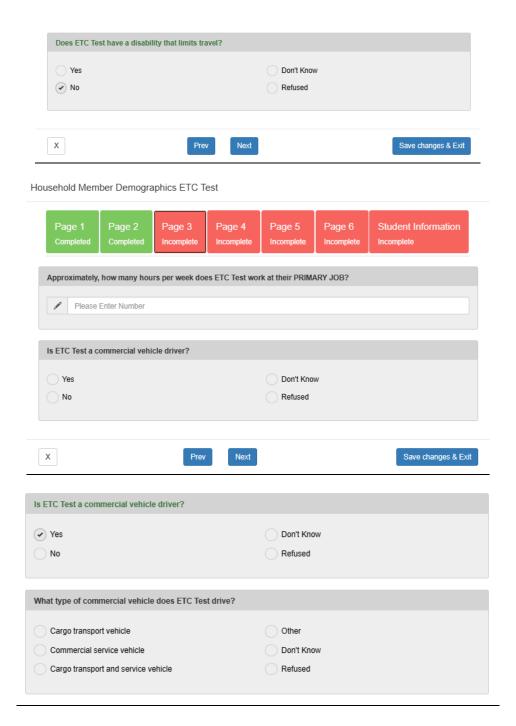
To get started please click on the pencil icon in the Edit/Delete column in the table below.





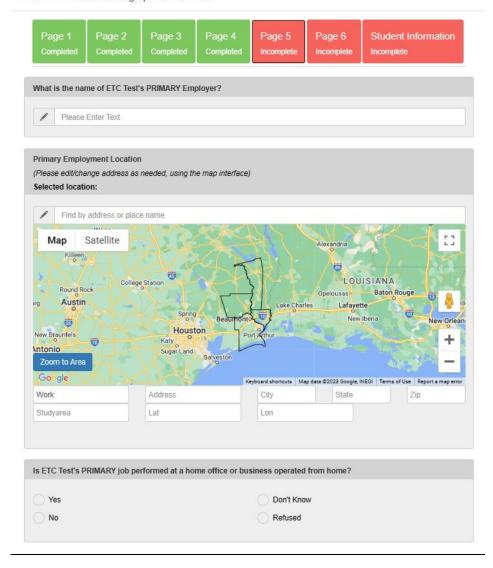
| Is ETC Test a licer | nsed Driver? | | |
|-----------------------|---------------------------------|------------------------|---------------------|
| Yes | | Don't Know | |
| ○ No | | Refused | |
| | | | |
| | | la bissala | |
| . | now many days has ETC Test used | | Refused |
| n the past 7 days, h | now many days has ETC Test used | a bicycle? Don't Know | Refused |
| 1 | now many days has ETC Test used | Don't Know | Refused |
| 1 | | Don't Know | Refused Don't Know |
| / 1 What was the most | common trip purpose for ETC Tes | Don't Know | |

| Page 1 Page 2 Incomplete | |
|---|---|
| What is ETC Test's Race/Ethnicity (Multiple Responses Allow | ved)? |
| Black / African-American Hispanic / Mexican-American Asian / Pacific Islander Native American | White / Caucasian Other Don't Know Refused |
| Is ETC Test Employed? | |
| Yes No | Don't Know Refused |
| What is the highest grade or degree that ETC Test has earne | d? |
| Less than a high school graduate High school graduate or GED Some College or Associate's degree Bachelor's degree | Graduate degree or professional degree Don't Know Refused |
| Is ETC Test a Student? (Note: children in daycare are consid | ered students) |
| Yes No | Don't Know Refused |
| Is ETC Test Employed? | |
| Yes✓ No | Don't Know Refused |
| Which of the following best describes ETC Test's situation? | |
| Retired Volunteer Disability Status Homemaker Looking for Work | Not Looking for Work Student Other Don't Know Refused |



