Maryland Statewide Household Travel Survey
Final Report

August 2020

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Acknowledgments

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1. Introduction and Executive Summary

In spring 2018, the Baltimore Metropolitan Council (BMC) issued a request for proposals seeking professional services for the Maryland-Statewide Travel Survey (MTS). Information collected as a part of the MTS will be incorporated into the Baltimore region Travel Demand Model (TDM) update, used in support of advanced model development and analyzed to provide an assessment of current travel behavior across the state of Maryland.

BMC contracted with Westat to conduct the 2018-19 MTS. The survey collected socio-demographic data and a one-day (24-hour) period of household travel behavior during weekdays (Monday through Friday). The survey also included the use of a smartphone app offered to all participants who owned a smartphone and were at least 16 years of age. The use of the app was an option to replace paper logs and reduce the travel reporting process for those comfortable with smartphone technology.

The survey called for data from 7,500 households from counties across Maryland including Alleghany, Anne Arundel, Baltimore, Caroline, Carroll, Cecil, Dorchester, Garrett, Harford, Howard, Kent, Queen Anne's, Somerset, Talbot, Washington, Wicomico, Worchester, and Baltimore City.

The MTS represents 18 of the 24 Counties in Maryland across the Baltimore Metropolitan Region (BMR), the Eastern Shore (ES), and Western Maryland (WM). The BMR region is comprised of the city of Baltimore, Anne Arundel County, Baltimore County, Carroll County, Harford County, Howard County, and Queen Anne's County. The Eastern Shore is comprised of Caroline, Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties. Finally, Western Maryland includes the following counties: Allegany, Garrett, and Washington. The remaining six counties; Calvert, Charles, Frederick, Montgomery, Prince George's, and Saint Mary's County; were included as a part of the MWCOG Regional Travel Survey.

Sample from Anne Arundel, Carroll, and Howard County was split between the MTS and the Metropolitan Washington Council of Governments' (MWCOG) Regional Travel Survey (RTS). The two surveys were conducted separately and concurrently with both data collection field periods overlapping for a total of nine months. Data from the three overlapping counties in the RTS was combined with the MTS data and included in weighting and expansion for the statewide dataset. The combined dataset was weighted and expanded to the 2017 Public Use Microdata Sample (PUMS) estimates.

2. Survey Overview

2.1. Sample Design

2.1.1. Sample Frame and Selection

An address-based sample (ABS) frame was developed to identify all residential addresses in the study area and then a randomly selected sample of those addressed were invited to participate in the MTS. The ABS was selected from the United States Postal Service (USPS) Computerized Delivery Sequence File and included all street addresses in the Baltimore Metropolitan Region (BMR), Eastern Shore (ES), and Western Maryland (WM). An attempt was made to match each sampled address with a landline telephone number. In cases where an address was matched to a telephone number, the phone number may have been used to contact a non-responding sampled address during the data collection process. All sampled addresses were eligible to participate in the study.

Based on pre-survey response rate assumptions, a sample of 67,787 residential addresses were selected for inclusion in the MTS to achieve the goal of 7,500 completed households. A final grand total of 63,155 households were invited to participate in the MTS.

Three counties (Anne Arundel, Carroll, and Howard County) in the Baltimore Metropolitan Region were sampled jointly between the MTS and MWCOG's Regional Travel Survey (RTS), ensuring that there would be no households selected and invited into both surveys. Households from the three overlapping counties completed in the RTS (n=1,485) were combined with the MTS dataset in post-processing. Sections 2 – 4 focus on the methodologies used to conduct the MTS resulting in 6,828 completed households. Section 5 and onward present data from the combined studies netting 8,313 completed households in the Maryland Statewide Travel Survey dataset.

2.1.2. Sample Preparation

Prior to the beginning of data collection, the sampled addresses were assigned to release groups. Each release group was comprised of addresses that were representative of the entire modeling domain. Release groups were used to control the timing and amount of sample released. Multiple release groups of addresses were mailed invitations and reminder postcards simultaneously. Each release group contained 250 addresses, allowing the release of the sample to be managed effectively and efficiently as data collection proceeded.

The ABS sampling and release group strategy is designed to provide the best opportunity to achieve the sample objectives for geographic and socio-demographic distributions, day-of-week distributions, and to manage workflow. Figure 1 shows the locations of all sampled addresses.

Figure 1.   Home Locations of Sampled Addresses
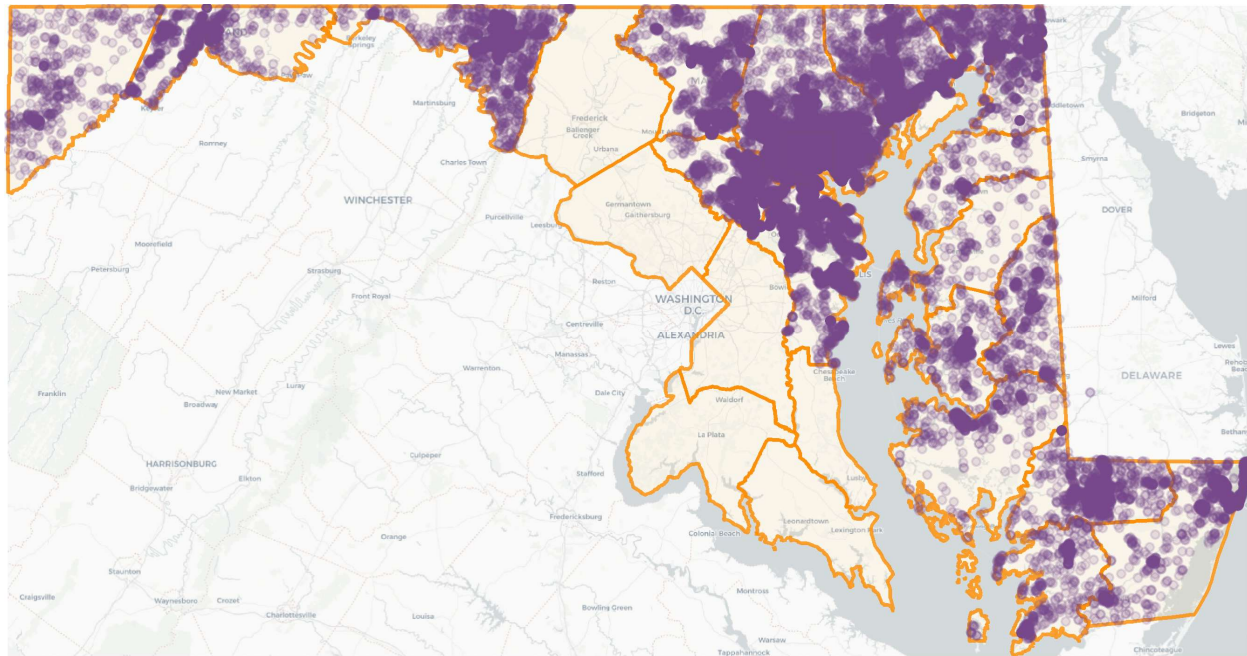
To achieve a balanced day-of-week distribution, each sampled address was randomly assigned a specified weekday (Monday to Friday) travel day with 20 percent of the sample assigned to each of the five travel days. A specific travel date was assigned to households during the recruitment survey.

The sampling and release group strategy is designed to provide the best opportunity to achieve the sample objectives for geographic and socio-demographic distributions, day-of-week distributions, and to manage workflow.

2.2. Survey Methodology

The study was designed as a multi-stage, mixed-mode survey with a graduated incentive structure to encourage participation and reduce respondent burden. The first stage utilized a screener survey to elicit general interest in the survey through the use of a short, simple paper questionnaire designed to focus on transportation issues relevant to all residents across the state of Maryland. The next stage, the recruitment survey, captured key demographic information for all household members and assigned a travel date to each household. The final stage, the retrieval survey, collected the travel details for each trip made by a household member on the travel date. In addition to the online retrieval survey, a smartphone app was offered to all age eligible respondents to help record their travel information. App users were asked to record up to seven days of travel information.

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This section of the report describes the survey instruments design and the data variables captured in the survey instruments.

2.2.1. Recruitment and Retrieval Instruments

The MTS instrument was designed to collect key analytic data required to support the development of travel demand and forecasting models. The survey instrument collected specific data items for each person age 5 and older in the household, including the travel behavior data for one weekday (24-hour period, Monday through Friday).

While these data are important, it is critical that they be collected in a way that minimizes respondent burden. The recruitment and retrieval surveys were administered using an integrated survey software system that supported both computer-assisted self-interviews (CASI) and computer-assisted telephone interviewing (CATI). Additionally, Westat's DailyTravel smartphone app was offered to all age-eligible participants to streamline collecting travel day information typically reported in the retrieval survey. Each survey mode used the same underlying questions, branching, format, and logic checks.

The recruitment questionnaire collected key TDM-focused demographic information about each household including income, household size, type of housing, and information about vehicle ownership. This questionnaire also asked for demographic characteristics about each member of the household such as age, gender, work, and student status, among others. At the conclusion of the recruitment survey, households were assigned a travel date. Households were also asked for contact information, such as email and cellphone number, to encourage continued engagement throughout the survey process.

Travel day details were collected through the customized TripBuilder™ component of the web survey software system, with an integrated online map that enabled real-time geocoding to collect accurate travel details. Travel details were captured in two steps. The first step was the creation of a sequential list of locations visited and basic attributes, including place name, arrival and departure times, and whether transit was used on the trip. If transit use was reported, access and egress details were captured within the TripBuilder™ interface.

The second step collected additional place details, such as mode of travel, place type, travel companions, primary activities at each place, and parking and transit fare information. Additional person-level characteristics and behavioral questions were collected once all household members age 5 and older completed reporting their travel details.

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The following sections list the key information that was verified, collected, or derived about each completed household. A full detailed list of variables are provided in a separate data codebook for reference.

2.2.1. 1. Household Data

Household-level details were collected for each household in the final dataset. Among the variables reported in the data are:

- Household size

- Household income

- Number of vehicles

2.2.1. 2. Person Data

Specific questions were asked about each household member living in the home on the date the recruitment survey was completed. Key person-level variables collected about household members include:

- Age

- Gender

- Relationship of all household members to the recruit survey respondent

- Licensed driver status (age eligible)

- Employment status (age eligible)

- If employed, additional data items related to work

- Student status

- If a student, additional data items related to school

- Highest level of education earned

- Hispanic origin

- Race

2.2.1.3. Travel Day Trip Data

The travel day began at 3 a.m. on the assigned date of travel. Data were collected for each trip made by each household member (age 5 and older) throughout the day until 2:59 a.m. the following day. Key trip-related details collected include:

- Trip start and end locations

- Trip start and end times

- Mode of travel

- If household vehicle was used, additional data items related to the vehicle and passengers

- If transit was used, additional data items related to access and egress

- Travel Companions

- Primary activity at each location (trip purpose)

2.3. Branding and Public Outreach

Prior to beginning data collection, branding was established to create a clear, consistent, and resonant message to be used on the survey and public outreach materials. Sponsorship from a well-known agency is a key component to the success of a survey. As such, the MDOT logo was prominently featured on the outside of all survey materials to garner buy-in from respondents and increase the likelihood that they would open the mailed invitation. A survey logo was designed by Westat to be used in conjunction with the MDOT logo to brand the survey and aid participants in the transition from paper questionnaire to reporting online (Figure 2). These elements set the design for all other outreach components including the printed materials, website, and survey instruments.

Figure 2.   Study Logo

Westat developed a project-specific, public-facing website to promote the survey and communicate with the general population, and to serve as the access point to the survey instruments. The site was designed with the same color scheme, logo, and style of the survey materials so that participants

would see an immediate connection between the invitation letter and the website. A short, descriptive web address, or uniform resource locator (URL) was used to allow for easy dictation to, and recall by participants (MDTravels.com). The site served primarily as a portal for joining the survey for prospective participants, and as a means for participants to access information and view frequently asked questions (FAQs).

Westat and BMC launched a social media ad set and delivered it through the entirety of the survey data collection period. The aim of this effort was to raise the public awareness of the survey and add a sense of legitimacy to the public perception of the project. Managers recognized that the odds of the small number of sampled households overlapping with the households who received a social media ad were low, and so the total budget for the effort was limited.

2.4. Data Collection

Data collection began with letters of invitation mailed in April 2018 to sampled addresses and ended with final travel data collection in early August 2019. Invitation letters were mailed to 63,155 sampled addresses over the course of eleven months. The first travel dates began on May 2, 2018 with the last travel date on July 12, 2019. Holidays, which coincided with public school holidays, were excluded from the valid set of assigned travel dates. Additionally, sample was released less frequently during the summer months to control for the number of completed cases when school was not in session.

The survey data collection process included the recruitment of participants, various reminder contacts distributed across the field period, and the retrieval of the travel day data. The following sections describe this process in more detail.

2.4.1. Recruitment Process

Invitation letters were mailed to 63,155 addresses in the region. Letters were addressed to "city" resident (e.g., Annapolis Resident), printed on MDOT branded letterhead and signed by Heather Murphy from the Office of Planning & Capital Programming at the Maryland Department of Transportation. All mailed materials included a toll-free number to reach the study team if respondents had questions or preferred to participate by phone. Letters were dual-sided with English on the front and Spanish on the back. Additionally, a Spanish tagline was included at the bottom of each postcard. Examples of the recruitment materials can be found in Appendix A.

Each released sampled address was sent three pieces of mail requesting their participation in the survey. The first contact was an invitation package that included a letter with a brief description of

the survey, a short paper questionnaire, a prepaid envelope to mail back the completed questionnaire, and a $1 cash pre-incentive. Next, a reminder postcard was sent one week after the survey to remind households to complete the paper questionnaire. Finally, a second postcard was sent three weeks after the survey package which provided the survey URL and a personal identification number (PIN) and instructed respondents to go online to complete the recruitment survey.

Households that completed the paper questionnaire were then mailed a recruitment survey package that included a letter providing further details about the survey, travel logs for each household member age five and older, and a $5 cash pre-incentive. The recruitment letter included a brief description of the survey, instructions on how to participate, and information about the incentive structure. The URL for the public website, the toll-free survey hotline phone number, and the household PIN were provided to access the survey. A recruitment postcard was sent seven days after the recruitment package if the recruitment survey had not yet been completed.

The recruitment survey captured key demographic information about the household members, including details about school and work, and vehicles owned or leased by the household. Although the primary mode of participation at this stage was web, participants were also provided the opportunity to complete over the phone with a trained data collector. The home locations of all recruited households are shown in Figure 3. Table 1 shows the count of sampled households by region and actual number of recruitment responses for each region. The percent columns represent the percent of the total sampled and recruited cases in each region. In Table 1 and Table 2, as throughout this document, any references to Home Region should be read as data grouped according to the location of the home address of the household (or person, where relevant).

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Figure 3.   Home Locations of Recruited Households
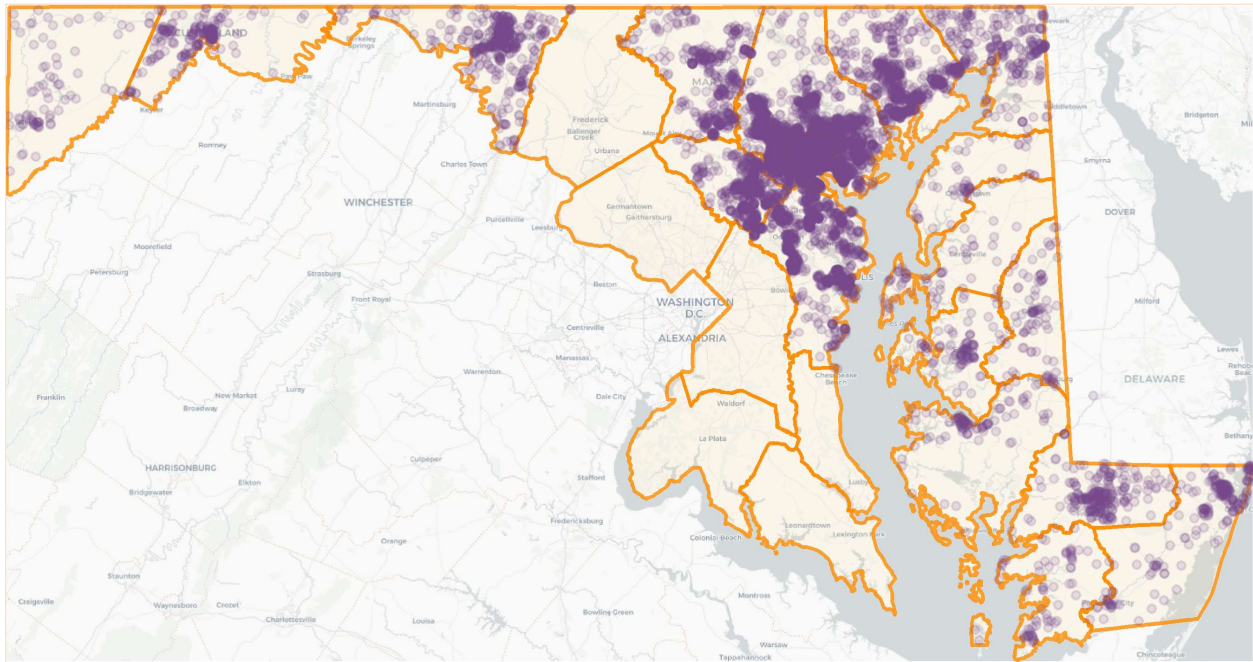
Table 1.   Released Sample and Recruited Households by Home Region

Home Region	Released Sample	Percent of Sample	Recruited Households	Percent of Total Recruits
BMR	51,067	80.86%	6,662	79.08%
ES	7,585	12.01%	1,080	12.82%
WM	4,503	7.13%	682	7.86%
Total	63,155	100.00%	8,424	100.00%

2.4.1.1.   Travel Date Assignment

Each address was randomly assigned to a day of the week (Monday through Friday) during the sampling process. Specific calendar dates were assigned at the time the household was recruited into the study based on the day of week that they were assigned when sampled. The goal was to have an even distribution of 20% of households to each of the five days of the week. During the recruitment survey, households were assigned the next available date that fell on the pre-assigned day of the week, beginning two days after the recruitment date. Travel logs were included with the recruitment package allowing for a quicker assignment of the travel date. Table 2 shows the distribution of recruited households by day of week for each region.

Table 2.　　　　Distribution of Recruited Households by Day of Week by Home Region

Home Region	HH Travel Survey Day of Week	N	Unweighted	Weighted
BMR	*Monday*	1,348	20.23%	20.23%
	Tuesday	1,321	19.83%	19.83%
	Wednesday	1,350	20.26%	20.26%
	Thursday	1,291	19.38%	19.38%
	Friday	1,351	20.28%	20.28%
ES	*Monday*	202	18.70%	18.70%
	Tuesday	218	20.19%	20.19%
	Wednesday	238	22.04%	22.04%
	Thursday	209	19.35%	19.35%
	Friday	213	19.72%	19.72%
WM	*Monday*	149	21.85%	21.85%
	Tuesday	121	17.74%	17.74%
	Wednesday	132	19.35%	19.35%
	Thursday	131	19.21%	19.21%
	Friday	148	21.70%	21.70%
Total	*Monday*	1,699	20.17%	20.17%
	Tuesday	1,660	19.71%	19.71%
	Wednesday	1,720	20.42%	20.42%
	Thursday	1,631	19.36%	19.36%
	Friday	1,712	20.32%	20.32%

2.4.1.2.　　　Recruitment Confirmation

Households that provided an email address or contact number in the recruitment survey received a message a few days after completing the recruitment survey, thanking them for their participation and alerting them that their incentive had been mailed. The message reminded respondents that included with their incentive would be an opportunity to participate in another survey for an additional incentive. Respondents were also encouraged to download the Westat DailyTravel App to aid in the process of recording their travel details on the assigned travel date.

2.4.2. Pre-Travel Date Contacts

Between recruitment into the study and the actual travel behavior data collection, other steps were taken to enhance household participation and provide materials to assist in the process. These efforts are presented in the following sections.

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2.4.2.1. Pre-Travel Day Reminder Contacts

The day before the assigned travel day, households were sent messages (phone, email or text message) reminding them to record their travel on their assigned travel date. Email and text reminders allowed participants to respond with questions through the same medium; study team members responded to each participant in a timely manner.

2.4.2.2. Smartphone Invitation

Households were presented with the option to record their travel using Westat's smartphone application, DailyTravel. Use of the smartphone app to record travel day information was offered to all households. All household members 13 years or older were eligible to use the smartphone app.

Households were provided a link to the DailyTravel app website with links to the Apple App Store and the Android Google Play store. They were given instructions to install the app and log in using the household PIN, provided in the invitation letter and all reminders. Once logged in, household members selected themselves on their respective smartphone thereby linking device and data collected on it to the appropriate household member. Reminders were used to encourage participants to opt into using the smartphone app for data collection.

Household members using the smartphone app were asked to use the app to capture GPS locations and confirm place details on the assigned travel date and to continue collecting data for another 6 days, for a total of 7 days of GPS-based travel data. Once the app was installed and authenticated using the PIN, the GPS data was collected regardless of user interaction with the application. However, many participants continued to confirm places and place details throughout the full 7 days.

2.4.3. Retrieval Process

In total, there were 6,828 completed households in the MTS. Households were encouraged to self-report their data online or through the smartphone app; however, a telephone interview option was also available.

2.4.3.1. Retrieval Details

Households were able to begin reporting their travel day trip and activity details by web or CATI beginning the day after the travel day. Households preferring to complete by telephone with an interviewer were called the first day after their assigned travel day. Those preferring to complete by

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web were also called if the household had not reported their travel by the third day after the travel day.

App users were able to record their travel details on their smartphone in real time on their travel day. Data was synchronized across all survey platforms allowing app users to review, edit, or finish reporting their travel details online or over the phone if so desired. In addition, all shared trips captured in the app were ported to allow access for other household members who may have reported online or over the phone. App users were asked to record their travel for seven days, though only the first day (assigned travel date) was required for completion of the survey.

The travel day data was collected using Westat's TripBuilder Web™ (TBW) web-based software that enabled all participants regardless of response mode to provide travel and activity details while geocoding each reported location in real-time. TBW uses a built-in mapping interface developed with the Google Maps Application Program Interface (API).

2.4.3.4. Post-Travel Day Reminder Contacts

A series of electronic reminders were delivered to recruited households in an attempt to improve response to the retrieval survey. Beginning the day after the travel date, up to five reminder prompts were sent as text messages, emails, and IVRs depending on the contact provided in the recruitment survey. These reminders included the households' PIN and links to the public website.

2.4.3.5. Definition of a Complete Survey

Households where all members reported travel details for the assigned travel day were considered complete and subsequently included in the final data deliverable file assuming that all edit checks and post processing errors were able to be cleared.

2.4.4. Sample Monitoring

Recruitment and retrieval results were monitored daily. Sample was monitored across mail group, survey month, day of week, and completion date to help inform sample management decisions. Surveys were also compared to ACS data at the jurisdiction level to track the representativeness of household size, number of vehicles, number of workers, and household income in each region.

Figure 4 shows the percentage of recruited households by recruitment mode. Although participants were encouraged to self-recruit online, providing multiple response modes allowed each participant the option to select the mode of participation that best suited their household. Overall, percent of all recruited households utilized the self-recruiting option.

Figure 4. Household Recruitment Response Mode (Web, CATI, and Both)
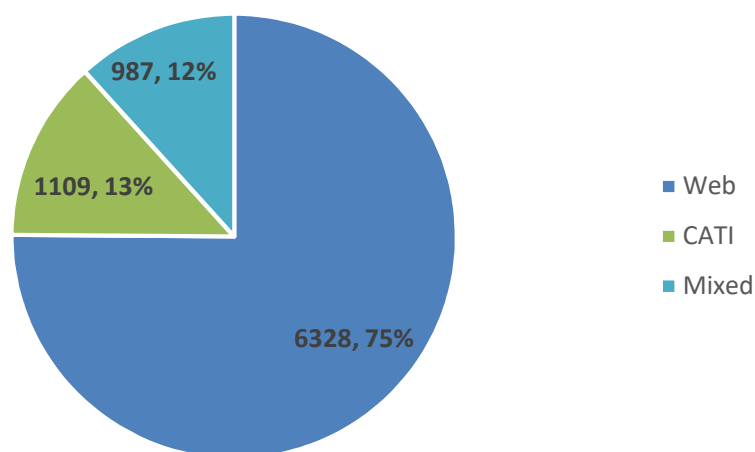
Retrieval percentages by response mode are presented in Figure 5 and show online reporting was the dominate response mode for the retrieval survey supported by a measurable amount of CATI and app use. Response modes are categorized into Web, CATI, and Mixed (combination of Web & CATI) with or without the presence of app data for at least one person in the household.

Figure 5. Household Retrieval Response Mode (CATI, Web, Mixed, and App)
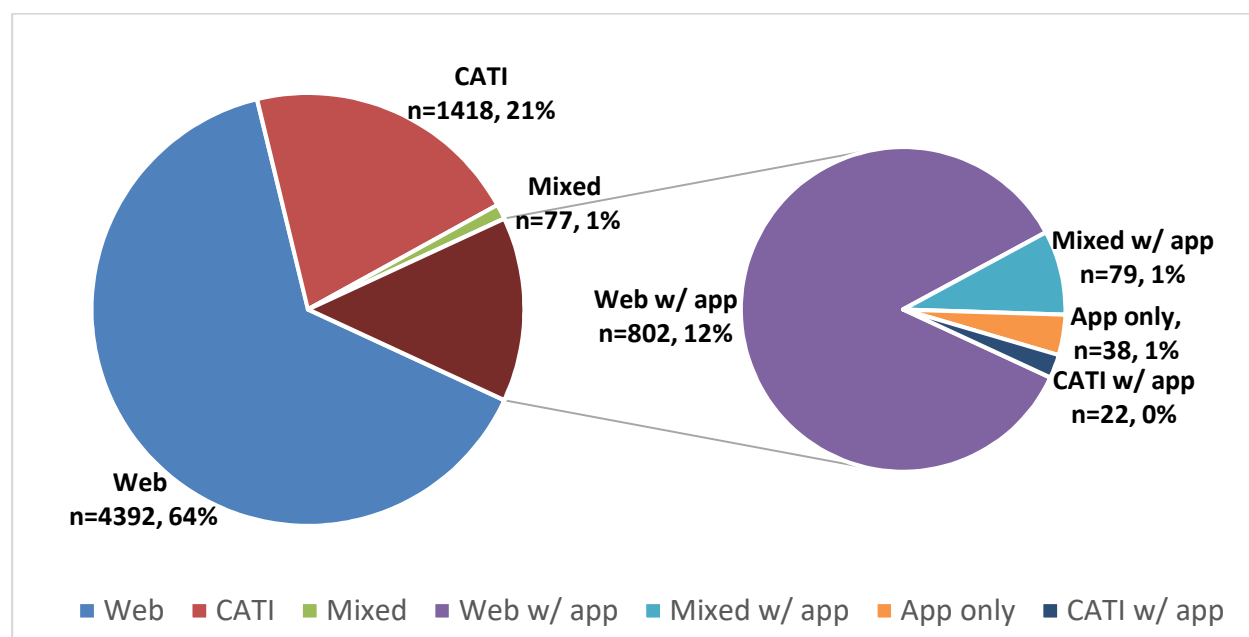
Table 3 presents the distribution of completed households across day of week (travel day) and

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Table 4 presents the breakdown of completed households by geographic 'Home' region. Home Region refers to the geographic region where the household's home address is located. The retrieved household percentages presented here are similar to the recruited results presented in Table 2. The weighted figures in Table 3 show that the weighting process did not substantially change the distribution of travel across the five days of the week as compared to the unweighted results, i.e., close to 20% of the total count of households were assigned to travel on each of the five days. Note that in all tables containing weighted data, N represents the actual surveyed count, unweighted represents the surveyed percentage, weighted, the weighted percentage, and MOE, the margin of error which is discussed in Section 4.4.

Table 3.   Distribution of Completed Households by Day of Week by Home Region

Home Region	HH Travel Survey Day of Week	N	Unweighted	Weighted	MOE (95%)
BMR	*Monday*	1,425	17.14%	16.85%	1.05%
	Tuesday	1,359	16.35%	16.32%	1.02%
	Wednesday	1,389	16.71%	16.79%	1.00%
	Thursday	1,307	15.72%	15.22%	1.00%
	Friday	1,374	16.53%	15.89%	0.94%
ES	*Monday*	162	1.95%	2.04%	0.35%
	Tuesday	179	2.15%	2.25%	0.31%
	Wednesday	201	2.42%	2.62%	0.35%
	Thursday	173	2.08%	2.15%	0.37%
	Friday	178	2.14%	2.48%	0.32%
WM	*Monday*	125	1.50%	1.69%	0.31%
	Tuesday	102	1.23%	1.32%	0.25%
	Wednesday	112	1.35%	1.37%	0.28%
	Thursday	108	1.30%	1.50%	0.32%
	Friday	119	1.43%	1.52%	0.26%
Total	*Monday*	1,712	20.59%	20.57%	1.07%
	Tuesday	1,640	19.73%	19.89%	1.11%
	Wednesday	1,702	20.47%	20.78%	1.04%
	Thursday	1,588	19.10%	18.87%	1.12%
	Friday	1,671	20.10%	19.89%	1.03%

Table 4. Completed Households Summary by Home Region

Home Region	N	Unweighted	Weighted	MOE (95%)
BMR	6,854	82.45%	81.06%	0.35%
ES	893	10.74%	11.54%	0.35%
WM	566	6.81%	7.40%	0.00%
Total	8,313	100.00%	100.00%	0.00%

The home locations of all completed households are shown in Figure 6 and the work locations for completed households is displayed in Figure 7.

Figure 6. Home Locations of Completed Households
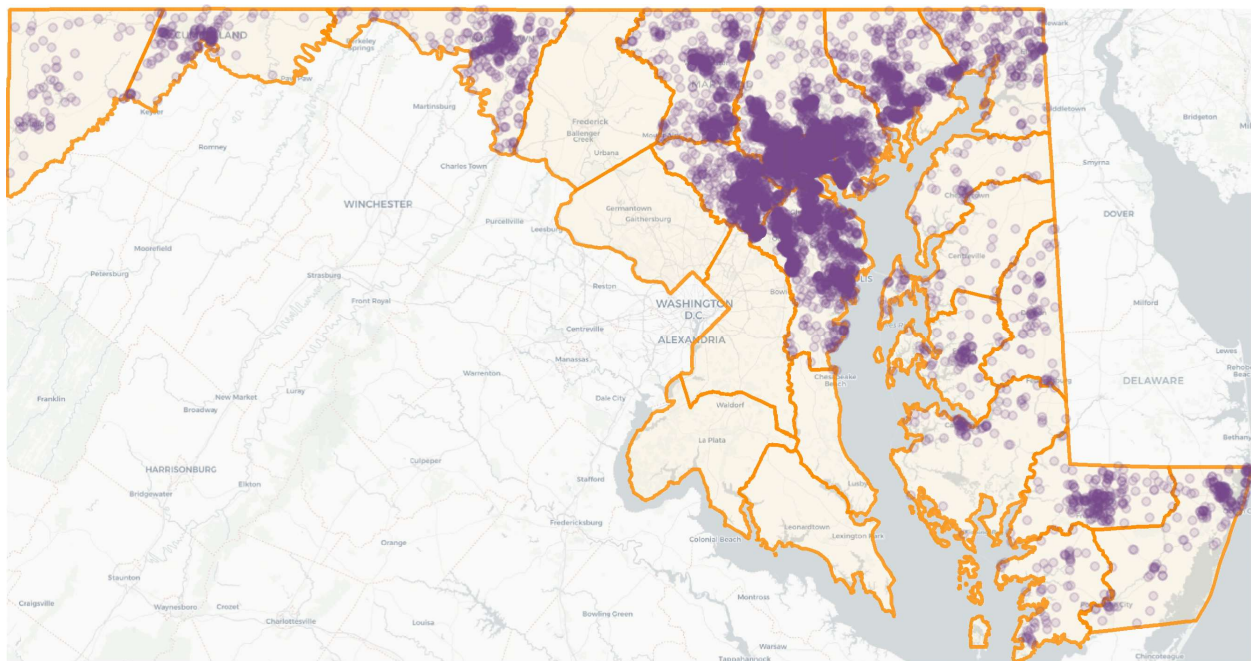
Figure 7.   Work Locations of Completed Households
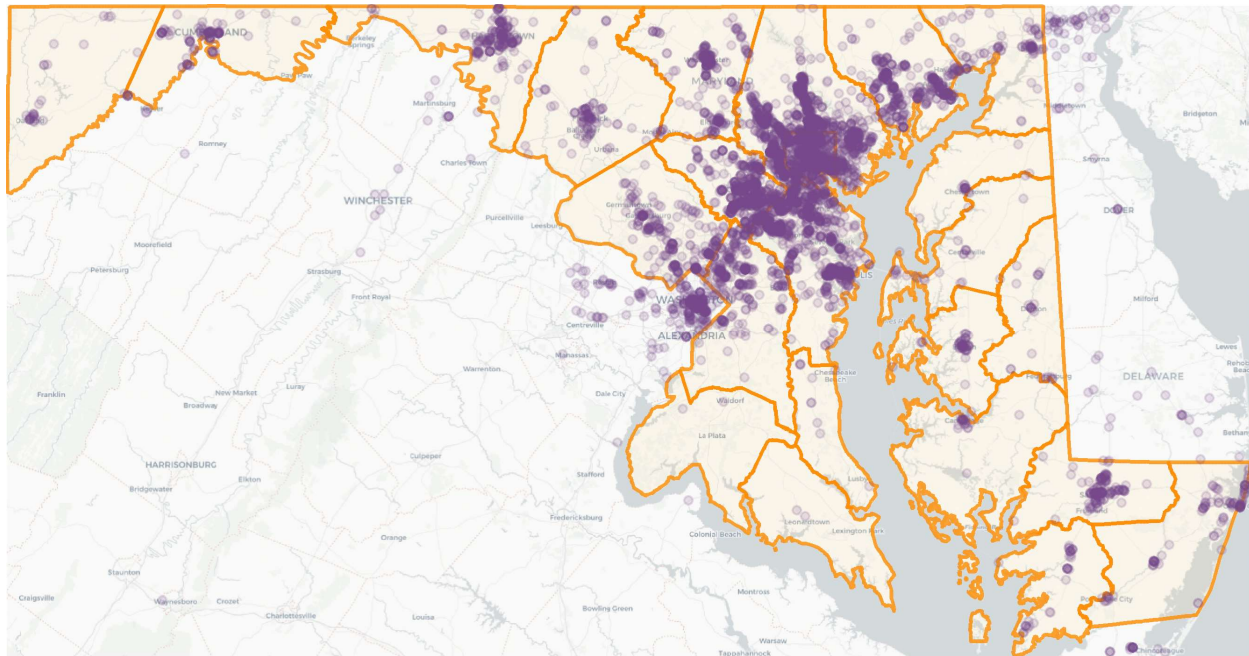
2.5. Survey Response Rates

The recent decline in survey response rates has been well documented. The shift from random digit dialing (RDD) to address-based sampling (ABS) frames provides many benefits to targeted sampling and coverage bias, but has not helped overcome the diminishing response rate issue. In general, approximately 40 to 50 percent of all sampled addresses are matched to a telephone number, and about 15 percent of those matches generally prove to be bad matches (e.g., not associated with the sampled address). Because more than half of the sampled households are only reachable by mail in the ABS sample design, passive refusals happen at a high rate. Response rates achieved from ABS frames are largely dependent on the salience of the study, the presentation of the recruitment materials, and public outreach campaigns.