| Page 1 Completed | Page 2 Completed | Page 3 Completed | Page 4 Incomplete | Page 5 Incomplete | Page 6 Incomplete | Student Information Incomplete |
|---|--|---------------------------|----------------------|--|---|--|
| s ETC Test co | nsidered self-en | nployed at their | PRIMARY place | e of employmen | t? | |
| Yes | | | | Oon't Kno | w | |
| ✓ No | | | | Refused | | |
| Vhich of the fo | llowing best de | scribe ETC Tes | t's PRIMARY pla | ace of employm | ent? | |
| | J | | t's PRIMARY pla | | | lallaga/l Injugrcity/Trada School |
| Office build | Illowing best de ing (non-governr ing (government) | ment) | ťs PRIMARY pla | School; Pe | | ollege/University/Trade Schoo /orkplace |
| Office build | ing (non-governr | nent) | t's PRIMARY pla | School; Pe | ost-Secondary C | |
| Office build Office build Retail Store | ing (non-governring (government) | nent)) Gas station | | School; Po | ost-Secondary C | /orkplace |
| Office build Office build Retail Store Industrial V | ing (non-governr ing (government) | nent)) Gas station | | School; Po | ost-Secondary C ice/Residential W | /orkplace |
| Office build Office build Retail Store Industrial V | ing (non-governring (government) e/Shopping mall/ /arehouse/Manufices/Hospital | nent)) Gas station | | School; Po Home Offi Airport Restaurar | ost-Secondary C ice/Residential W nt/Fast Food, Caf | /orkplace |

| Which of the following best describe ETC Test's PRIMARY | occupation? |
|---|--|
| Which of the following best describe ETC Test's PRIMARY Management, professional, and related occupations Service occupations Sales and office occupations Farming, fishing, and forestry occupations Construction, extraction, and maintenance occupations Production, transportation, and material moving occupation | |
| Other/Not applicable (unemployed/student/retired) | |
| On't know | |
| Refused | |
| Which of the following best describes the type of industry Agriculture, forestry, fishing and hunting, mining | of ETC Test's PRIMARY occupation? Professional, scientific, management, administrative, and |
| | waste management services |
| Construction | Education, health, and social services |
| Manufacturing | Arts, entertainment, recreation, accommodation, food service |
| Wholesale trade | Other services (except public administration) |
| Retail trade | Public Administration |
| Transportation, warehousing, utilities | Not Applicable-(unemployed, student, retired) |
| Information | On't Know |
| Finance, insurance, real estate, rental and leasing | Refused |
| | |
| X Prev Next | Save changes & Exit |



| Page 1 Completed | Page 2 Completed | Page 3 Completed | Page 4 Completed | Page 5 Completed | Page 6 Incomplete | Student Information Incomplete |
|------------------|-------------------|---------------------|------------------|------------------|-------------------|--------------------------------|
| Does ETC Test | currently work | from home or te | lecommute on | a regular basis | for their PRIMA | RY job? |
| Yes No | | | | Don't Know | W | |
| Is ETC Test's P | RIMARY work s | chedule flexible | or fixed? | | | |
| Flexible / Va | ariable | Fixed / Uno | changing | Don't Kno | W | Refused |
| How many days | s per week does | ETC Test typic | ally work at the | ir PRIMARY job | ? | |
| ✔ Please I | Enter Number | | | | Don't Know | Refused |
| How many of the | ne last 7 days ha | as ETC Test wor | ked at home fo | r their PRIMAR\ | / job? | |
| Does ETC Test | have more than | one job? | | | | |
| Yes | | No | | Don't Kno | W | Refused |
| Does ETC Test ha | ave more than | one job? | | | | |
| Yes | | No | | Oon't Know | V | Refused |
| How many total j | obs does ETC | Test have? | | | | |
| ✓ Please Er | nter Number | | | | Don't Know | Refused |
| Approximately, h | ow many hours | s per week does | ETC Test wor | k at their SECO | NDARY JOB? | |
| ✔ Please Er | nter Number | | | | | |

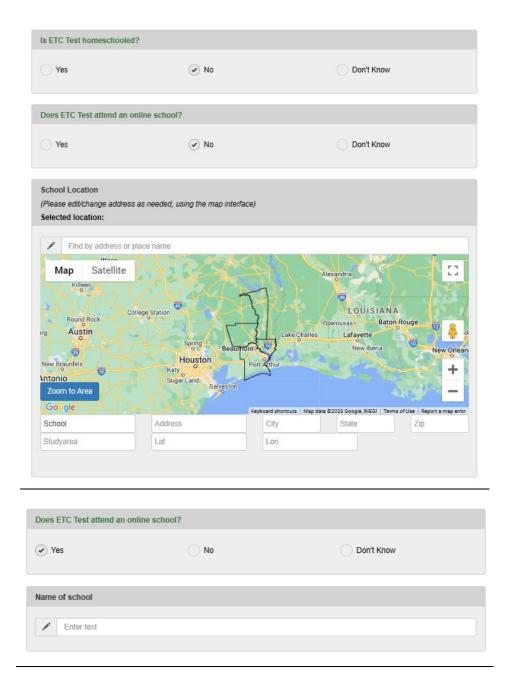
Household Member Demographics ETC Test

| Page 1 Completed | Page 2 Completed | Page 3 Completed | Page 4 Completed | Page 5 Completed | Page 6 Completed | Page 7 Incomplete | |
|---|---|---------------------------|------------------|---|--------------------------------------|----------------------|----------------|
| Student In | formation | | | | | | |
| Is ETC Test co | nsidered self-en | nployed at their | SECONDARY p | place of employs | nent? | | |
| Yes | | | | Don't Kno | w | | |
| ○ No | | | | Refused | | | |
| | | | | | | | |
| Which of the fo | ollowing best de | escribe ETC Tes | t's SECONDAR | Y place of emplo | pyment? | | |
| | ollowing best de | | t's SECONDARY | | oyment? ost-Secondary C | college/University | //Trade School |
| Office build | J | ment) | t's SECONDAR' | School; P | - | | //Trade School |
| Office build | ling (non-governr | ment) | t's SECONDAR | School; P | ost-Secondary C | | //Trade School |
| Office build Office build Retail Store | ling (non-governr | ment)) Gas station | | School; Po | ost-Secondary C | Vorkplace | /Trade School |
| Office build Office build Retail Store Industrial V | ling (non-governr ling (government | ment)) Gas station | | School; Po | ost-Secondary C | Vorkplace | //Trade School |
| Office build Office build Retail Store Industrial V | ling (non-governr ling (government e/Shopping mall/ Varehouse/Manu fices/Hospital | ment)) Gas station | | School; P Home Off Airport Restaurar | ost-Secondary C ice/Residential W | Vorkplace | /Trade School |

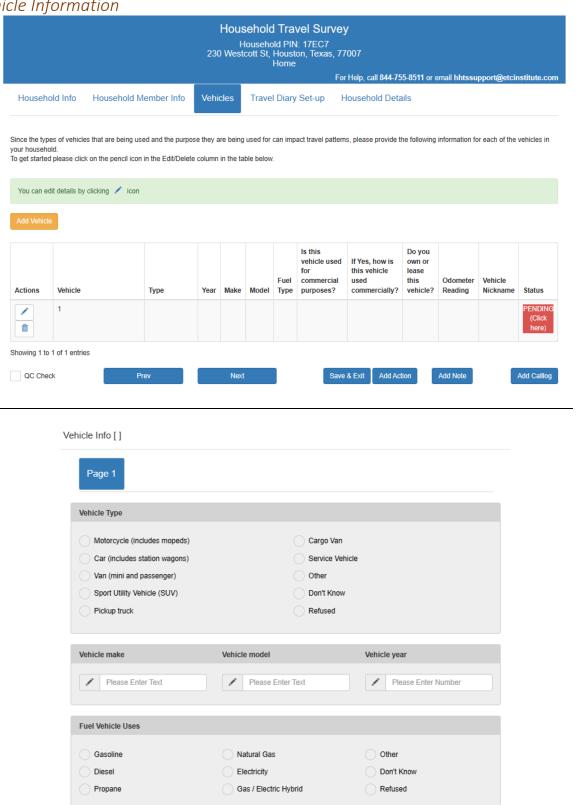
| Management, professional, and related occupations | |
|---|--|
| Service occupations | |
| Sales and office occupations | |
| Farming, fishing, and forestry occupations | |
| Construction, extraction, and maintenance occupations | |
| Production, transportation, and material moving occupation | tions |
| Other/Not applicable (unemployed/student/retired) | |
| Don't know | |
| Refused | |
| /hich of the following best describes the type of industr | ry of ETC Test's SECONDARY occupation? |
| Thich of the following best describes the type of industrial Agriculture, forestry, fishing and hunting, mining | |
| Agriculture, forestry, fishing and hunting, mining Construction | Professional, scientific, management, administrative, ar |
| Agriculture, forestry, fishing and hunting, mining | Professional, scientific, management, administrative, at waste management services |
| Agriculture, forestry, fishing and hunting, mining Construction | Professional, scientific, management, administrative, at waste management services Education, health, and social services Arts, entertainment, recreation, accommodation, food |
| Agriculture, forestry, fishing and hunting, mining Construction Manufacturing | Professional, scientific, management, administrative, as waste management services Education, health, and social services Arts, entertainment, recreation, accommodation, food service |
| Agriculture, forestry, fishing and hunting, mining Construction Manufacturing Wholesale trade | Professional, scientific, management, administrative, at waste management services Education, health, and social services Arts, entertainment, recreation, accommodation, food service Other services (except public administration) |
| Agriculture, forestry, fishing and hunting, mining Construction Manufacturing Wholesale trade Retail trade | Professional, scientific, management, administrative, at waste management services Education, health, and social services Arts, entertainment, recreation, accommodation, food service Other services (except public administration) Public Administration |