Response rates were calculated for both the recruitment and retrieval stages of the survey. The screener rate ($R_{screener}$) in surveys using an ABS is calculated by dividing responding households by eligible addresses.

$$R_{screener} = \frac{Screened\ Households}{Sampled\ Addresses\ -\ Postal\ Non-Deliverable}$$

The recruitment rate ($R_{Recruit}$) in surveys using an ABS is calculated by dividing responding households by eligible addresses.

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$$R_{Recruit} = \frac{Recruited\ Households}{Screened\ Households}$$

The retrieval rate ($R_{Retrieve}$) is the percentage of households that completed the study after agreeing to participate.

$$R_{Retrieve} = \frac{Retrieved\ Households}{Recruited\ Households}$$

The final response rate (R_{Final}) is the product of the screener, recruitment, and retrieval rates.

$$R_{Final} = R_{Recruit} \times R_{Retrieve} = \frac{Retrieved\ Households}{Sampled\ Addresses - Postal\ Non - Deliverable}$$

Table 5 shows the recruitment, retrieval and overall response rates for the MTS grouped by the region where the household's home address is located.

Table 5. Response Rates

Home Region	Sampled	Recruitment	Retrieved	Recruitment Rate	Retrieval Rate	Response Rate
BMR	51,067	6,662	5,370	13.05%	80.61%	10.52%
ES	7,585	1,080	892	14.24%	82.59%	11.76%
WM	4,503	682	566	15.15%	82.99%	12.57%

As expected in all voluntary surveys, there is some level of item non-response. Survey logic did not allow participants to skip questions; however, participants could provide a "don't know" or "prefer not to answer" response to most survey questions. To mitigate non-response, the "don't know" and "prefer not to answer" options were not initially shown to participants. However, if a participant tried to advance a page without providing a response to a question, a pop-up would appear prompting whether they meant to answer the question, did not know the answer, or would prefer not to answer. If the participant reported that they meant to answer the question, the pop-up was cleared allowing them an opportunity to provide a response. Westat has successfully utilized this non-response strategy in other regional household travel surveys to combat non-response.

Table 6 presents variables with the highest level of non-response. For households that refused income in the initial, recruitment stage, a follow-up with broader categories was presented in retrieval. This resulted in a reduction of income non-response from 782 to 148 households for a final non-response rate of 2.17 percent.

Table 6   Item Non-Response

Non-response Variable	Frequency	Total Queried	Percentage
Household Income	148	6,828	2.17%
Race	118	14,429	0.82%
Reason for not travelling	13	2,301	0.56%
Number of Jobs	22	7,353	0.3%
Work Industry	25	7,320	0.34%
Hispanic/Ethnicity	67	14,429	0.46%
Student Status	19	14,429	0.13%

2.6. Daily Travel Smartphone Application

This section of the report describes the Daily Travel Smartphone app used, the methods employed to distribute and collect the survey data from the smartphone, and presents the results of the deployment effort.

2.6.1. DailyTravel App Data Deployment

2.6.1.1.   DailyTravel Application

The travel log letter presented households with the option to record travel using Westat's DailyTravel smartphone application for household travel survey data collection. Use of the smartphone app to record travel day information was offered to all household members 13 years or older.

Households were provided a link to the DailyTravel app website with links to the Apple App Store and the Android Google Play Store. The retrieval letter, and all subsequent reminders, detailed instructions to install the app and log in using the household PIN. Once logged in, household members selected themselves on their respective smartphone thereby linking device and data collected on it to the appropriate household member. Reminders were used to encourage participants to opt into using the smartphone app for data collection.

Household members using the smartphone app were asked to capture GPS locations and confirm place details on the assigned travel date plus an additional 6 days, for a total of 7 days of GPS-based travel data. Once the app was installed and authenticated using the PIN, the GPS data was collected regardless of user interaction with the application. However, many of the smartphone participants continued to confirm places and place details throughout the full 7 days.

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2.6.1.2. Smartphone Usage

In total, 2,085 participants across 1,705 households downloaded and initialized the app, and 1,766 of these participants used the app to report their travel day details. Seventy percent (1,220) of app users confirmed their entire day on the app while the remaining users confirmed their details on some combination of app, web, and CATI. App users completed the retrieval survey (84.7%) at a higher rate than the overall retrieval rate (81.2%) across all participants.

Figure 8 displays the home locations where at least one household member owns a smartphone is displayed. The households where at least one household member used the smartphone app to record their travel is shown in Figure 9.

Figure 8.   Home Locations of Completed Households Where At Least One Household Member Owns a Smartphone

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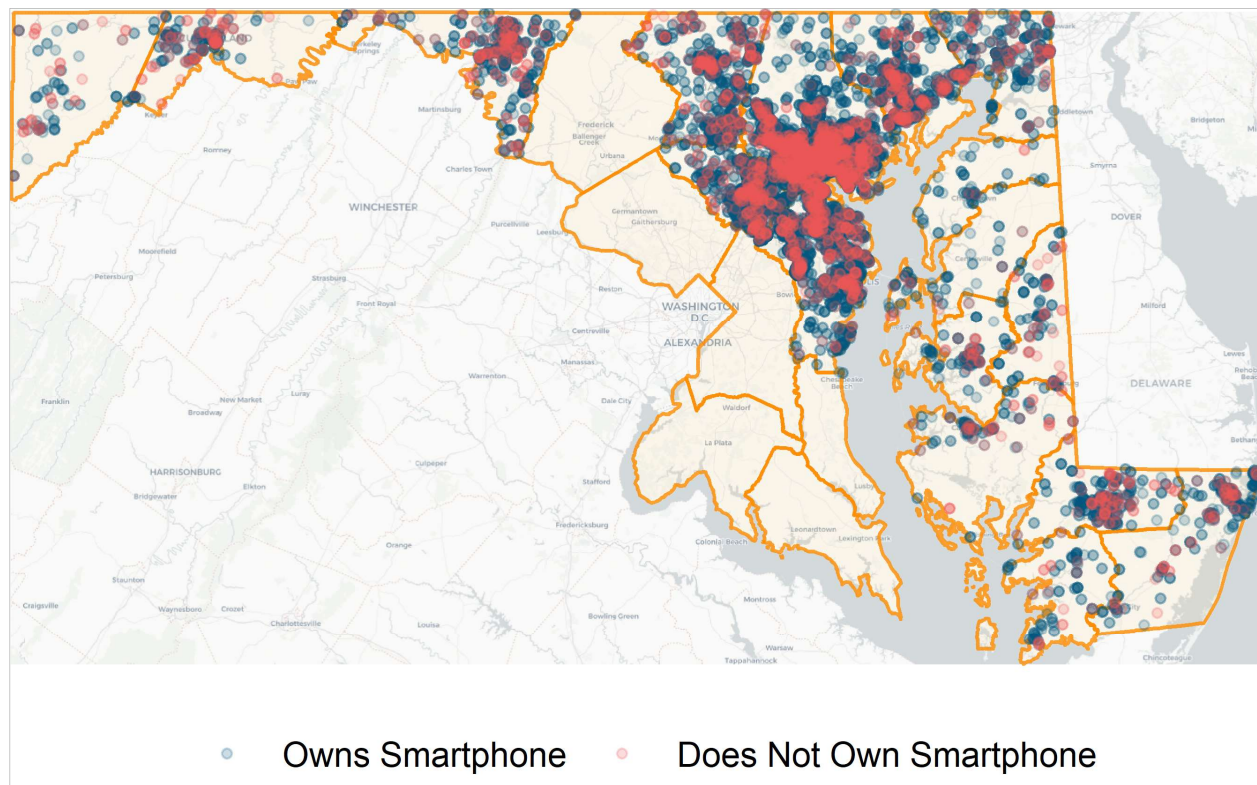
Figure 9. Home Locations of Completed Households Where At Least One Household Member Used the Smartphone App to Record Travel

At Least One Smartphone User   •   No Smartphone Users
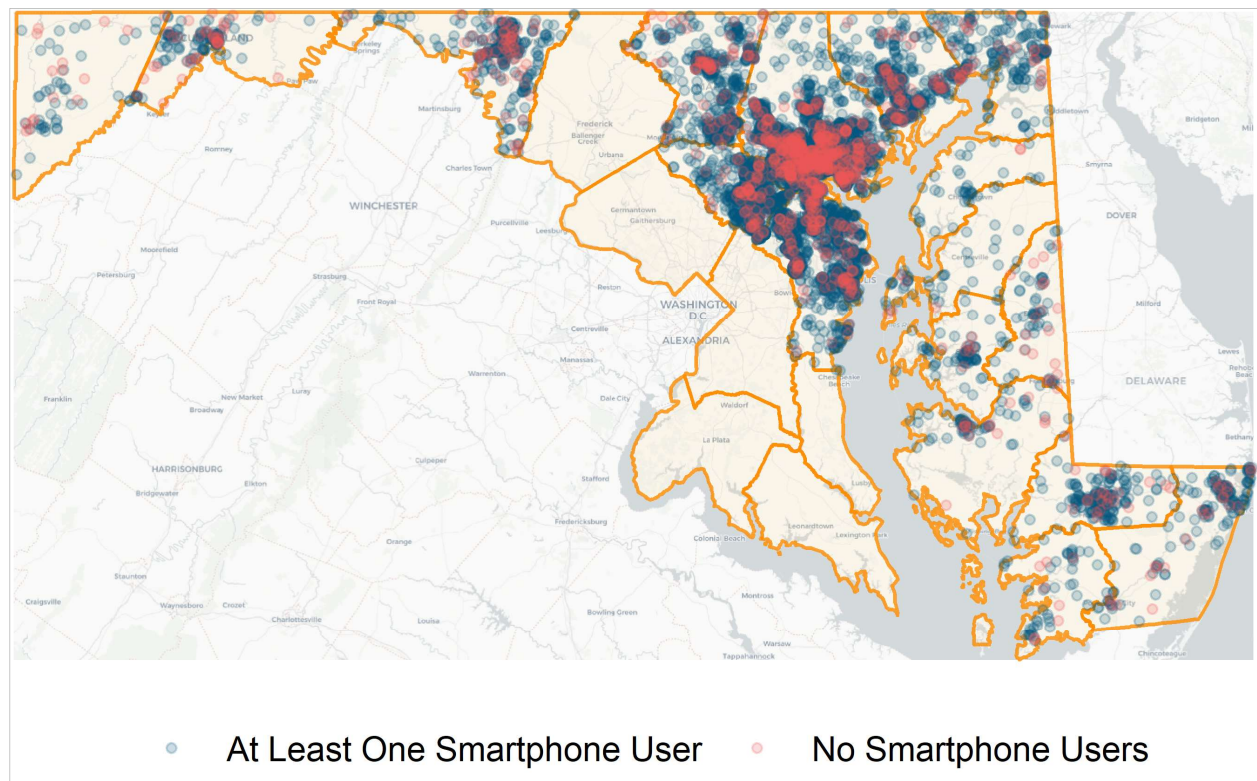
2.6.2. DailyTravel App Data Collection and Processing

2.6.2.1 Smartphone App data location and process

App users were able to record up to seven days of travel including the main travel day. The participants were encouraged but not required to report details about app-captured places on the additional six days beyond the assigned travel day. During this time, the app may have automatically collected places that were not valid stops. Consequently, the data were processed to remove invalid places and impute important travel details. First, duplicate locations were identified and combined them into one location record. Next, invalid trips were removed including instances where the app captured a stop but the participant was still traveling (common at traffic lights) and instances where the app added a trip but the participant had not left (common for movement on large sites). Finally, travel mode and trip purpose was imputed using GPS and Accelerometer data.

2.6.2.2 Combine Duplicate Locations

To combine duplicate locations, a density-based clustering algorithm, DBSCAN, was used to cluster all locations within a household that were close in proximity. If a cluster was identified, a location

was chosen within that cluster based on the following priority: Habitual (home, work, or school), whether it had location details, and its horizontal accuracy if it was a GPS collected place.

2.6.2.3 Identify and Collapse False Stops

False stops are instances where the participant was still traveling, but the app recorded a stop. The most common scenario is heavy traffic or a long stop light. We developed a heuristic, an imputation solution leveraging confirmed travel data attributes, to detect these instances by looking at stop duration and gap speed. Gap speed was computed by grabbing the last GPS point before the stop and the first point after the stop and computing the speed. High gap speeds indicated that the participant may not have actually stopped. It was also useful to address whether the stop was "on the way" to the next location as well as looking at the GPS trace upon arrival.

2.6.2.3 Identify and Collapse Noise Stops

Noise stops are instances where the app records a trip, but the participant had not left their existing location. This is common at locations like parks, campuses, or large offices where the participant may move around without actually leaving. These were identified using a heuristic-based algorithm as well. Short origin-destination distances with low speeds tended to indicate noise stops. Very compact, circuitous GPS traces were also a common indicator.

2.6.2.4 Impute Travel Mode

For travel mode imputation of smartphone trips collected beyond the first travel day, a modeling approach was applied. The smartphone trip imputation model was trained on trips collected from the app on confirmed travel days (confirmed every trip on the day). Trips with user-edited start/arrival times were not used. For each trip, we merged GPS and Accelerometer sensor data at 1 Hz and aggregated the data over a 1-minute rolling window every 30 seconds. For each window, we calculated the following variables:

- GPS Point Count

- Connected Point Distance

- Circuity (Connected Point Distance / Straight Line Distance)

- Compactness (Connected Point Distance / Diagonal Distance)

- Accelerometer Count

- Speed (Average, Median, 25th & 75th Percentile, Standard Deviation, Kurtosis, Skew)

- Magnitude of Acceleration (Average, Median, 25th & 75th Percentile, Standard Deviation, Kurtosis, Skew)

- Average Change in Heading

- Range of Altitude

- Person Type

Categories in the mode list were collapsed so the model could make more discrete/unambiguous predictions. A Random Forest algorithm using 100 trees was trained on the confirmed data and then applied to the unconfirmed travel days.

2.6.2.5 Impute Trip Purpose

A heuristic was used to determine trip purpose using a combination of person and location-based information. These included whether the participant was a student or worker and whether the origin/destinations were habitual home, school, or work locations. Like travel mode, the trip purpose categories were collapsed to reduce ambiguity.

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3. Survey Processing, Data Cleaning, and Data Quality Checks

3.1. Overview of Survey Processing and Data Cleaning

Data processing and data cleaning were conducted on an ongoing basis throughout the study. Updates were made to key operational variables during the administration of survey (e.g., the addition of a car that was not originally reported). Variables that did not impact the flow of the survey were updated at the conclusion of data collection (e.g., recoding race based on 'Other, specify' responses).

A series of automated edits, range checks, and consistency checks were performed within the survey instrument, and data preparation staff performed frequency reviews and problem resolution to monitor, correct, and update the data. Automated checks were run to evaluate the validity of reported trip data. The following sections provide more details for each of the data quality checks used.

3.1.1. Logic Checks

Logic checks were programmed into the recruit and retrieval instruments to ensure that questions were answered as accurately as possible. These included requiring that certain questions be answered (e.g., requiring a response even if "don't know" or "prefer not to answer") and forcing the data type (e.g., requiring a number for the question AGE). Data range checks were employed to ensure that the data fell within the expected range for a given question (e.g., 0-112 for AGE). Consistency checks were conducted to confirm data consistency in common variables across data files (e.g., household size or participant age).

3.1.2. Real-Time Geocoding

Westat's TBW survey software was used to collect the travel day details in the retrieval portion of the household travel survey. All trip ends were geocoded reporting in real-time using a Google interface during the completion of the trip. Respondents could enter the location's address or were able to use the Google search engine to locate a specific place (e.g., the CVS drugstore at a specific intersection) when they did not know the address of the location. TBW captured full address information and the matching X/Y coordinate of the location.

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3.1.3. Frequency Reviews

Frequency reviews were conducted in the beginning, middle and end of data collection to ensure that all data were being properly captured in the survey database. A report displaying a frequency table for each survey variable was generated including branching logic, question text and responses. Through the review of these frequency reports, analysts would identify and correct issues with the data as appropriate.

3.1.4. Edit Checks

Upon completion of retrieval, a series of edit check queries were run on the data to identify potential reporting inconsistencies. If an edit check failed, the data from the household was manually reviewed by an analyst. Edit checks were completed on trip data and non-trip data. Non-trip data checks were executed as part of the frequency review process described above and included checks of each survey variable at each survey stage (recruit and retrieval).

Trip data was processed through Westat's trip processing system (TPS). TPS includes a series of consistency checks on reported trip data. Table 7 provides a list of the TPS checks performed on these data. When a TPS edit failed, an analyst reviewed the data to determine whether adjustments to the data could be made based on information provided by another household member or if the household needed to be re-contacted to resolve the inconsistency in the data. Whether the data was updated by an analyst or an interviewer as a result of a re-contact with the household, the entire household record was reprocessed through the TPS checks. Cases were continually run through this process until it cleared TPS without any failures. Only households that successfully passed these edits were included in the final dataset.

Table 7.   Trip Data Checks

Number	Type	Check Description
1	Household	Household size does not match the number of people.
2	Household	Home location is missing "full_address"
3	Household	Home location not named Home
5	Household	Home location geocoded with bad address street or missing address component.
6	Person	Person missing age information.
7	Person	Person missing schooling information.
8	Person	Person with 0 places.
9	Person	Person has no travel but is missing reason for not travelling (NOGOWHY).
10	Person	Work location geocoded without address
11	Person	School location geocoded without address.