Household Member Demographics ETC Test

| Page 1 Completed | Page 2 Completed | Page 3 Completed | Page 4 Completed | Page 5 Completed | Page 6 Completed | Page 7 Completed | | | | |
|--|--------------------------------------|------------------|------------------|----------------------------------|------------------|------------------|--|--|--|--|
| Student Information Incomplete | | | | | | | | | | |
| What type of school does ETC Test go to? | | | | | | | | | | |
| Daycare / F | reschool | | | Post Secondary / College / Trade | | | | | | |
| Elementary | School | | | Other | | | | | | |
| Middle Scho | Middle School/Junior High Don't Know | | | | | | | | | |
| High School | | | Refused | | | | | | | |
| | | | | | | | | | | |
| Is ETC Test hor | neschooled? | | | | | | | | | |
| Yes | | ○ No | | | ○ Don't Know | | | | | |
| Does ETC Test attend an online school? | | | | | | | | | | |
| Yes | Yes No | | | Don't Know | | | | | | |
| | | | | | | | | | | |



Vehicle Information



| Is this vehicle used for commercial purposes? | | | | | | | |
|--|--|--|--|--|--|--|--|
| Don't Know Refused | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Don't Know Refused | | | | | | | |
| e such as "Nick's car" This will help you later when filling | | | | | | | |
| | | | | | | | |
| ○ Don't Know ○ Refused | | | | | | | |
| | | | | | | | |
| Other Don't Know | | | | | | | |
| | | | | | | | |