Number	Type	Check Description
12	Person	Person's first or last place is not their Home location.
13	Person	Driver is too young (under 14 years old)
15	Place	Place with a person identifier that does not exist.
16	Place	Place with no geocoded location.
17	Place	Place with no associated location.
18	Place	Place is missing travel mode information
19	Place	Place is missing trip purpose information
20	Place	Place with a departure time before or the same as its arrival time.
21	Place	Place with an arrival time before or the same as the previous place's departure time.
22	Place	Place where multiple household members went but did not report each other or disagree on the household members in the party.
23	Place	Passenger without driver
24	Place	Place where multiple household members went but persons disagree on the party size.
25	Place	This shared place has more than one driver in the party.
26	Place	Place travel speed too slow for travel mode
27	Place	Place has Other Mode
28	Place	Place lists household member on trip, but not all household members agree on place's exact arrival time or location. While addressing this check, review origin location and departure time for any discrepancies.
29	Place	Person reported traveling alone in an automobile but is under the age of 15
30	Place	Transit trip too short (less than 5 min duration)
31	Place	Place has a high travel time
32	Place	Place speed too fast
33	Place	Location geocoded without address
34	Place	Traveled with a household member but MODE does not match.
35	Place	Traveled with a household member but VEHICLEID does not match.
36	Place	Traveled with a household member but origin (previous ADDR or departure time) does not match.
37	Place	Same vehicle used for (non-shared trip)
38	Place	Vehicle number not valid in database.
39	Place	Location's geocode precision is not good enough. Current precision:
40	Place	Place has the same address and/or coordinates as previous place.
41	Place	Travel time less than 1 minute

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Number	Type	Check Description
42	Place	Departure time from last place is not 3 am.
43	Place	Place is suspiciously close to habitual work/school location.
44	Place	Person not at a common work location for work related purpose.
45	Place	Person not at a common school location for school related purpose.

3.1.5. Upcoding and Cleaning

At the conclusion of data collection period, open-ended and "other, specify" responses were reviewed and upcoded or aggregated as a new response category as appropriate. Upcoding is the activity of recoding an open-ended response into a categorical response option (e.g., recoding Caucasian to white). The process includes removing the "other, specify" (open-ended) text response.

In addition to coding open-end text into categorical responses, Westat also combined or collapsed other responses that were similar to each other (e.g., misspelling of the response, different letter spacing in the response or capitalization issues). These responses appear in the original dataset as independent, unique responses but have been corrected and combined in the final dataset for more efficient analysis.

3.1.6. Derived Variables

Several variables in the data deliverable were derived using counts from participant responses. Derived variables provide the sum of an attribute across a household. For example, the derived number of household students (HHSTUD) is the count of all household members that answered "Yes" to the question "Are you/he/she currently enrolled in any type of school, including daycare, technical school, or a university?" The result is an actual count of the number of students in a household, full-time or part-time. The survey question about student status (STUDE) is available in the data deliverable, so analysis can be conducted at the person level using the reported, rather than the derived household level data.

In survey research, some data elements are captured in more than one question or format causing discrepancies in the data. For example, asking how many people live in a household and a derived household size based on the number of rostered of household members can lead to discrepancies between the two. Limiting the number of people that may be rostered based on the response to another question may also affect the accuracy of the reported data in the more specific roster format. In this example, the derived variable is more accurate than the single question format.

Another type of derived variable provided in this dataset is the conversion of data collected in multiple units (e.g., hours and minutes) into a single unit of analysis (e.g., minutes). Calculations can also be used to determine quantitative values such as number of non-household members on a trip. This number was derived by subtracting the number of household members (HHPARTY) reported on a trip from the total number (PARTY) reported on the trip. A list of all of the derived variables included in the data deliverable can be found in Appendix B.

4. Weighting and Expansion Methodology

Completed MTS households were combined with data from the RTS survey (n=1,145) in the three overlapping counties (Anne Arundel, Carroll, and Howard County) to represent the full survey region. A total of 8,313 households from the combined datasets were weighted to represent modeled area household and population totals through a 3-step process. In addition to the full-sample weight, a set of 80 replicate weights were generated for each household. These replicate weights are used to calculate standard error of estimates obtained from the MD HTS data, using the paired jackknife (JK2) replication method.

4.1. Household Base Weights

The household base weight reflects the probability of selection for a sampled household and is calculated simply as the reciprocal of its probability of selection. In the first step of the weighting process, initial household base weights were calculated by dividing the sum of the frame postal address counts by the number of sampled addresses within each stratum. Because frame counts of addresses were not available, they were approximated using housing unit counts from the 2015 5-year ACS. The minimum base weight for each sample address in a stratum was set to 1.

4.1.1. Adjustment for Non-Response

After the assignment of the household level base weight, an adjustment for non-response was made to reflect those households for which a retrieval interview was not obtained. The adjustments for household non-response were made within adjustment cells defined by whether telephone number was available for the household at the time of sampling and by dwelling type (multi-family dwelling or single-family). A non-response adjustment factor was calculated for each cell as the ratio of the sum of household weights for all eligible households to the sum of the household weights for all households for which a retrieval interview was obtained. The non-response adjustment factor was applied to the household base weight of each responding household. In this way, the weights of the responding households were "weighted up" to represent the full set of responding and non-responding households in the adjustment cell. Out of 98,019 sampled addresses, a retrieval interview

was obtained for 8,313 addresses. These addresses were retained at the nonresponse adjustment step and received a nonresponse-adjusted weight.

4.1.2. Post-Stratification Adjustment

The raking adjustment procedure is used to improve the reliability of survey estimates and, to some extent, correct for the bias due to under-coverage and/or non-response. Raking is a post-stratification adjustment procedure where survey weights are iteratively adjusted to independent control totals for various demographic categories. The process has the effect of differentially adjusting the weights of the sampled, responding households within groups of demographically similar households, so that the total sum of weights for the sampled, responding households equals the corresponding independent control totals for all households. The raking process used with the MTS data had two "dimensions," (1) jurisdiction (PUMA) by dwelling type and (2) household size. The weights were adjusted to equal the totals within the cells for each dimension in an iterative process, until the process converged, and each dimension's cell totals equaled the independent control totals.

Control total data came from the 2014–2018 5-year housing-level American Community Survey (ACS) estimates. The control totals were obtained using the ACS publicly available PSAM_HUSB file.[1] The PSAM_HUSB file was subset to the state of Maryland (ST=24) and the twenty-six PUMAs included in the BMC planning region. Group quarters (BLD = ' '), boats, RV, van, etc. (BLD = '10') and vacant units (NP=0) were excluded from generating the control totals. The 5-year ACS estimates were produced by weighting up the household-level estimates by the household weight for generating statistics on housing units (WGTP). The first dimension, jurisdiction (PUMA) by dwelling type had 52 cells (26 PUMAs by two types of dwelling type (multi-family dwelling or single-family). The second dimension, household size, had five cells, with household sizes of 1, 2, 3, 4, and 5 or more persons. Collapsing was not required for any cells. The final raked weights were products of the base weights, nonresponse adjustments, and calibration adjustments.

In Table 8 through Table 10, the weighted estimates for several key household-level demographic variables (e.g., household size, number of vehicles, etc.) are presented by region alongside the ACS estimate for the same variables in the study region. In Table 8 through Table 17, references to Home Region indicate data grouped according to the location of the home address of the household or person.

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[1] https://www.census.gov/programs-surveys/acs/technical-documentation/pums/filestructure.html

Table 8. Weighted Estimate of Percent Distribution of Household Size Compared to ACS 5-Year Averages by Home Region

Home Region	HH Size	MTS	MTS MOE (90%)	ACS	ACS MOE (90%)
BMR	1 person	28.48%	0.37%	28.21%	0.53%
	2 person	32.92%	0.44%	32.67%	0.53%
	3 person	16.11%	0.39%	16.69%	0.53%
	4+ person	22.49%	0.50%	22.43%	0.53%
ES	1 person	25.68%	2.10%	26.71%	1.39%
	2 person	38.56%	2.71%	38.42%	1.36%
	3 person	16.95%	2.20%	15.23%	1.40%
	4+ person	18.81%	2.90%	19.63%	1.40%
WM	1 person	28.66%	2.68%	28.55%	1.55%
	2 person	37.70%	3.33%	35.59%	1.54%
	3 person	14.94%	2.83%	14.59%	1.56%
	4+ person	18.71%	3.21%	21.27%	1.56%

Table 9. Weighted Estimate of Percent Distribution of Household Number of Vehicles Compared to ACS 5-Year Estimates by Home Region

Home Region	HH Size	HH Vehicles	MTS	MTS MOE (90%)	ACS	ACS MOE (90%)
BMR	1 person	0 vehicles	5.10%	0.44%	6.28%	0.61%
		1 vehicle	19.39%	0.63%	18.21%	0.61%
		2 vehicles	3.04%	0.33%	3.03%	0.61%
		3 vehicles	0.60%	0.14%	0.50%	0.61%
		4+ vehicles	0.36%	0.13%	0.19%	0.61%
	2 person	0 vehicles	1.39%	0.27%	2.26%	0.61%
		1 vehicle	7.12%	0.55%	7.77%	0.61%
		2 vehicles	18.14%	0.62%	17.35%	0.61%
		3 vehicles	4.58%	0.45%	4.15%	0.61%
		4+ vehicles	1.69%	0.24%	1.14%	0.61%
	3 person	0 vehicles	0.56%	0.17%	1.12%	0.61%
		1 vehicle	2.78%	0.43%	3.32%	0.61%
		2 vehicles	6.36%	0.52%	6.58%	0.61%
		3 vehicles	4.41%	0.50%	4.24%	0.61%
		4+ vehicles	2.00%	0.42%	1.43%	0.61%
	4+ person	0 vehicles	0.58%	0.22%	1.25%	0.61%
		1 vehicle	1.79%	0.36%	3.17%	0.61%
		2 vehicles	11.72%	0.82%	9.84%	0.61%
		3 vehicles	4.47%	0.57%	4.77%	0.61%
		4+ vehicles	3.93%	0.65%	3.41%	0.61%
ES	1 person	0 vehicles	1.56%	0.66%	4.17%	1.59%
		1 vehicle	18.53%	2.09%	17.52%	1.58%
		2 vehicles	4.21%	1.02%	3.82%	1.59%
		3 vehicles	1.00%	0.49%	0.88%	1.59%
		4+ vehicles	0.38%	0.32%	0.34%	1.59%
	2 person	0 vehicles	0.17%	0.20%	1.52%	1.59%
		1 vehicle	5.09%	1.23%	8.12%	1.59%
		2 vehicles	19.79%	2.07%	20.26%	1.58%
		3 vehicles	8.31%	1.33%	6.48%	1.59%
		4+ vehicles	5.21%	1.15%	2.04%	1.59%
	3 person	0 vehicles	0.19%	0.32%	0.66%	1.59%
		1 vehicle	2.32%	1.03%	2.77%	1.59%

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Home Region	HH Size	HH Vehicles	MTS	MTS MOE (90%)	ACS	ACS MOE (90%)
		2 vehicles	7.09%	1.59%	5.76%	1.59%
		3 vehicles	4.56%	1.17%	4.34%	1.59%
		4+ vehicles	2.79%	0.91%	1.70%	1.59%
	4+ person	0 vehicles	0.00%	0.00%	0.81%	1.59%
		1 vehicle	1.22%	0.73%	3.04%	1.59%
		2 vehicles	6.90%	1.86%	7.36%	1.59%
		3 vehicles	4.73%	1.39%	4.83%	1.59%
		4+ vehicles	5.96%	1.73%	3.60%	1.59%
WM	1 person	0 vehicles	2.08%	1.02%	5.42%	1.83%
		1 vehicle	20.83%	2.33%	17.84%	1.83%
		2 vehicles	4.20%	1.24%	4.16%	1.83%
		3 vehicles	1.03%	0.66%	0.80%	1.83%
		4+ vehicles	0.51%	0.49%	0.33%	1.83%
	2 person	0 vehicles	0.49%	0.57%	1.82%	1.83%
		1 vehicle	6.81%	1.78%	8.08%	1.83%
		2 vehicles	18.39%	2.79%	17.53%	1.83%
		3 vehicles	8.12%	1.84%	6.13%	1.83%
		4+ vehicles	3.90%	1.27%	2.02%	1.83%
	3 person	0 vehicles	0.38%	0.63%	0.76%	1.83%
		1 vehicle	1.74%	1.23%	2.99%	1.83%
		2 vehicles	3.97%	1.43%	4.86%	1.83%
		3 vehicles	5.79%	1.89%	4.24%	1.83%
		4+ vehicles	3.06%	1.38%	1.74%	1.83%
	4+ person	0 vehicles	0.20%	0.34%	0.87%	1.83%
		1 vehicle	1.79%	1.24%	2.88%	1.83%
		2 vehicles	6.72%	2.20%	8.63%	1.83%
		3 vehicles	5.98%	2.23%	5.01%	1.83%
		4+ vehicles	4.01%	2.02%	3.88%	1.83%

Table 10. Weighted Estimate of Household Income Compared to ACS 5-Year Average by Home Region

Home Region	HH Income	MTS	MTS MOE (90%)	ACS	ACS MOE (90%)
BMR	Less than $15,000	6.57%	0.58%	9.05%	0.63%
	$15,000 to $24,999	5.30%	0.49%	6.63%	0.63%
	$25,000 to $34,999	7.21%	0.69%	7.09%	0.63%
	$35,000 to $49,999	8.69%	0.64%	10.46%	0.63%
	$50,000 to $74,999	18.25%	0.99%	16.43%	0.63%
	$75,000 to $99,999	14.14%	0.92%	12.95%	0.63%
	$100,000 to $149,999	20.25%	1.09%	18.30%	0.63%
	$150,000 or more	19.58%	0.91%	19.09%	0.63%
ES	Less than $15,000	5.53%	1.33%	10.02%	1.67%
	$15,000 to $24,999	5.97%	1.56%	10.20%	1.67%
	$25,000 to $34,999	11.04%	1.81%	10.06%	1.67%
	$35,000 to $49,999	11.43%	1.93%	13.02%	1.67%
	$50,000 to $74,999	22.49%	2.34%	18.15%	1.66%
	$75,000 to $99,999	15.25%	2.37%	13.22%	1.67%
	$100,000 to $149,999	19.06%	2.39%	14.95%	1.67%
	$150,000 or more	9.22%	1.90%	10.37%	1.67%
WM	Less than $15,000	8.31%	2.21%	12.36%	1.97%
	$15,000 to $24,999	9.36%	2.24%	11.17%	1.97%
	$25,000 to $34,999	11.11%	2.24%	10.31%	1.97%
	$35,000 to $49,999	14.12%	2.91%	14.37%	1.97%
	$50,000 to $74,999	22.60%	3.27%	19.19%	1.97%
	$75,000 to $99,999	15.67%	2.66%	12.24%	1.97%
	$100,000 to $149,999	12.57%	2.90%	12.74%	1.97%
	$150,000 or more	6.25%	1.73%	7.63%	1.97%

4.2. Person Weights

The final household weight was assigned to each person in responding households in the sample. This weight represents the initial person-level weight. Table 11 and Table 12 display the weighted estimates for age and race alongside the ACS estimate for the same variables in the study region.

Table 11. Weighted Estimate of Person Age Ranges Compared to ACS 5-Year Average by Home Region

Home Region	ACS Age Bins	MTS	MTS MOE (90%)	ACS	ACS MOE (90%)
BMR	Under 5 years	6.54%	0.48%	6.04%	0.22%
	5 to 9 years	6.50%	0.53%	6.17%	0.22%
	10 to 14 years	6.29%	0.52%	6.15%	0.22%
	15 to 19 years	4.70%	0.35%	6.32%	0.22%
	20 to 24 years	4.20%	0.47%	6.63%	0.22%
	25 to 29 years	5.81%	0.48%	7.36%	0.22%
	30 to 34 years	6.65%	0.44%	7.05%	0.22%
	35 to 39 years	7.32%	0.52%	6.32%	0.22%
	40 to 44 years	6.07%	0.50%	6.16%	0.22%
	45 to 49 years	6.10%	0.41%	6.81%	0.22%
	50 to 54 years	6.48%	0.42%	7.44%	0.22%
	55 to 59 years	7.72%	0.55%	7.03%	0.22%
	60 to 64 years	7.26%	0.43%	6.12%	0.22%
	65 to 69 years	7.21%	0.45%	4.89%	0.22%
	70 to 74 years	5.00%	0.34%	3.47%	0.22%
	75 to 79 years	3.09%	0.30%	2.41%	0.22%
	80 to 84 years	1.67%	0.24%	1.74%	0.22%
	85 years and over	1.39%	0.20%	1.88%	0.22%
ES	Under 5 years	4.03%	1.04%	5.42%	0.64%
	5 to 9 years	5.30%	1.12%	5.86%	0.64%
	10 to 14 years	6.79%	1.32%	6.01%	0.64%
	15 to 19 years	5.91%	1.02%	6.81%	0.64%
	20 to 24 years	3.76%	1.10%	7.28%	0.64%
	25 to 29 years	4.75%	1.07%	5.95%	0.64%
	30 to 34 years	4.62%	1.19%	5.57%	0.64%
	35 to 39 years	4.51%	1.08%	5.41%	0.64%
	40 to 44 years	5.68%	1.13%	5.62%	0.64%