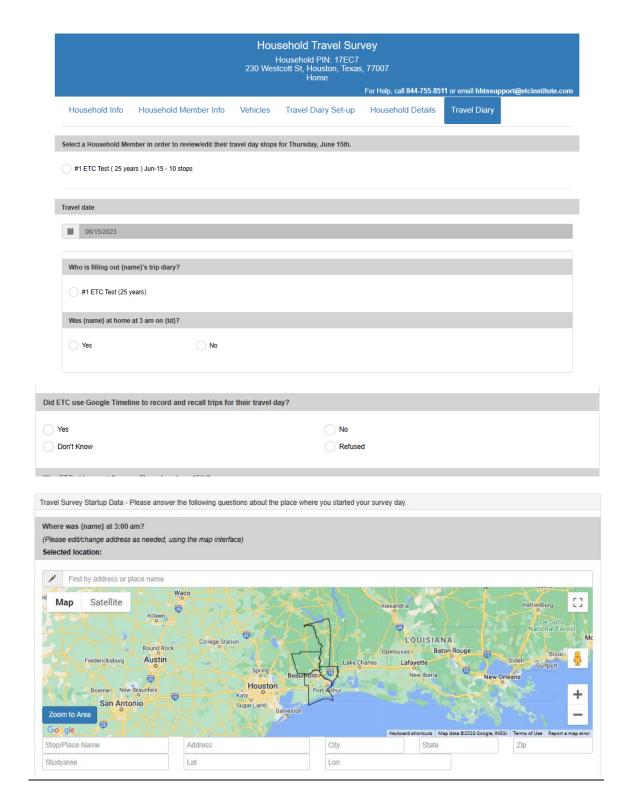
Participation Information

| Household Travel Survey | | | | | | | | | | |
|--|--|---------------|-----------|------------|--------------------|----------|--------------------------------|--------------|-------------------------|--|
| Household PIN: 17EC7 230 Westcott St, Houston, Texas, 77007 Home | | | | | | | | | | |
| | | | | _ | | For Help | o, call 844-755-8511 or | email hhtssu | upport@etcinstitute.com | |
| Hous | ehold Info | Household Mer | nber Info | Vehicles 1 | ravel Diary Set-up | Hous | ehold Details | | | |
| "We ap | "We appreciate the information you've provided! We also need to collect information about the places that residents in your area visit on typical weekday." | | | | | | | | | |
| - | [IF MORE INFO NEEDED: "Data about people's travel patterns help your local and sate transportation departments plan improvements to this region's transportation system, to make it easier for people to get where they want to go."] | | | | | | | | | |
| | We collect that information by asking local households to keep a log of their trips for 24 hours. With a set of completed 24-hr trip logs, each member of the participating household can choose a reward from dozens of national retailers. You can also choose to donate your reward to your favorite charity. | | | | | | | | | |
| | Which person in your household will be in charge of making sure everyone has COMPLETED a travel diary? NOTE: This person will be the contact person for your household if we have questions about any of the survey responses. | | | | | | | | | |
| #1 ETC Test (25 years) | | | | | | | | | | |
| Please choose your travel date: | | | | | | | | | | |
| Thursday June 15th, 2023 Friday June 16th, 2023 Monday June 19th, 2023 Other | | | | | | | | | | |
| Edit | Person | | Email | Phone | Survey Mode | | Send Reminders | | Status | |
| | #1 ETC Test (2 | 5) | | | | | | | PENDING (Click here) | |
| Showing | Showing 1 to 1 of 1 entries | | | | | | | | | |
| QC | QC Check Prev Next Save & Exit Add Action Add Note Add Calllog | | | | | | | | | |

Page 1 How will ETC Test's travel diary be completed? Note: When choosing how to participate, past participants who have used multiple methods for entering travel information, preferred the ease and speed of the mobile app. If no one in your household uses the smartphone app, your household will receive a \$20 gift card upon completion. If at least one person in your household uses the smartphone app to complete their travel diary, your household will receive a \$40 gift card. Smartphone App (recommended if applicable) Online (on this website) Over the phone with our call center Mailed paper survey materials Email Please provide your email address Don't Know Refused Phone number (allowed formats: 123-456-7890 or 1234567890) Please Enter Number Don't Know Refused Phone number (allowed formats: 123-456-7890 or 1234567890) Refused 9999999999 Don't Know May we send text reminders to ETC Test regarding the survey? Note: Reminders will stop once the survey is completed Yes O No