Home Region	ACS Age Bins	MTS	MTS MOE (90%)	ACS	ACS MOE (90%)
	45 to 49 years	5.05%	0.96%	6.37%	0.64%
	50 to 54 years	7.97%	1.27%	7.34%	0.64%
	55 to 59 years	7.81%	1.19%	7.52%	0.64%
	60 to 64 years	9.13%	1.45%	6.59%	0.64%
	65 to 69 years	9.29%	1.37%	5.97%	0.64%
	70 to 74 years	7.64%	1.17%	4.60%	0.64%
	75 to 79 years	3.81%	0.81%	3.15%	0.64%
	80 to 84 years	2.16%	0.58%	2.28%	0.64%
	85 years and over	1.79%	0.52%	2.27%	0.64%
WM	Under 5 years	5.26%	1.33%	5.35%	0.69%
	5 to 9 years	5.39%	1.38%	5.74%	0.69%
	10 to 14 years	5.65%	1.52%	5.75%	0.69%
	15 to 19 years	5.39%	1.40%	6.45%	0.69%
	20 to 24 years	3.00%	0.91%	6.86%	0.69%
	25 to 29 years	4.08%	1.23%	6.36%	0.69%
	30 to 34 years	6.37%	1.37%	6.06%	0.69%
	35 to 39 years	5.25%	1.30%	5.78%	0.69%
	40 to 44 years	6.07%	1.78%	6.34%	0.69%
	45 to 49 years	7.01%	1.74%	7.06%	0.69%
	50 to 54 years	8.17%	1.55%	7.30%	0.69%
	55 to 59 years	7.45%	1.50%	7.14%	0.69%
	60 to 64 years	8.59%	1.42%	6.26%	0.69%
	65 to 69 years	9.06%	1.62%	5.53%	0.69%
	70 to 74 years	5.65%	1.10%	4.18%	0.69%
	75 to 79 years	3.38%	0.88%	3.17%	0.69%
	80 to 84 years	2.53%	0.68%	2.27%	0.69%
	85 years and over	1.69%	0.62%	2.39%	0.69%

Table 12. Weighted Estimate of Person Race Compared to ACS 5-Year Average by Home Region

Home Region	Race	MTS	MTS MOE (90%)	ACS	ACS MOE (90%)
BMR	*White*	71.51%	1.34%	61.76%	0.18%
	Black or African American	18.46%	1.07%	29.54%	0.19%
	American Indian, Alaskan Native	0.23%	0.10%	0.24%	0.19%
	Asian	4.84%	0.62%	5.44%	0.19%
	Native Hawaiian or Pacific Islander	0.19%	0.08%	0.05%	0.19%
	Multiracial	4.77%	0.63%	2.97%	0.19%
ES	*White*	86.18%	2.73%	77.73%	0.34%
	Black or African American	10.05%	2.39%	17.79%	0.37%
	American Indian, Alaskan Native	0.10%	0.12%	0.22%	0.37%
	Asian	0.84%	0.54%	1.77%	0.37%
	Native Hawaiian or Pacific Islander	0.04%	0.07%	0.06%	0.37%
	Multiracial	2.79%	1.02%	2.43%	0.37%
WM	*White*	93.95%	1.69%	86.74%	0.42%
	Black or African American	2.41%	1.16%	8.70%	0.44%
	American Indian, Alaskan Native	0.66%	0.77%	0.20%	0.44%
	Asian	0.44%	0.28%	1.34%	0.44%
	Native Hawaiian or Pacific Islander	0.28%	0.33%	0.03%	0.44%
	Multiracial	2.26%	0.85%	2.99%	0.44%

4.3. Trip Weights and Rates

Trip weights were generated by multiplying the final person weight by 260 to represent the number of trips on any given weekday within a year. These weights should be used to expand the data to the population. Trip rates in Table 13 through Table 17 were calculated by dividing the sum of trips by the sum of households or persons in the survey.

Table 13. Household and Person Trip Rates from Total Count of All Trips

Domain	N	Unweighted	Weighted	MOE (95%)
Household	59,913	7.21	8.08	0.14
Person	59,913	3.35	3.31	0.06

Table 14.   Person Trip Rates by Age Range by Home Region

Home Region	Age	N	Unweighted	Weighted	MOE (95%)
BMR	*Not ascertained*	328	2.80	2.43	0.65
	Under 5	1,566	2.26	2.38	0.25
	5 - 12	2,772	2.64	2.61	0.16
	13 - 15	1,025	2.68	2.74	0.21
	16 - 17	625	2.53	2.46	0.29
	18 - 44	14,670	3.37	3.42	0.11
	45 - 64	16,420	3.62	3.65	0.09
	65 or older	11,545	3.44	3.43	0.12
ES	*Not ascertained*	16	2.29	2.28	0.95
	Under 5	143	2.86	3.17	1.10
	5 - 12	396	2.98	3.00	0.38
	13 - 15	145	2.84	2.89	0.66
	16 - 17	130	2.95	2.67	0.82
	18 - 44	1,496	3.58	3.51	0.34
	45 - 64	2,439	3.88	3.85	0.26
	65 or older	2,199	3.64	3.62	0.23
WM	*Not ascertained*	7	1.75	1.61	1.28
	Under 5	109	2.42	2.27	0.74
	5 - 12	189	2.66	2.65	0.49
	13 - 15	49	1.75	1.78	0.70
	16 - 17	60	2.61	2.71	1.41
	18 - 44	927	3.50	3.41	0.37
	45 - 64	1,354	3.36	3.17	0.29
	65 or older	1,303	3.84	3.89	0.39
Total	*Not ascertained*	351	2.74	2.40	0.61
	Under 5	1,818	2.31	2.43	0.23
	5 - 12	3,357	2.67	2.66	0.15
	13 - 15	1,219	2.64	2.70	0.21
	16 - 17	815	2.60	2.51	0.29
	18 - 44	17,093	3.39	3.43	0.10
	45 - 64	20,213	3.63	3.64	0.09
	65 or older	15,047	3.50	3.50	0.10

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Table 15. Household Trip Rates by Household Size by Home Region

Home Region	HH Size	N	Unweighted	Weighted	MOE (95%)
BMR	*1*	8,589	3.83	3.82	0.13
	2	18,666	6.84	6.89	0.19
	3	8,639	9.29	9.21	0.38
	4+	13,057	13.66	14.29	0.58
ES	*1*	1,105	4.46	4.46	0.37
	2	3,095	7.39	7.46	0.45
	3	1,273	10.43	10.57	0.98
	4+	1,491	14.34	14.69	2.19
WM	*1*	707	4.02	3.99	0.42
	2	1,878	7.25	7.18	0.58
	3	626	9.07	8.85	1.25
	4+	787	12.69	12.69	2.06
Total	*1*	10,401	3.90	3.90	0.11
	2	23,639	6.94	6.99	0.17
	3	10,538	9.40	9.35	0.34
	4+	15,335	13.67	14.23	0.55

Table 16. Household Trip Rates by Number of Household Workers by Home Region

Home Region	HH Workers	N	Unweighted	Weighted	MOE (95%)
BMR	*0*	9,938	5.10	5.14	0.24
	1	15,790	6.25	7.00	0.34
	2	19,013	9.38	10.41	0.35
	3+	4,210	12.03	12.34	0.93
ES	*0*	1,938	5.93	6.08	0.67
	1	2,025	7.36	8.33	1.07
	2	2,526	10.06	10.85	0.78
	3+	475	11.88	12.04	2.63
WM	*0*	1,155	5.45	5.35	0.56
	1	1,297	7.05	7.40	1.00
	2	1,236	8.64	9.21	1.27
	3+	310	11.48	12.26	3.49
Total	*0*	13,031	5.24	5.29	0.21
	1	19,112	6.40	7.17	0.30
	2	22,775	9.41	10.38	0.30
	3+	4,995	11.98	12.30	0.83

Table 17. Household Trip Rates by Household Income Range by Home Region

Home Region	Household Income - Detailed	N	Unweighted	Weighted	MOE (95%)
BMR	*Less than $15,000*	2,000	4.12	4.38	0.60
	$15,000 to $24,999	1,847	5.03	5.62	0.98
	$25,000 to $34,999	2,935	5.72	6.32	0.63
	$35,000 to $49,999	3,346	5.88	6.22	0.59
	$50,000 to $74,999	8,559	6.98	7.58	0.46
	$75,000 to $99,999	6,956	7.35	8.27	0.54
	$100,000 to $149,999	10,505	8.22	9.09	0.45
	$150,000 or more	10,793	9.48	10.82	0.60
ES	*Less than $15,000*	251	5.23	6.28	3.08
	$15,000 to $24,999	253	4.96	5.37	1.28
	$25,000 to $34,999	718	7.18	7.70	1.39
	$35,000 to $49,999	689	6.89	8.20	2.45
	$50,000 to $74,999	1,492	7.50	8.10	0.94
	$75,000 to $99,999	1,123	8.57	9.17	1.11
	$100,000 to $149,999	1,557	10.18	10.95	0.91

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Home Region	Household Income - Detailed	N	Unweighted	Weighted	MOE (95%)
	$150,000 or more	673	8.97	10.02	1.86
WM	*Less than $15,000*	165	3.75	3.94	1.26
	$15,000 to $24,999	328	6.19	6.64	1.79
	$25,000 to $34,999	365	5.37	5.44	0.91
	$35,000 to $49,999	481	6.59	7.05	1.50
	$50,000 to $74,999	1,065	8.80	9.40	1.51
	$75,000 to $99,999	650	7.47	8.15	1.47
	$100,000 to $149,999	540	8.31	8.80	1.68
	$150,000 or more	287	7.76	7.82	1.69
Total	*Less than $15,000*	2,416	4.18	4.52	0.55
	$15,000 to $24,999	2,428	5.15	5.71	0.80
	$25,000 to $34,999	4,018	5.90	6.45	0.47
	$35,000 to $49,999	4,516	6.09	6.59	0.61
	$50,000 to $74,999	11,116	7.19	7.82	0.40
	$75,000 to $99,999	8,729	7.49	8.37	0.48
	$100,000 to $149,999	12,602	8.42	9.29	0.41
	$150,000 or more	11,753	9.39	10.69	0.57

Table 18 through Table 23 show details about household trips including trip purpose, mode, and percentage of trips by day of week. Table 19 shows trip purpose by both internal and external trips, with external being any trips outside of the BMR/ES/WM regions. In this section, any tables referencing Home Region indicate that the household or person's home address falls within the boundaries of one of the study regions, and 'Region' indicates that the trip destination falls within one of the particular study regions." 'Other' refers to trips ending in an area outside of the counties in the state.

Table 18. Percent of Trips by Primary Trip Purpose by Region

Region	Activity	N	Unweighted	Weighted	MOE (95%)
BMR	*Not ascertained*	27	0.06%	0.07%	0.06%
	Home	15,970	34.46%	34.82%	0.41%
	Work	6,580	14.20%	14.24%	0.56%
	School	1,809	3.90%	5.28%	0.30%
	Volunteer	328	0.71%	0.61%	0.09%
	Social / Recreational	7,643	16.49%	15.92%	0.60%
	Maintenance / Errands	10,305	22.24%	19.90%	0.62%

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Region	Activity	N	Unweighted	Weighted	MOE (95%)
	Escorting / Mode change	3,306	7.13%	8.30%	0.51%
	Something Else	373	0.80%	0.87%	0.17%
ES	*Not ascertained*	0	0.00%	0.00%	0.00%
	Home	2,141	34.82%	35.02%	1.34%
	Work	753	12.25%	12.29%	1.30%
	School	238	3.87%	5.08%	0.90%
	Volunteer	55	0.89%	0.75%	0.33%
	Social / Recreational	1,154	18.77%	18.94%	1.85%
	Maintenance / Errands	1,469	23.89%	21.70%	2.04%
	Escorting / Mode change	304	4.94%	5.71%	0.97%
	Something Else	35	0.57%	0.50%	0.24%
WM	*Not ascertained*	18	0.51%	0.67%	1.00%
	Home	1,261	35.67%	36.73%	1.89%
	Work	409	11.57%	11.28%	1.64%
	School	125	3.54%	4.95%	1.13%
	Volunteer	26	0.74%	0.71%	0.33%
	Social / Recreational	584	16.52%	15.93%	1.89%
	Maintenance / Errands	861	24.36%	22.02%	2.31%
	Escorting / Mode change	227	6.42%	7.12%	1.64%
	Something Else	24	0.68%	0.59%	0.40%
Other	*Not ascertained*	0	0.00%	0.00%	0.00%
	Home	125	3.22%	3.59%	0.92%
	Work	1,502	38.63%	38.01%	3.30%
	School	76	1.95%	2.56%	0.97%
	Volunteer	30	0.77%	0.54%	0.32%
	Social / Recreational	966	24.85%	25.06%	2.39%
	Maintenance / Errands	797	20.50%	19.11%	2.29%
	Escorting / Mode change	278	7.15%	7.52%	2.69%
	Something Else	114	2.93%	3.62%	1.40%
Total	*Not ascertained*	45	0.08%	0.10%	0.08%
	Home	19,497	32.54%	33.10%	0.38%
	Work	9,244	15.43%	15.26%	0.53%
	School	2,248	3.75%	5.07%	0.25%
	Volunteer	439	0.73%	0.63%	0.09%
	Social / Recreational	10,347	17.27%	16.79%	0.55%

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Region	Activity	N	Unweighted	Weighted	MOE (95%)
	Maintenance / Errands	13,432	22.42%	20.18%	0.55%
	Escorting / Mode change	4,115	6.87%	7.90%	0.46%
	Something Else	546	0.91%	0.98%	0.15%

Table 19.   Percent of Trips by Primary Trip Purpose by Internal and External Destination

Trip Type	Activity	N	Unweighted	Weighted	MOE (95%)
Internal	*Not ascertained*	45	0.08%	0.10%	0.08%
	Home	19,372	34.58%	34.97%	0.41%
	Work	7,742	13.82%	13.82%	0.52%
	School	2,172	3.88%	5.23%	0.25%
	Volunteer	409	0.73%	0.63%	0.09%
	Social / Recreational	9,381	16.74%	16.27%	0.56%
	Maintenance / Errands	12,635	22.55%	20.25%	0.57%
	Escorting / Mode change	3,837	6.85%	7.92%	0.46%
	Something Else	432	0.77%	0.81%	0.14%
External	*Not ascertained*	0	0.00%	0.00%	0.00%
	Home	125	3.22%	3.59%	0.92%
	Work	1,502	38.63%	38.01%	3.30%
	School	76	1.95%	2.56%	0.97%
	Volunteer	30	0.77%	0.54%	0.32%
	Social / Recreational	966	24.85%	25.06%	2.39%
	Maintenance / Errands	797	20.50%	19.11%	2.29%
	Escorting / Mode change	278	7.15%	7.52%	2.69%
	Something Else	114	2.93%	3.62%	1.40%

Table 20.   Percent of All Trips by Trip Mode by Region

Region	Primary Travel Mode	N	Unweighted	Weighted	MOE (95%)
BMR	*Walk*	3,185	6.87%	6.89%	0.53%
	Bike	178	0.38%	0.39%	0.14%
	Motorcycle	25	0.05%	0.04%	0.03%
	Auto (driver)	31,285	67.51%	64.66%	0.95%
	Auto (passenger)	8,313	17.94%	20.33%	0.96%
	School Bus	967	2.09%	3.09%	0.41%
	Rail	447	0.96%	0.82%	0.13%
	Bus	1,112	2.40%	1.86%	0.29%

Region	Primary Travel Mode	N	Unweighted	Weighted	MOE (95%)
	Private Bus	112	0.24%	0.23%	0.08%
	Paratransit	81	0.17%	0.15%	0.06%
	Taxi / Private Car	75	0.16%	0.12%	0.05%
	Uber/Lyft/Rideshare	165	0.36%	0.41%	0.12%
	Air	13	0.03%	0.02%	0.02%
	Other	383	0.83%	1.01%	0.26%
ES	*Walk*	234	3.81%	4.15%	1.01%
	Bike	17	0.28%	0.24%	0.20%
	Motorcycle	3	0.05%	0.06%	0.09%
	Auto (driver)	4,386	71.33%	67.44%	2.77%
	Auto (passenger)	1,279	20.80%	23.80%	2.95%
	School Bus	138	2.24%	2.96%	0.93%
	Rail	2	0.03%	0.02%	0.03%
	Bus	11	0.18%	0.14%	0.13%
	Private Bus	3	0.05%	0.06%	0.08%
	Paratransit	4	0.07%	0.06%	0.09%
	Taxi / Private Car	4	0.07%	0.08%	0.09%
	Uber/Lyft/Rideshare	0	0.00%	0.00%	0.00%
	Air	0	0.00%	0.00%	0.00%
	Other	68	1.11%	1.00%	0.60%
WM	*Walk*	129	3.65%	3.83%	1.64%
	Bike	3	0.08%	0.09%	0.16%
	Motorcycle	3	0.08%	0.08%	0.11%
	Auto (driver)	2,509	70.98%	67.05%	3.50%
	Auto (passenger)	750	21.22%	23.52%	3.59%
	School Bus	81	2.29%	3.79%	1.45%
	Rail	2	0.06%	0.05%	0.08%
	Bus	21	0.59%	0.61%	0.48%
	Private Bus	7	0.20%	0.17%	0.17%
	Paratransit	2	0.06%	0.06%	0.11%
	Taxi / Private Car	4	0.11%	0.13%	0.17%
	Uber/Lyft/Rideshare	1	0.03%	0.04%	0.07%
	Air	0	0.00%	0.00%	0.00%
	Other	23	0.65%	0.58%	0.53%
Other	*Walk*	204	5.25%	4.97%	1.49%

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Region	Primary Travel Mode	N	Unweighted	Weighted	MOE (95%)
	Bike	9	0.23%	0.17%	0.18%
	Motorcycle	8	0.21%	0.56%	0.77%
	Auto (driver)	2,625	67.52%	67.25%	2.99%
	Auto (passenger)	679	17.46%	18.94%	3.20%
	School Bus	8	0.21%	0.18%	0.18%
	Rail	199	5.12%	4.43%	0.94%
	Bus	36	0.93%	0.58%	0.23%
	Private Bus	12	0.31%	0.23%	0.25%
	Paratransit	0	0.00%	0.00%	0.00%
	Taxi / Private Car	7	0.18%	0.09%	0.07%
	Uber/Lyft/Rideshare	14	0.36%	0.30%	0.30%
	Air	36	0.93%	1.00%	0.64%
	Other	51	1.31%	1.32%	0.62%
Total	*Walk*	3,752	6.26%	6.29%	0.46%
	Bike	207	0.35%	0.34%	0.11%
	Motorcycle	39	0.07%	0.08%	0.05%
	Auto (driver)	40,805	68.11%	65.26%	0.82%
	Auto (passenger)	11,021	18.40%	20.82%	0.83%
	School Bus	1,194	1.99%	2.95%	0.36%
	Rail	650	1.08%	0.90%	0.13%
	Bus	1,180	1.97%	1.52%	0.23%
	Private Bus	134	0.22%	0.21%	0.07%
	Paratransit	87	0.15%	0.12%	0.05%
	Taxi / Private Car	90	0.15%	0.11%	0.04%
	Uber/Lyft/Rideshare	180	0.30%	0.33%	0.09%
	Air	49	0.08%	0.08%	0.04%
	Other	525	0.88%	1.00%	0.23%

Table 21.   Percent of School-Related Trips by Travel Mode and Home Region

Home Region	Travel Mode	N	Unweighted	Weighted	MOE (95%)
BMR	*Walk*	270	10.15%	9.90%	1.57%
	Bike	15	0.56%	0.61%	0.49%
	POV	1,310	49.25%	48.33%	2.94%
	School Bus	753	28.31%	31.04%	2.87%
	Public Transit	132	4.96%	4.13%	1.28%
	Other	180	6.77%	5.98%	1.39%
ES	*Walk*	18	5.68%	6.21%	2.23%
	Bike	1	0.32%	0.49%	0.96%
	POV	192	60.57%	56.11%	8.00%
	School Bus	92	29.02%	32.44%	7.24%
	Public Transit	4	1.26%	1.13%	1.15%
	Other	10	3.15%	3.61%	3.04%
WM	*Walk*	11	6.67%	6.47%	4.85%
	Bike	2	1.21%	1.35%	2.54%
	POV	87	52.73%	47.28%	9.76%
	School Bus	58	35.15%	41.09%	9.61%
	Public Transit	2	1.21%	1.35%	2.67%
	Other	5	3.03%	2.45%	2.17%
Total	*Walk*	299	9.52%	9.32%	1.37%
	Bike	18	0.57%	0.64%	0.43%
	POV	1,589	50.57%	49.08%	2.72%
	School Bus	903	28.74%	31.76%	2.65%
	Public Transit	138	4.39%	3.66%	1.08%
	Other	195	6.21%	5.53%	1.22%

Table 22.   Percent of Work-Related Trips by Travel Mode and Home Region

Home Region	Travel Mode	N	Unweighted	Weighted	MOE (95%)
BMR	*Walk*	166	2.35%	2.61%	0.54%
	Bike	45	0.64%	0.63%	0.23%
	POV	6,169	87.48%	87.99%	1.08%
	Public Transit	509	7.22%	6.23%	0.71%
	Other	163	2.31%	2.54%	0.52%
ES	*Walk*	18	2.12%	2.35%	1.28%
	Bike	4	0.47%	0.49%	0.51%

Home Region	Travel Mode	N	Unweighted	Weighted	MOE (95%)
	POV	806	94.71%	94.27%	1.88%
	Public Transit	3	0.35%	0.41%	0.48%
	Other	20	2.35%	2.47%	1.45%
WM	*Walk*	3	0.59%	0.56%	0.68%
	Bike	1	0.20%	0.37%	0.71%
	POV	485	95.47%	95.54%	2.17%
	Public Transit	6	1.18%	1.07%	1.07%
	Other	13	2.56%	2.45%	1.59%
Total	*Walk*	187	2.22%	2.44%	0.49%
	Bike	50	0.59%	0.60%	0.19%
	POV	7,460	88.69%	89.16%	0.90%
	Public Transit	518	6.16%	5.27%	0.60%
	Other	196	2.33%	2.53%	0.47%

Table 23.   Percent of All Trips by Day of Week by Region

Region	HH Travel Survey Day of Week	N	Unweighted	Weighted	MOE (95%)
BMR	*Monday*	9,147	19.74%	19.56%	1.94%
	Tuesday	9,182	19.81%	20.40%	1.76%
	Wednesday	9,404	20.29%	20.76%	1.61%
	Thursday	8,961	19.34%	18.98%	1.80%
	Friday	9,647	20.82%	20.31%	1.81%
ES	*Monday*	992	16.13%	15.93%	3.62%
	Tuesday	1,356	22.05%	20.92%	3.86%
	Wednesday	1,355	22.04%	21.94%	3.63%
	Thursday	1,180	19.19%	18.96%	4.50%
	Friday	1,266	20.59%	22.26%	4.33%
WM	*Monday*	726	20.54%	22.45%	6.13%
	Tuesday	575	16.27%	15.85%	4.20%
	Wednesday	683	19.32%	16.71%	4.23%
	Thursday	651	18.42%	18.74%	5.13%
	Friday	900	25.46%	26.25%	6.20%
Other	*Monday*	737	18.96%	19.48%	3.21%
	Tuesday	745	19.16%	20.74%	3.39%

Region	HH Travel Survey Day of Week	N	Unweighted	Weighted	MOE (95%)
	Wednesday	743	19.11%	19.64%	3.49%
	Thursday	744	19.14%	16.56%	2.64%
	Friday	919	23.64%	23.58%	3.99%
Total	*Monday*	11,602	19.36%	19.34%	1.59%
	Tuesday	11,858	19.79%	20.19%	1.47%
	Wednesday	12,185	20.34%	20.57%	1.45%
	Thursday	11,536	19.25%	18.82%	1.60%
	Friday	12,732	21.25%	21.08%	1.62%

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4.4. Replicate Weights

In addition to the full-sample weight, a set of 80 replicate weights was calculated for each household using weighting procedures similar to those used for the full-sample weight. These replicate weights are used to calculate standard error of estimates obtained from the MD HTS data, using the pared jackknife (JK2) replication method. For each sample, the calculation of replicate weighting factors was performed in a series of steps. First, each household was assigned to one of 80 variance estimation strata. Then, a random subset of households in each variance estimation stratum was assigned a replicate factor of between 0 and 1. Next, the remaining subset of households in the same variance stratum was assigned a complementary replicate factor greater than 1. All households in the other variance estimation strata were assigned a replicate factor of exactly 1. This process was repeated for each of the 80 variance estimation strata so that 80 distinct replicate factors were assigned to each household in the sample.

Nonresponse and calibration adjustments were then computed for each set of replicate weights, using the replicate base weights in the computation of nonresponse and calibration adjustments in place of the original weights. These calculations generated a set of replicate nonresponse and post-stratification adjustments for each responding household. The final replicate weights were products of the replicate base weights, nonresponse adjustments, and calibration adjustments. By repeating the various weighting procedures on each set of replicates, the impact of these procedures on the sampling variance of an estimate is appropriately reflected in the variance estimate.

Many software packages for personal computers exist for replication variance estimation methods. For example, WesVar, later versions of SAS, and STATA all have the capability of producing replication estimates. These software packages produce both the appropriate estimates and corresponding variance estimates for the estimates. WesVar, developed and distributed by Westat, is available for free.

5. Survey Results

5.1. Travel Characteristics and Demographic Results

The following section includes observations about selected travel characteristics and demographics like race, gender, and income. The data in Table 24 through Table 28 shows results of average travel time for each of these categories. Table 29 shows mode share by household size for each region. Note in the following tables that the 'Other' category of activities includes all other activity choices not included in the independent 'Home', 'School', 'Work' categories. Throughout the remaining tables, references to Region should be understood as the region containing the destination of a trip. 'Other' refers to trips ending in areas outside of the state. References to Home Region should be read as data grouped according to the location home address of the person or household.

Table 24 shows the average travel time to locations where work, school, and 'other' activities were reported, grouped by region. Work trips across the state took 28.30 (±0.85) minutes on average, with work trips by regional destination taking 49.77 (±3.26) minutes for trips outside of the study area, 25.54 (±0.72) minutes for trips ending in BMR, 20.28 (±1.82) minutes for trips ending in ES, and 17.49 (±1.99) minutes for trips ending in WM.

Data Suppression in Data Reporting
Note that in all of the following tables, some data have been suppressed for one of three reasons using three icons to denote scenarios:
† indicates data have been suppressed due to low raw sample sizes (less than 30 observations).
! indicates the coefficient of variation (CV) for this estimate is between 30 percent and 50 percent (i.e., the standard error is at least 30 percent and less than 50 percent of the estimate).
‡ indicates that reporting standards are not met. The coefficient of variation (CV) for this estimate is 50 percent or greater (i.e., the standard error is 50 percent or more of the estimate).

Table 24. Average Travel Time (In Minutes) to Locations to Perform Work, School, or 'Other' Activities by Region

Region	Activity	N	Unweighted	Weighted	MOE (95%)
BMR	*Work*	6,580	25.71	25.54	0.72
	School	1,809	19.67	18.84	1.02
	Other	37,915	20.68	20.17	0.40
ES	*Work*	753	20.47	20.28	1.82
	School	238	17.03	16.23	2.00
	Other	5,158	19.88	19.90	1.19
WM	*Work*	409	17.47	17.49	1.99
	School	125	16.58	16.53	2.57
	Other	2,983	17.29	17.42	1.34
Other	*Work*	1,497	49.76	49.77	3.27
	School	76	35.42	!	-
	Other	2,308	40.51	42.53	4.86
Total	*Work*	9,239	28.82	28.30	0.85
	School	2,248	19.75	19.20	1.27
	Other	48,364	21.33	20.95	0.50

Table 25 shows average travel time to locations where work, school, and all 'other' activities were reported, grouped by race/ethnicity. The estimated travel time of 'Other' trips ranged from 20.05 (±0.54) minutes for White residents to 25.52 (±1.40) minutes for African American or Black residents.

Table 25. **Average Travel Time (In Minutes) to Locations to Perform Work, School, or 'Other' Activities by Race**

Activity	Race/Ethnicity	N	Unweighted	Weighted	MOE (95%)
Work	Not ascertained	210	32.22	33.06	4.98
	White	6,911	28.01	27.63	0.96
	African American, Black	1,475	32.12	31.19	2.00
	Asian	324	27.92	28.02	2.72
	American Indian, Alaskan Native	†	-	-	-
	Native Hawaiian or Pacific Islander	†	-	-	-
	Multiracial	280	30.32	28.54	3.91
School	Not ascertained	68	17.85	16.42	4.27
	White	1,374	18.81	19.06	1.76
	African American, Black	457	23.06	21.80	2.90
	Asian	129	19.78	17.38	3.42
	American Indian, Alaskan Native	†	-	-	-
	Native Hawaiian or Pacific Islander	†	-	-	-
	Multiracial	209	19.22	17.02	2.19
Other	Not ascertained	1,064	22.98	23.23	2.50
	White	35,628	20.23	20.05	0.54
	African American, Black	8,165	25.72	25.52	1.40
	Asian	1,670	21.44	20.91	2.73
	American Indian, Alaskan Native	109	23.42	21.98	9.62
	Native Hawaiian or Pacific Islander	85	24.33	25.26	10.60
	Multiracial	1,643	22.09	20.25	1.70

Table 26 shows the average travel time to locations where work, school, and all 'other' activities were reported grouped by household income. Travel times were fairly consistent across income ranges for travel to work. Travel times to school varied based on income, but the variation was not clearly related to income. However, travel time for discretionary travel (Other) is estimated to take much longer for the lowest income earners in the state.

Table 26. Average Travel Time (In Minutes) to Locations to Perform Work, School, or 'Other' Activities by Household Income

Activity	Household Income - Detailed	N	Unweighted	Weighted	MOE (95%)
Work	*Not ascertained*	247	29.80	35.38	10.06
	Less than $15,000	131	33.82	28.60	7.68
	$15,000 to $24,999	172	28.09	28.09	4.92
	$25,000 to $34,999	448	27.86	25.25	2.81
	$35,000 to $49,999	625	24.83	25.19	2.64
	$50,000 to $74,999	1,740	27.25	26.83	2.09
	$75,000 to $99,999	1,493	28.29	27.40	1.77
	$100,000 to $149,999	2,178	28.97	28.26	1.55
	$150,000 or more	2,205	31.24	30.35	1.47
School	*Not ascertained*	55	19.73	20.55	2.95
	Less than $15,000	101	25.48	24.79	8.98
	$15,000 to $24,999	72	23.51	18.85	4.47
	$25,000 to $34,999	130	19.07	18.44	3.78
	$35,000 to $49,999	128	16.45	16.14	2.90
	$50,000 to $74,999	368	21.80	21.06	2.48
	$75,000 to $99,999	268	22.14	20.89	2.89
	$100,000 to $149,999	531	17.77	17.36	1.43
	$150,000 or more	595	18.60	18.79	3.61
Other	*Not ascertained*	2,031	21.44	21.20	1.70
	Less than $15,000	2,182	29.02	27.62	2.57
	$15,000 to $24,999	2,175	22.04	21.09	1.64
	$25,000 to $34,999	3,440	20.39	20.33	1.69
	$35,000 to $49,999	3,762	20.13	20.92	1.91
	$50,000 to $74,999	8,986	20.44	20.31	1.05
	$75,000 to $99,999	6,958	21.05	20.58	0.96
	$100,000 to $149,999	9,880	21.01	20.33	0.88
	$150,000 or more	8,950	21.61	21.23	1.48

Table 27 shows the average travel time to locations where work, school, and all 'other' activities were reported grouped by respondent gender. The differences in travel times based on gender were minor with the only notable difference being travel time to work which was 29.80 (±1.16) minutes for males and 26.52 (±0.93) minutes for females.

Table 27.   Average Travel Time (In Minutes) to Locations to Perform Work, School, or 'Other' Activities by Gender

Activity	Gender	N	Unweighted	Weighted	MOE (95%)
Work	*Not ascertained*	†	-	-	-
	Female	4,436	27.29	26.52	0.93
	Male	4,799	30.15	29.80	1.16
School	*Not ascertained*	†	-	-	-
	Female	1,145	19.22	18.38	1.13
	Male	1,099	20.30	20.06	2.21
Other	*Not ascertained*	†	-	-	-
	Female	26,775	20.79	20.30	0.62
	Male	21,565	22.01	21.77	0.64

Table 28 shows the average travel time to location where work, school, and 'other' activities were performed, grouped by respondent age. Travel times to work were slightly higher for the 45 – 64 age group than other working age groups.

Table 28.   Average Travel Time (In Minutes) to Locations to Perform Work, School, or 'Other' Activities by Age

Activity	Age	N	Unweighted	Weighted	MOE (95%)
Work	*Not ascertained*	51	42.57	40.66	14.11
	Under 5	†	-	-	-
	5 - 12	†	-	-	-
	13 - 15	†	-	!	-
	16 - 17	38	17.61	16.35	2.91
	18 - 44	3,990	28.20	27.67	1.39
	45 - 64	4,246	29.66	29.22	0.99
	65 or older	890	27.45	27.27	3.27
School	*Not ascertained*	†	-	-	-
	Under 5	251	16.76	16.13	2.15
	5 - 12	944	16.70	16.65	1.09
	13 - 15	337	20.36	19.91	1.80
	16 - 17	227	20.43	18.27	1.81
	18 - 44	373	27.65	29.11	6.80
	45 - 64	71	22.24	19.36	4.47
	65 or older	38	24.05	24.45	6.50
Other	*Not ascertained*	293	24.46	23.76	4.47
	Under 5	1,548	16.86	17.14	2.19
	5 - 12	2,402	18.47	17.57	1.45
	13 - 15	875	20.59	19.39	1.71
	16 - 17	542	22.11	22.27	6.82
	18 - 44	12,709	21.99	21.36	0.76
	45 - 64	15,890	22.97	22.83	0.74
	65 or older	14,105	19.83	19.90	0.82

Table 29 shows the percentage of trips by travel mode, grouped by household size. The majority of all trips were made using privately owned vehicles with walking as the next most regularly used mode.