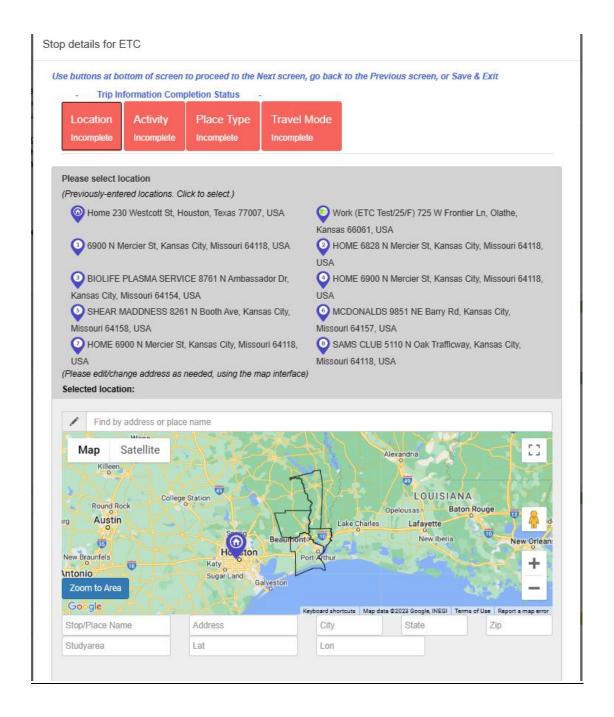
Travel Diary Information

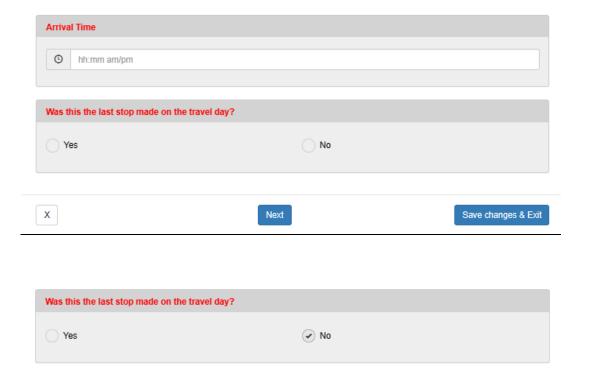
| | Household Travel Survey Household PIN: 17EC7 230 Westcott St, Houston, Texas, 77007 Home | | | | | | | | | |
|--|--|---------------------------------|----------------|-----------------------------|---------------------|--|--|--|--|--|
| | Household Info | Household Member Info | Vehicles | Travel Diary Set-up | Household Details | 11 or email hhtssupport@etcinstitute.com Travel Diary | | | | |
| | Did any non-household members stop by your residence for any reason on your travel day? | | | | | | | | | |
| | Yes Don't Know No Refused | | | | | | | | | |
| | Did any commercial vehicles stop at your residence to deliver cargo on your travel day? | | | | | | | | | |
| | Yes Don't Know No Refused | | | | | | | | | |
| | Did any commercial vehicles stop at your residence to perform work activities on your travel day? | | | | | | | | | |
| | Yes Don't Know No Refused | | | | | | | | | |
| D | | | | | | | | | | |
| DI | a any non-nousenoia i | members stop by your residence | for any reason | i on your traver day? | | | | | | |
| • | | | | Don't Kno | DW | | | | | |
| On your household's assigned travel day, how many different people (who are not members of your household) stopped by or visited your home for any reason? | | | | | | | | | | |
| | ✓ Enter number | | | | Don't Know | Refused | | | | |
| Di | Did any commercial vehicles stop at your residence to deliver cargo on your travel day? | | | | | | | | | |
| • | Yes No | | | Don't Kno | OW | | | | | |
| 0 | n your household's as | signed travel day, how many com | mercial vehicl | es stopped at this residenc | e to deliver cargo? | | | | | |
| | ✓ Enter number | | | | Don't Know | Refused | | | | |
| Did any commercial vehicles stop at your residence to perform work activities on your travel day? | | | | | | | | | | |
| | Yes No | | | Don't Kno | ow | | | | | |
| 0 | On your household's assigned travel day, how many commercial vehicles stopped at this residence to perform work? | | | | | | | | | |
| | Enter number | | | | Don't Know | Refused | | | | |



| Activity at Location | | | | | | | | |
|---|---|--|--|--|--|--|--|--|
| At Home; primary job related | Personal Business; laundry, dry cleaning, barber, medical, etc. | | | | | | | |
| At Home; other | Other Services | | | | | | | |
| At Home; job and non-job related | Social/Recreational | | | | | | | |
| Work | Eat Out | | | | | | | |
| Work Related | Civic Activities (including church) | | | | | | | |
| School; Daycare/Preschool | Pick-up/Drop-off Person at Work | | | | | | | |
| School; Elementary | Pick-up/Drop-off Person at School | | | | | | | |
| School; Middle/Junior High | Pick-up/Drop-off Person at Day Care | | | | | | | |
| School; High School | Pick-up/Drop-off Person at Other | | | | | | | |
| School; College/University/Trade School | Change Mode of Travel | | | | | | | |
| Incidental Shopping; gas, groceries, etc. | Other Activity | | | | | | | |
| Major Shopping; clothes, appliances, etc. | On't Know | | | | | | | |
| Volunteer | Refused | | | | | | | |
| | | | | | | | | |
| Type of place | | | | | | | | |
| Residential | Fitness Club / Gym | | | | | | | |
| Residential Type Workplace | Medical Facility / Hospital | | | | | | | |
| Construction Site | Movie Theater / Cinema | | | | | | | |
| Transportation stop (Bus, Train) | Restaurant / Fast Food, Bar & Grill | | | | | | | |
| Automotive Dealer / Repair | Educational-12th Grade or lower | | | | | | | |
| Bank / Financial Institution | Educational-college, trade, etc. | | | | | | | |
| Barber / Beauty / Nail Salon | Shopping Mall / Department Store | | | | | | | |
| Bookstore / News Stand | Gas Station | | | | | | | |
| Convenience / Drug Store | Airport | | | | | | | |
| Gov / City / County / State / Federal Offices | Other | | | | | | | |
| Offices (Non-Government) | O Don't Know | | | | | | | |
| Grocery | Refused | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Did undefined leave 6900 N Mercier St, Kansas City, MO 64118, USA at any time on Thursday, June 15th? | | | | | | | | |
| | | | | | | | | |
| Yes | They were out of the area / region all day | | | | | | | |
| ○ No | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Did undefined leave 6900 N Mercier St, Kansas City, MO 64118, USA at any time on Thursday, June 15th? | | | | | | | | | |
|--|---|--|--|-----------------------------|--|--|--|--|--|
| Yes ✓ No | | | They were out of the area / region all da | ıy | | | | | |
| Why didn't undefined travel on the | Why didn't undefined travel on the survey day? | | | | | | | | |
| Personal illness Vacation or personal day Caring for a dependent Home-bound elderly or disabled Worked at home (for pay) Not scheduled to work Worked around home (not for p | | | Bad weather No transportation available No longer a household resident Did not need to travel Other Don't Know Refused | | | | | | |
| Did undefined leave 6900 N Mercier St, Kansas City, MO 64118, USA at any time on Thursday, June 15th? | | | | | | | | | |
| ✓ Yes No They were out of the area / region all day | | | | | | | | | |
| What time did undefined leave this location on Thursday, June 15th? | | | | | | | | | |
| hh:mm am/pm | | | | | | | | | |
| Fravel Day Stops | | | | | | | | | |
| Please make sure all the stops from the travel day are recorded accurately below. You can add, edit, reorder and delete stops. Answer questions for each stop by clicking on the pencil icon. If you see a stop below in red font, that does not necessarily indicate anything is wrong with the stop details. However, you may want to double-check these trip details. Something looks a little odd to us. These stops will receive additional scrutiny during review. Only enter information for trips you have already completed. Do not enter information for future travel. | | | | | | | | | |
| Add Stop | Add Stop Click to edit another household member's stops | | | | | | | | |
| Show Deleted Stops Show Traffic Signal Stops Show Hidden Stops | | | | | | | | | |
| Actions | # | Location/Activity | | Status | | | | | |
| | Start | Place Name: 6900 N Mercie Activity: At Home; other Place Type: Residential | er St | Pending (Complete above) | | | | | |
| Showing 1 to 1 of 1 entries | | | | | | | | | |