Table 29. Percent of Travel Mode by Household Size and Region of Destination, for all Trips

Region	Travel Mode	HH Size	N	Unweighted	Weighted	MOE (95%)
BMR	Walk	1	741	1.60%	1.28%	0.16%
		2	1,139	2.46%	2.04%	0.29%
		3	470	1.01%	1.10%	0.25%
		4+	835	1.80%	2.48%	0.41%
	Bike	1	40	0.09%	!	-
		2	69	0.15%	0.12%	0.05%
		3	31	0.07%	!	-
		4+	38	0.08%	!	-
	POV	1	6,630	14.31%	11.06%	0.56%
		2	15,606	33.68%	24.63%	0.87%
		3	7,121	15.37%	15.94%	0.86%
		4+	10,266	22.15%	33.38%	1.37%
	Public Transit	1	570	1.23%	0.83%	0.13%
		2	518	1.12%	0.73%	0.13%
		3	274	0.59%	0.58%	0.15%
		4+	278	0.60%	0.69%	0.23%
	Other	1	162	0.35%	0.28%	0.09%
		2	296	0.64%	0.56%	0.14%
		3	308	0.66%	0.75%	0.18%
		4+	949	2.05%	3.29%	0.43%
ES	Walk	1	44	0.72%	!	-
		2	105	1.71%	1.43%	0.54%
		3	37	0.60%	!	-
		4+	48	0.78%	1.27%	0.63%
	Bike	1	†	-	‡	-
		2	†	-	‡	-
		3	†	-	‡	-
		4+	†	-	-	-
	POV	1	894	14.54%	12.34%	1.64%
		2	2,589	42.10%	31.55%	3.85%
		3	1,002	16.30%	18.67%	3.18%

Region	Travel Mode	HH Size	N	Unweighted	Weighted	MOE (95%)
		4+	1,183	19.24%	28.74%	5.35%
	Public Transit	1	†	-	‡	-
		2	†	-	‡	-
		3	†	-	‡	-
		4+	†	-	‡	-
	Other	1	†	-	‡	-
		2	38	0.62%	!	-
		3	59	0.96%	1.13%	0.50%
		4+	106	1.72%	2.41%	0.83%
WM	Walk	1	36	1.02%	!	-
		2	50	1.41%	1.09%	0.52%
		3	†	-	!	-
		4+	21	0.59%	1.00%	1.06%
	Bike	1	†	-	‡	-
		2	†	-	-	-
		3	†	-	-	-
		4+	†	-	-	-
	POV	1	585	16.55%	14.12%	2.45%
		2	1,578	44.64%	33.74%	5.51%
		3	488	13.80%	15.35%	4.14%
		4+	611	17.28%	27.44%	6.65%
	Public Transit	1	†	-	‡	-
		2	†	-	‡	-
		3	†	-	‡	-
		4+	†	-	‡	-
	Other	1	†	-	‡	-
		2	†	-	!	-
		3	†	-	!	-
		4+	76	2.15%	3.61%	1.48%
Other	Walk	1	51	1.31%	0.87%	0.34%
		2	76	1.95%	1.57%	0.67%
		3	35	0.90%	!	-
		4+	42	1.08%	!	-
	Bike	1	†	-	‡	-
		2	†	-	-	-
		3	†	-	‡	-

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Region	Travel Mode	HH Size	N	Unweighted	Weighted	MOE (95%)
		4+	†	-	‡	-
	POV	1	539	13.86%	11.73%	2.50%
		2	1,375	35.37%	27.60%	3.13%
		3	604	15.53%	16.96%	2.74%
		4+	794	20.42%	30.46%	3.85%
	Public Transit	1	42	1.08%	0.61%	0.30%
		2	105	2.70%	1.85%	0.46%
		3	46	1.18%	1.12%	0.58%
		4+	42	1.08%	1.43%	0.56%
	Other	1	†	-	!	-
		2	59	1.52%	1.21%	0.36%
		3	†	-	!	-
		4+	31	0.80%	!	-
Total	Walk	1	872	1.46%	1.16%	0.12%
		2	1,370	2.29%	1.88%	0.24%
		3	564	0.94%	1.05%	0.23%
		4+	946	1.58%	2.20%	0.34%
	Bike	1	55	0.09%	0.06%	0.03%
		2	72	0.12%	0.10%	0.04%
		3	36	0.06%	0.07%	0.04%
		4+	44	0.07%	!	-
	POV	1	8,648	14.43%	11.43%	0.43%
		2	21,148	35.30%	26.12%	0.75%
		3	9,215	15.38%	16.26%	0.65%
		4+	12,854	21.45%	32.34%	1.06%
	Public Transit	1	626	1.04%	0.70%	0.11%
		2	637	1.06%	0.69%	0.11%
		3	325	0.54%	0.53%	0.13%
		4+	329	0.55%	0.63%	0.19%
	Other	1	200	0.33%	0.26%	0.08%
		2	412	0.69%	0.58%	0.12%
		3	398	0.66%	0.76%	0.15%
		4+	1,162	1.94%	3.08%	0.37%

Table 30 shows the average trip distance by mode (in miles) for trips made in each region and in total. Public transit trips had the longest average distance but variability within this mode is high.

POV had the second longest trip distance with an average of 9.13 miles (±0.49). The 'Other' category includes airplane modes of which there are few trips, but cover far greater distance than an average trip by any other mode.

Table 30.   Average Trip Distance (In Miles) by Mode on All Trips by Region

Region	Travel Mode	N	Unweighted	Weighted	MOE (95%)
BMR	Walk	3,185	0.50	0.46	0.04
	Bike	178	2.04	1.73	0.62
	POV	39,623	8.03	7.97	0.56
	Public Transit	1,640	12.27	13.05	6.47
	Other	1,715	11.87	7.84	3.26
ES	Walk	234	0.47	0.49	0.16
	Bike	†	-	!	-
	POV	5,668	9.76	9.48	0.66
	Public Transit	†	-	!	-
	Other	213	6.54	5.99	1.17
WM	Walk	129	0.38	0.43	0.14
	Bike	†	-	-	-
	POV	3,262	7.28	7.26	0.77
	Public Transit	†	-	!	-
	Other	116	5.40	5.28	1.67
Other	Walk	204	0.75	0.50	0.24
	Bike	†	-	!	-
	POV	3,311	24.26	25.09	2.23
	Public Transit	235	33.92	42.36	10.32
	Other	128	408.88	!	-
Total	Walk	3,752	0.51	0.47	0.04
	Bike	207	2.21	1.95	0.63
	POV	51,864	9.21	9.13	0.49
	Public Transit	1,917	14.91	16.38	5.98
	Other	2,172	34.40	26.65	14.41

Table 31 shows average trip distance by trip purpose. "Something Else" had the longest average distance with 24.37 (±12.20) miles followed by "Escorting / Mode change" with 18.77 (±8.39) miles but the variation is high with both estimates. The Escorting/Mode change distance may be skewed due to respondents providing this purpose for trips with airplane mode as well, i.e. a place is reported at a connecting airport with a purpose of Mode Change, all the miles in between are assigned to that purpose.

Table 31. Average Trip Distance (In Miles) by Primary Trip Purpose by Region

Region	Activity	N	Unweighted	Weighted	MOE (95%)
BMR	Not ascertained	†	-	-	-
	Home	15,970	9.21	8.83	1.38
	Work	6,580	10.32	10.42	0.44
	School	1,809	4.69	4.18	0.32
	Volunteer	328	6.49	6.01	1.14
	Social / Recreational	7,643	5.60	5.48	0.26
	Maintenance / Errands	10,305	5.52	5.70	0.30
	Escorting / Mode change	3,306	9.89	8.29	1.89
	Something Else	373	6.85	6.35	1.67
ES	Not ascertained	†	-	-	-
	Home	2,141	11.06	10.68	0.96
	Work	753	10.42	10.21	1.15
	School	238	5.95	5.49	0.90
	Volunteer	55	10.56	10.00	5.74
	Social / Recreational	1,154	8.90	8.15	1.19
	Maintenance / Errands	1,469	7.15	7.11	0.76
	Escorting / Mode change	304	7.20	7.12	1.26
	Something Else	35	19.34	!	-
WM	Not ascertained	†	-	!	-
	Home	1,261	8.41	8.13	1.02
	Work	409	9.11	9.08	1.72
	School	125	4.79	4.80	1.72
	Volunteer	†	-	-	-
	Social / Recreational	584	5.81	5.89	1.18
	Maintenance / Errands	861	5.01	4.90	0.66
	Escorting / Mode change	227	7.61	7.81	3.20
	Something Else	†	-	-	-
Other	Not ascertained	†	-	-	-
	Home	125	35.75	33.43	14.07
	Work	1,502	27.50	27.69	2.34
	School	76	20.86	!	-
	Volunteer	30	10.96	!	-
	Social / Recreational	966	23.65	22.43	4.45
	Maintenance / Errands	796	15.12	17.00	3.28
	Escorting / Mode change	278	169.27	!	-

Region	Activity	N	Unweighted	Weighted	MOE (95%)
	Something Else	114	97.98	!	-
Total	*Not ascertained*	45	4.71	4.49	1.89
	Home	19,497	9.53	9.15	1.15
	Work	9,244	13.06	12.90	0.61
	School	2,248	5.38	5.17	0.84
	Volunteer	439	7.29	6.82	1.24
	Social / Recreational	10,347	7.67	7.33	0.49
	Maintenance / Errands	13,431	6.24	6.45	0.36
	Escorting / Mode change	4,115	20.34	18.77	8.39
	Something Else	546	26.50	24.37	12.20

Table 32 shows the distribution of percentage of trip departure times by hour of the day by the region of the trip destination. Travel time peaks occur as expected during morning and later afternoon / early evening commute times.

Table 32.   Percentage of Trips Grouped by Trip Departure Hour by Region

Region	Departure Hour	N	Unweighted	Weighted	MOE (95%)
BMR	*00:00*	72	0.16%	0.13%	0.05%
	01:00	55	0.12%	!	-
	02:00	†	-	-	-
	03:00	70	0.15%	0.11%	0.04%
	04:00	163	0.35%	0.31%	0.07%
	05:00	563	1.21%	1.10%	0.13%
	06:00	1,558	3.36%	3.28%	0.30%
	07:00	3,267	7.05%	7.88%	0.49%
	08:00	3,246	7.00%	7.80%	0.43%
	09:00	2,550	5.50%	5.70%	0.39%
	10:00	2,568	5.54%	5.29%	0.44%
	11:00	2,820	6.09%	5.77%	0.41%
	12:00	3,026	6.53%	6.08%	0.38%
	13:00	2,835	6.12%	5.61%	0.37%
	14:00	3,275	7.07%	6.80%	0.39%
	15:00	3,888	8.39%	8.78%	0.52%
	16:00	4,024	8.68%	8.49%	0.41%
	17:00	4,053	8.75%	9.03%	0.50%
	18:00	3,109	6.71%	6.70%	0.41%

Region	Departure Hour	N	Unweighted	Weighted	MOE (95%)
	19:00	2,061	4.45%	4.42%	0.33%
	20:00	1,465	3.16%	3.18%	0.37%
	21:00	947	2.04%	1.95%	0.22%
	22:00	457	0.99%	0.94%	0.16%
	23:00	249	0.54%	0.50%	0.10%
ES	00:00	†	-	!	-
	01:00	†	-	‡	-
	02:00	†	-	‡	-
	03:00	†	-	!	-
	04:00	†	-	!	-
	05:00	45	0.73%	0.63%	0.21%
	06:00	159	2.59%	2.75%	0.62%
	07:00	432	7.03%	7.65%	1.09%
	08:00	392	6.38%	6.92%	1.06%
	09:00	361	5.87%	5.30%	0.93%
	10:00	332	5.40%	4.78%	0.70%
	11:00	425	6.91%	6.37%	0.75%
	12:00	446	7.25%	7.04%	0.97%
	13:00	393	6.39%	5.85%	0.90%
	14:00	484	7.87%	7.48%	0.99%
	15:00	550	8.94%	9.40%	1.16%
	16:00	567	9.22%	8.82%	0.94%
	17:00	578	9.40%	9.98%	1.10%
	18:00	372	6.05%	6.68%	0.97%
	19:00	231	3.76%	3.82%	0.79%
	20:00	193	3.14%	3.17%	0.67%
	21:00	98	1.59%	1.86%	0.85%
	22:00	45	0.73%	0.70%	0.32%
	23:00	†	-	!	-
WM	00:00	†	-	!	-
	01:00	†	-	‡	-
	02:00	†	-	‡	-
	03:00	†	-	!	-
	04:00	†	-	-	-
	05:00	58	1.64%	1.59%	0.68%
	06:00	88	2.49%	2.53%	0.69%

Region	Departure Hour	N	Unweighted	Weighted	MOE (95%)
	07:00	205	5.80%	6.26%	1.19%
	08:00	226	6.39%	7.43%	1.52%
	09:00	183	5.18%	4.88%	0.99%
	10:00	194	5.49%	4.89%	1.07%
	11:00	257	7.27%	6.67%	1.29%
	12:00	280	7.92%	7.03%	1.36%
	13:00	218	6.17%	5.50%	1.09%
	14:00	280	7.92%	8.38%	1.33%
	15:00	332	9.39%	9.62%	1.28%
	16:00	302	8.54%	8.11%	1.19%
	17:00	301	8.51%	9.09%	1.36%
	18:00	218	6.17%	6.38%	1.50%
	19:00	156	4.41%	4.45%	1.23%
	20:00	116	3.28%	3.67%	1.95%
	21:00	41	1.16%	1.24%	0.51%
	22:00	†	-	-	-
	23:00	†	-	-	-
Other	*00:00*	†	-	‡	-
	01:00	†	-	-	-
	02:00	†	-	‡	-
	03:00	†	-	-	-
	04:00	74	1.90%	1.89%	0.50%
	05:00	210	5.40%	5.31%	0.89%
	06:00	301	7.74%	7.47%	0.99%
	07:00	394	10.13%	9.86%	1.46%
	08:00	302	7.77%	7.78%	1.22%
	09:00	252	6.48%	6.98%	1.55%
	10:00	256	6.58%	6.98%	1.31%
	11:00	268	6.89%	6.85%	1.17%
	12:00	304	7.82%	7.38%	1.27%
	13:00	276	7.10%	6.52%	1.06%
	14:00	210	5.40%	5.09%	1.06%
	15:00	204	5.25%	4.24%	0.85%
	16:00	212	5.45%	5.83%	1.26%
	17:00	206	5.30%	5.69%	1.41%
	18:00	139	3.58%	3.67%	0.85%

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Region	Departure Hour	N	Unweighted	Weighted	MOE (95%)
	19:00	82	2.11%	2.36%	0.79%
	20:00	61	1.57%	1.70%	0.63%
	21:00	52	1.34%	1.64%	0.78%
	22:00	†	-	!	-
	23:00	†	-	!	-
Total	*00:00*	94	0.16%	0.16%	0.06%
	01:00	60	0.10%	!	-
	02:00	†	-	-	-
	03:00	105	0.18%	0.14%	0.04%
	04:00	269	0.45%	0.41%	0.07%
	05:00	876	1.46%	1.33%	0.12%
	06:00	2,106	3.52%	3.42%	0.27%
	07:00	4,298	7.17%	7.88%	0.40%
	08:00	4,166	6.95%	7.68%	0.35%
	09:00	3,346	5.58%	5.68%	0.35%
	10:00	3,350	5.59%	5.31%	0.35%
	11:00	3,770	6.29%	5.95%	0.34%
	12:00	4,056	6.77%	6.32%	0.36%
	13:00	3,722	6.21%	5.68%	0.31%
	14:00	4,249	7.09%	6.87%	0.34%
	15:00	4,974	8.30%	8.63%	0.43%
	16:00	5,105	8.52%	8.34%	0.35%
	17:00	5,138	8.58%	8.94%	0.39%
	18:00	3,838	6.41%	6.50%	0.36%
	19:00	2,530	4.22%	4.23%	0.26%
	20:00	1,835	3.06%	3.12%	0.32%
	21:00	1,138	1.90%	1.88%	0.21%
	22:00	554	0.92%	0.89%	0.13%
	23:00	307	0.51%	0.50%	0.09%

Table 33 shows the percent of trips grouped by travel mode and trip purpose. Personally-owned vehicles (POV) were the predominant mode across all trip purposes. Trip purposes of 'Home' 2.05% (±0.20) and 'Social / Recreational' 1.72 (±0.16) had the largest share of walk modes. Trips to work-related locations using public transit accounted for 0.64 (±0.09) percent of all trips. Trips ending at locations in BMR and 'Other' regions had 0.51 (±0.09) and 3.92 (±0.84) percent public transit trips to work respectively. Estimates in Eastern Shore and Western Maryland are based on low sample sizes for public transit trips to work related locations and caution should be used when

interpreting these results. Note that Table 33 excludes results for both ES and WM because the sample sizes in each cell with two levels of aggregation lead to smaller than adequate sample sizes that do not meet reporting standards.

Table 33.   Percentage of Trips by Trip Purpose by Mode by Region

Region	Activity	Travel Mode	N	Unweighted	Weighted	MOE (95%)
BMR	*Home*	*Walk*	1,043	2.25%	2.30%	0.25%
		Bike	63	0.14%	0.15%	0.06%
		POV	13,559	29.28%	29.37%	0.47%
		Public Transit	638	1.38%	1.08%	0.16%
		Other	667	1.44%	1.95%	0.22%
	Work	*Walk*	353	0.76%	0.82%	0.14%
		Bike	34	0.07%	0.07%	0.03%
		POV	5,816	12.56%	12.54%	0.54%
		Public Transit	247	0.53%	0.51%	0.09%
		Other	130	0.28%	0.30%	0.08%
	School	*Walk*	166	0.36%	0.41%	0.09%
		Bike	†	-	‡	-
		POV	1,040	2.25%	2.96%	0.24%
		Public Transit	65	0.14%	0.16%	0.08%
		Other	531	1.15%	1.73%	0.21%
	Volunteer	*Walk*	32	0.07%	0.07%	0.03%
		Bike	†	-	-	-
		POV	289	0.62%	0.53%	0.09%
		Public Transit	†	-	‡	-
		Other	†	-	‡	-
	Social /	*Walk*	879	1.90%	1.83%	0.18%
	Recreational	*Bike*	46	0.10%	0.10%	0.04%
		POV	6,378	13.77%	13.37%	0.57%
		Public Transit	219	0.47%	0.36%	0.07%
		Other	121	0.26%	0.28%	0.08%
	Maintenance	*Walk*	514	1.11%	0.94%	0.14%
	/ Errands	*Bike*	†	-	-	-
		POV	9,225	19.92%	18.07%	0.60%
		Public Transit	414	0.89%	0.61%	0.11%

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Region	Activity	Travel Mode	N	Unweighted	Weighted	MOE (95%)
		Other	125	0.27%	0.26%	0.10%
	Escorting /	Walk	181	0.39%	0.47%	0.13%
	Mode	Bike	†	-	‡	-
	change	POV	2,954	6.38%	7.43%	0.48%
		Public Transit	43	0.09%	0.08%	0.03%
		Other	127	0.27%	0.32%	0.10%
	Something	Walk	†	-	‡	-
	Else	Bike	†	-	‡	-
		POV	335	0.72%	0.75%	0.15%
		Public Transit	†	-	‡	-
		Other	†	-	!	-
Total	Home	Walk	1,183	1.98%	2.05%	0.20%
		Bike	74	0.12%	0.13%	0.05%
		POV	16,785	28.04%	28.30%	0.41%
		Public Transit	661	1.10%	0.87%	0.12%
		Other	794	1.33%	1.79%	0.19%
	Work	Walk	454	0.76%	0.77%	0.12%
		Bike	37	0.06%	0.06%	0.03%
		POV	8,150	13.61%	13.50%	0.53%
		Public Transit	425	0.71%	0.64%	0.09%
		Other	178	0.30%	0.31%	0.06%
	School	Walk	201	0.34%	0.41%	0.08%
		Bike	†	-	‡	-
		POV	1,302	2.17%	2.86%	0.20%
		Public Transit	72	0.12%	0.13%	0.06%
		Other	664	1.11%	1.65%	0.19%
	Volunteer	Walk	34	0.06%	0.06%	0.03%
		Bike	†	-	-	-
		POV	396	0.66%	0.56%	0.08%
		Public Transit	†	-	‡	-
		Other	†	-	‡	-
	Social /	Walk	1,063	1.78%	1.72%	0.16%
	Recreational	Bike	57	0.10%	0.09%	0.03%
		POV	8,807	14.71%	14.40%	0.53%

Region	Activity	Travel Mode	N	Unweighted	Weighted	MOE (95%)
		Public Transit	248	0.41%	0.30%	0.06%
		Other	172	0.29%	0.29%	0.07%
	Maintenance	Walk	590	0.99%	0.84%	0.12%
	/ Errands	Bike	†	-	-	-
		POV	12,234	20.43%	18.61%	0.52%
		Public Transit	437	0.73%	0.50%	0.09%
		Other	143	0.24%	0.23%	0.08%
	Escorting /	Walk	203	0.34%	0.40%	0.10%
	Mode	Bike	†	-	‡	-
	change	POV	3,656	6.11%	7.06%	0.44%
		Public Transit	57	0.10%	0.08%	0.03%
		Other	197	0.33%	0.36%	0.09%
	Something	Walk	†	-	!	-
	Else	Bike	†	-	-	-
		POV	490	0.82%	0.86%	0.14%
		Public Transit	†	-	-	-
		Other	†	-	!	-

Table 34 shows the reason selected when there were no trips made by a person on their assigned travel day. "Other" accounted for the largest share with 24.63 (±2.43) percent. "Vacation / Personal day / Not scheduled to work" 22.40 (±2.38%) percent, "Personally sick or caretaking for others" 15.76 (±6.63%) percent, and "Worked around home (not for pay)" 15.12 (±1.73) percent were the next three most common reasons for not traveling.