Departure Time

hh:mm am/pm

Х

Use buttons at bottom of screen to proceed to the Next screen, go back to the Previous screen, or Save & Exit **Trip Information Completion Status** Activity Place Type Travel Mode Incomplete **Activity at Location** At Home; primary job related Personal Business; laundry, dry cleaning, barber, medical, etc. At Home; other Other Services Social/Recreational At Home; job and non-job related Work Eat Out Work Related Civic Activities (including church) School; Daycare/Preschool Pick-up/Drop-off Person at Work School; Elementary Pick-up/Drop-off Person at School School; Middle/Junior High Pick-up/Drop-off Person at Day Care School; High School Pick-up/Drop-off Person at Other School; College/University/Trade School Change Mode of Travel Incidental Shopping; gas, groceries, etc. Other Activity Major Shopping; clothes, appliances, etc. Don't Know Volunteer Refused

Next

Save changes & Exit

Х

Use buttons at bottom of screen to proceed to the Next screen, go back to the Previous screen, or Save & Exit **Trip Information Completion Status** Place Type Travel Mode Incomplete Type of place Residential Fitness Club / Gym Residential Type Workplace Medical Facility / Hospital Construction Site Movie Theater / Cinema Transportation stop (Bus, Train) Restaurant / Fast Food, Bar & Grill Automotive Dealer / Repair Educational-12th Grade or lower Bank / Financial Institution Educational-college, trade, etc. Barber / Beauty / Nail Salon Shopping Mall / Department Store Bookstore / News Stand Gas Station Convenience / Drug Store Airport Other Gov / City / County / State / Federal Offices Offices (Non-Government) Don't Know Refused Grocery

Next

Save changes & Exit

Use buttons at bottom of screen to proceed to the Next screen, go back to the Previous screen, or Save & Exit **Trip Information Completion Status** Incomplete Mode of travel Walk Bicycle Driver (Car / Truck / Van) Motorcycle / Moped Passenger (Car / Truck / Van) Scooter (Bird, Lime, etc.) Carpool / Vanpool (Driver or Passenger) Commercial Service Vehicle Public Transit Commercial Cargo Transport Vehicle School Bus Other Rideshare Service (Uber, Lyft, etc.) Don't Know Refused Taxi / Paid Limo Х Save changes & Exit How many people traveled to this stop/destination, (including ETC)? 2 Was anyone else from your household traveling with you to this location? Yes O No

Stop details for ETC Personal 856b Broadway, Beaumont, Texas Use buttons at bottom of screen to proceed to the Next screen, go back to the Previous screen, or Save & Exit **Trip Information Completion Status** Persons How many people traveled to this stop/destination, (including ETC)? ✓ Please Enter Number Does the vehicle used for this trip belong to your household? Yes O No Don't Know Refused X Prev Save changes & Exit How many people traveled to this stop/destination, (including ETC)? 1 2 Was anyone else from your household traveling with you to this location? Yes O No Does the vehicle used for this trip belong to your household? Yes O No Oon't Know Refused Which vehicle #1 RAM 1500 2018 Was this vehicle used on all of your remaining trips on the survey day?

ETC Institute 83

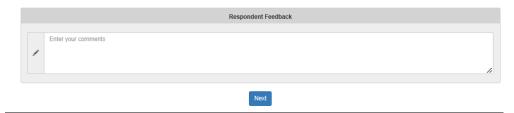
O No

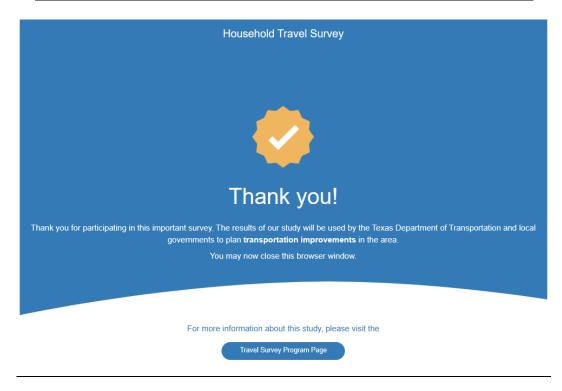
Yes

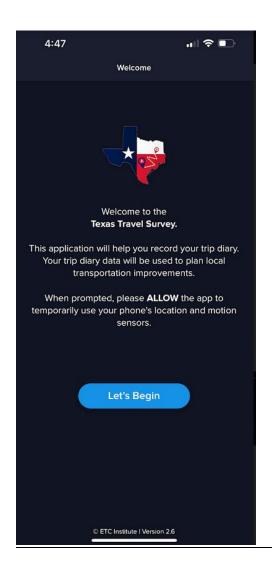


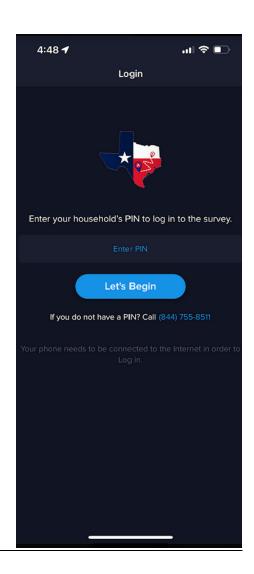
Your Comments About This Survey

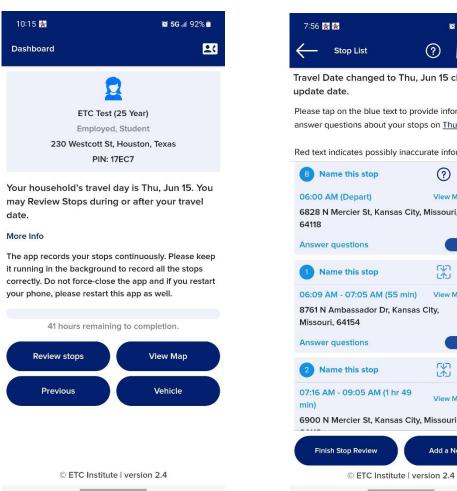
In a few words, please tell us about aspects of the survey process and tools that you liked or disliked. We would appreciate any improvements or suggestions you might have.

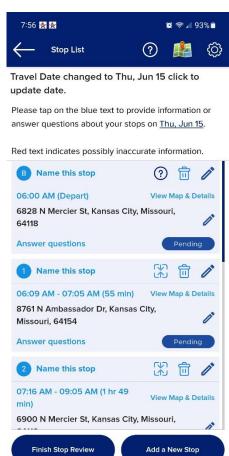


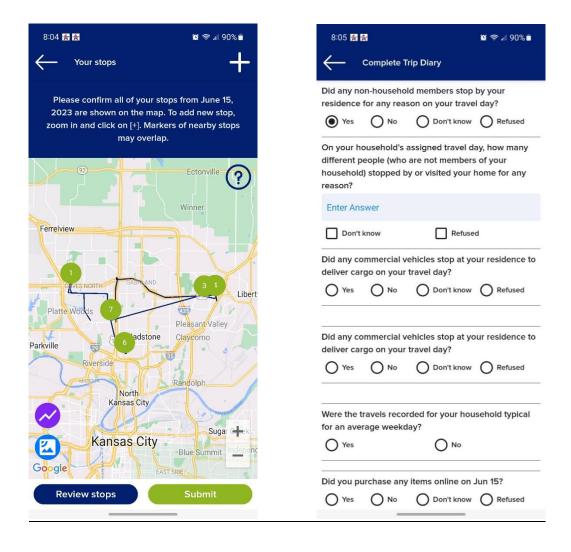












Appendix H: Flow Chart of App Algorithm