Table 34.   Percentage of Reasons for No Trips Reported on Travel Day by Home Region

Home Region	Primary reason	N	Unweighted	Weighted	MOE (95%)
BMR	Vacation/Personal day/Off work today	482	20.82%	22.77%	2.93%
	Personally sick or caretaking for others	366	15.81%	15.25%	1.89%
	Home-bound elderly or disabled	215	9.29%	8.56%	1.44%
	Worked at home for pay	160	6.91%	6.75%	1.31%
	Worked around home (not for pay)	370	15.98%	14.74%	2.07%
	Out of area	98	4.23%	4.73%	1.16%
	No transportation available	45	1.94%	1.89%	0.87%

Home Region	Primary reason	N	Unweighted	Weighted	MOE (95%)
	Other	579	25.01%	25.31%	2.97%
ES	*Vacation/Personal day/Off work today*	58	19.21%	22.08%	6.62%
	Personally sick or caretaking for others	52	17.22%	16.71%	5.04%
	Home-bound elderly or disabled	43	14.24%	12.00%	4.72%
	Worked at home for pay	†	-	-	-
	Worked around home (not for pay)	59	19.54%	16.24%	3.68%
	Out of area	†	-	!	-
	No transportation available	†	-	‡	-
	Other	61	20.20%	21.73%	7.44%
WM	*Vacation/Personal day/Off work today*	35	17.24%	19.28%	7.45%
	Personally sick or caretaking for others	32	15.76%	16.75%	6.63%
	Home-bound elderly or disabled	†	-	-	-
	Worked at home for pay	†	-	-	-
	Worked around home (not for pay)	44	21.67%	17.24%	6.03%
	Out of area	4	1.97%	3.28%	3.31%
	No transportation available	4	1.97%	2.48%	2.96%
	Other	42	20.69%	21.99%	7.06%
Total	*Vacation/Personal day/Off work today*	575	20.39%	22.40%	2.38%
	Personally sick or caretaking for others	450	15.96%	15.54%	1.54%
	Home-bound elderly or disabled	286	10.14%	9.36%	1.28%
	Worked at home for pay	188	6.67%	6.46%	1.22%
	Worked around home (not for pay)	473	16.77%	15.12%	1.73%
	Out of area	114	4.04%	4.58%	1.07%
	No transportation available	52	1.84%	1.90%	0.70%
	Other	682	24.18%	24.63%	2.43%

5.2   Vehicle / Fleet

The following section includes three tables relating to privately owned vehicles. Table 35 shows the vehicle body type for reported household (personally owned) vehicles. Cars accounted for just over half of all vehicle body types. Table 36 shows Fleet Age, indicating the year or range of years reported for household vehicles. Table 37 shows mode by household vehicle ownership indicating that households with zero vehicles had the highest share of public transit use. Note that Table 37 excludes results for both ES and WM because the sample sizes in each cell with two levels of aggregation lead to smaller than adequate sample sizes that do not meet reporting standards.

Table 35.   Vehicle Body Type by Home Region

Home Region	Vehicle body type	N	Unweighted	Weighted	MOE (95%)
BMR	Not ascertained	†	-	!	-
	Car	6,680	55.08%	53.35%	1.15%
	Van	629	5.19%	5.93%	0.55%
	SUV	3,279	27.04%	28.12%	1.05%
	Pickup Truck	1,166	9.61%	9.78%	0.67%
	Other Truck	60	0.49%	0.49%	0.14%
	RV	44	0.36%	0.38%	0.14%
	Motorcycle	248	2.04%	1.79%	0.35%
ES	Not ascertained	†	-	‡	-
	Car	866	43.52%	43.40%	2.50%
	Van	86	4.32%	4.87%	1.26%
	SUV	495	24.87%	25.81%	2.11%
	Pickup Truck	421	21.16%	20.09%	1.75%
	Other Truck	†	-	-	-
	RV	†	-	-	-
	Motorcycle	82	4.12%	4.14%	1.18%
WM	Not ascertained	†	-	‡	-
	Car	536	44.93%	44.33%	3.03%
	Van	55	4.61%	5.14%	1.44%
	SUV	308	25.82%	25.86%	2.65%
	Pickup Truck	234	19.61%	19.71%	2.24%
	Other Truck	†	-	!	-
	RV	†	-	!	-
	Motorcycle	41	3.44%	3.41%	1.13%

Home Region	Vehicle body type	N	Unweighted	Weighted	MOE (95%)
Total	*Not ascertained*	33	0.22%	0.18%	0.10%
	Car	8,082	52.79%	51.26%	0.97%
	Van	770	5.03%	5.72%	0.42%
	SUV	4,082	26.66%	27.63%	0.84%
	Pickup Truck	1,821	11.89%	11.99%	0.64%
	Other Truck	87	0.57%	0.54%	0.13%
	RV	65	0.42%	0.43%	0.13%
	Motorcycle	371	2.42%	2.24%	0.32%

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Table 36. Percent of all Vehicles Owned or Leased by Fleet Age by Home Region

Home Region	Vehicle Year	N	Unweighted	Weighted	MOE (95%)
BMR	Before 2000	862	7.11%	6.89%	0.57%
	2000 - 2004	1,524	12.57%	12.03%	0.69%
	2005 - 2009	2,695	22.22%	21.85%	1.00%
	2010 - 2014	3,743	30.86%	31.83%	1.19%
	2015	951	7.84%	8.07%	0.72%
	2016	869	7.17%	7.38%	0.62%
	2017	814	6.71%	6.51%	0.63%
	2018	550	4.53%	4.53%	0.51%
	2019	69	0.57%	0.58%	0.18%
ES	Before 2000	237	11.91%	11.00%	1.84%
	2000 - 2004	298	14.97%	14.91%	1.83%
	2005 - 2009	405	20.35%	19.64%	1.74%
	2010 - 2014	543	27.29%	28.00%	2.13%
	2015	138	6.93%	7.33%	1.56%
	2016	118	5.93%	6.12%	1.08%
	2017	108	5.43%	5.75%	1.15%
	2018	105	5.28%	5.29%	1.31%
	2019	†	-	-	-
WM	Before 2000	156	13.08%	12.26%	2.34%
	2000 - 2004	180	15.09%	15.62%	2.27%
	2005 - 2009	252	21.12%	21.10%	2.48%
	2010 - 2014	303	25.40%	25.43%	2.66%
	2015	77	6.45%	6.25%	1.52%
	2016	69	5.78%	5.93%	1.75%
	2017	73	6.12%	6.16%	1.45%
	2018	54	4.53%	4.69%	1.39%
	2019	†	-	-	-
Total	Before 2000	1,255	8.20%	7.89%	0.56%
	2000 - 2004	2,002	13.08%	12.72%	0.59%
	2005 - 2009	3,352	21.89%	21.49%	0.81%
	2010 - 2014	4,589	29.97%	30.79%	1.06%
	2015	1,166	7.62%	7.82%	0.59%
	2016	1,056	6.90%	7.09%	0.55%

Home Region	Vehicle Year	N	Unweighted	Weighted	MOE (95%)
	2017	995	6.50%	6.38%	0.51%
	2018	709	4.63%	4.65%	0.42%
	2019	109	0.71%	0.75%	0.19%

Table 37.   Percentage of Mode Reported for All Trips by Household Vehicle Ownership by Region

Region	Travel Mode	HH Vehicles	N	Unweighted	Weighted	MOE (95%)
BMR	*Walk*	*0*	695	1.50%	1.26%	0.22%
		1	948	2.05%	1.96%	0.31%
		2	1,164	2.51%	2.86%	0.46%
		3+	378	0.82%	0.81%	0.18%
	Bike	*0*	36	0.08%	!	-
		1	50	0.11%	!	-
		2	54	0.12%	0.14%	0.08%
		3+	38	0.08%	‡	-
	POV	*0*	264	0.57%	0.38%	0.10%
		1	9,741	21.02%	17.89%	1.18%
		2	18,932	40.85%	41.70%	1.97%
		3+	10,686	23.06%	25.05%	1.83%
	Public	*0*	955	2.06%	1.48%	0.30%
	Transit	*1*	387	0.84%	0.71%	0.15%
		2	241	0.52%	0.50%	0.13%
		3+	57	0.12%	0.14%	0.05%
	Other	*0*	247	0.53%	0.47%	0.15%
		1	351	0.76%	0.81%	0.18%
		2	702	1.51%	2.28%	0.37%
		3+	415	0.90%	1.31%	0.28%
Total	*Walk*	*0*	736	1.23%	1.05%	0.18%
		1	1,102	1.84%	1.74%	0.26%
		2	1,410	2.35%	2.62%	0.36%
		3+	504	0.84%	0.88%	0.17%
	Bike	*0*	39	0.07%	!	-
		1	52	0.09%	!	-
		2	68	0.11%	0.12%	0.06%

Region	Travel Mode	HH Vehicles	N	Unweighted	Weighted	MOE (95%)
		3+	48	0.08%	!	-
	POV	0	312	0.52%	0.37%	0.09%
		1	12,266	20.47%	17.64%	1.03%
		2	24,122	40.26%	40.81%	1.84%
		3+	15,165	25.31%	27.34%	1.62%
	Public	0	981	1.64%	1.18%	0.24%
	Transit	1	465	0.78%	0.64%	0.12%
		2	359	0.60%	0.53%	0.12%
		3+	112	0.19%	0.20%	0.05%
	Other	0	271	0.45%	0.41%	0.12%
		1	424	0.71%	0.74%	0.15%
		2	887	1.48%	2.13%	0.30%
		3+	590	0.98%	1.39%	0.24%

6. Additional Frequency Tables

Sections 6.1 through 6.3 (including Table 38 through Table 56) provide frequencies for a selection of demographic results for household, person, and trip level characteristics.

6.1. Household-level Frequency Tables

In Table 38 through Table 41, the weighted frequencies for several key household-level demographic variables (e.g., number of household children, number of workers, and number of vehicles) are presented individually, and cross-tabbed, by region or home region.

Table 38 displays the total proportion of households with children. Table 39 shows the number of household vehicles. Table 40 shows the number of household workers per household. Table 41 shows the number of household students per household. Table 42 shows the number of licensed drivers in the household. Table 43 shows the number of workers cross-tabbed by household size Table 44 shows the vehicles by household size. Table 45 shows the number of workers cross-tabbed with the number of vehicles.

Table 38.   Number of Children in Household by Home Region

Home Region	HH Children	N	Unweighted	Weighted	MOE (95%)
BMR	*0*	5,459	79.65%	71.07%	1.11%
	1	664	9.69%	11.39%	0.95%
	2	541	7.89%	11.84%	0.92%
	3+	190	2.77%	5.71%	0.70%
ES	*0*	731	81.86%	74.14%	3.20%
	1	83	9.29%	11.56%	2.53%
	2	55	6.16%	9.57%	2.56%
	3+	†	-	-	-
WM	*0*	471	83.22%	75.11%	4.05%
	1	42	7.42%	9.32%	2.50%
	2	38	6.71%	10.84%	2.96%
	3+	†	-	-	-
Total	*0*	6,661	80.13%	71.72%	0.83%
	1	789	9.49%	11.25%	0.81%
	2	634	7.63%	11.50%	0.77%
	3+	229	2.75%	5.52%	0.64%

Table 39.   **Number of Household Vehicles by Home Region**

Home Region	HH Vehicles	N	Unweighted	Weighted	MOE (95%)
BMR	0	616	8.99%	7.63%	0.65%
	1	2,293	33.45%	31.07%	1.08%
	2	2,634	38.43%	39.27%	1.35%
	3+	1,311	19.13%	22.04%	1.16%
ES	0	†	-	-	-
	1	252	28.22%	27.16%	3.03%
	2	337	37.74%	37.98%	3.61%
	3+	285	31.91%	32.94%	3.15%
WM	0	†	-	-	-
	1	180	31.80%	31.17%	3.27%
	2	198	34.98%	33.28%	4.16%
	3+	172	30.39%	32.39%	3.98%
Total	0	651	7.83%	6.64%	0.51%
	1	2,725	32.78%	30.62%	0.98%
	2	3,169	38.12%	38.67%	1.19%
	3+	1,768	21.27%	24.07%	0.97%

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Table 40.   **Number of Household Workers by Home Region**

Home Region	HH Workers	N	Unweighted	Weighted	MOE (95%)
BMR	*0*	1,950	28.45%	24.82%	1.07%
	1	2,528	36.88%	34.88%	1.18%
	2	2,026	29.56%	32.83%	1.31%
	3+	350	5.11%	7.46%	0.87%
ES	*0*	327	36.62%	33.03%	3.34%
	1	275	30.80%	30.53%	3.23%
	2	251	28.11%	30.17%	3.22%
	3+	40	4.48%	6.28%	2.08%
WM	*0*	212	37.46%	32.86%	4.17%
	1	184	32.51%	33.05%	3.76%
	2	143	25.27%	27.33%	3.70%
	3+	†	-	-	-
Total	*0*	2,489	29.94%	26.37%	1.03%
	1	2,987	35.93%	34.25%	1.10%
	2	2,420	29.11%	32.12%	1.17%
	3+	417	5.02%	7.27%	0.75%

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Table 41.   Number of Household Students by Home Region

Home Region	HH Students	N	Unweighted	Weighted	MOE (95%)
BMR	*0*	5,230	76.31%	68.02%	1.15%
	1	906	13.22%	15.21%	1.15%
	2	534	7.79%	11.59%	0.90%
	3+	184	2.68%	5.18%	0.74%
ES	*0*	719	80.52%	73.36%	3.35%
	1	95	10.64%	13.49%	2.79%
	2	56	6.27%	8.83%	2.12%
	3+	†	-	-	-
WM	*0*	474	83.75%	77.31%	3.57%
	1	53	9.36%	11.73%	3.14%
	2	†	-	-	-
	3+	†	-	-	-
Total	*0*	6,423	77.26%	69.32%	0.92%
	1	1,054	12.68%	14.76%	1.00%
	2	616	7.41%	10.91%	0.68%
	3+	220	2.65%	5.01%	0.58%

Table 42. Percentage of Households by Number of Licensed Drivers in Household by Home Region

Home Region	Licensed Drivers	N	Unweighted	Weighted	MOE (95%)
BMR	*0*	401	5.85%	4.67%	0.47%
	1	2,494	36.39%	32.95%	1.00%
	2	3,286	47.94%	48.63%	1.47%
	3+	673	9.82%	13.76%	1.03%
ES	*0*	†	-	-	-
	1	284	31.80%	30.48%	3.21%
	2	502	56.22%	53.25%	3.73%
	3+	92	10.30%	14.72%	2.83%
WM	*0*	†	-	-	-
	1	203	35.87%	33.61%	3.61%
	2	297	52.47%	50.97%	4.87%
	3+	52	9.19%	12.62%	3.23%
Total	*0*	430	5.17%	4.17%	0.38%
	1	2,981	35.86%	32.71%	0.83%
	2	4,085	49.14%	49.33%	1.21%
	3+	817	9.83%	13.79%	0.96%

Table 43.　　Workers by Household Size

Home Region	HH Size	HH Workers	N	Unweighted	Weighted	MOE (95%)
BMR	*1*	*0*	1,050	15.32%	13.50%	0.80%
		1	1,190	17.36%	14.99%	0.79%
		2	†	-	-	-
		3+	†	-	-	-
	2	*0*	806	11.76%	9.75%	0.68%
		1	835	12.18%	9.76%	0.65%
		2	1,087	15.86%	13.40%	0.74%
		3+	†	-	-	-
	3	*0*	61	0.89%	0.91%	0.28%
		1	275	4.01%	4.86%	0.58%
		2	439	6.41%	7.42%	0.76%
		3+	155	2.26%	2.93%	0.52%
	4+	*0*	33	0.48%	0.67%	0.29%
		1	228	3.33%	5.28%	0.67%
		2	500	7.30%	12.02%	0.90%
		3+	195	2.85%	4.53%	0.75%
ES	*1*	*0*	140	15.68%	14.27%	2.04%
		1	108	12.09%	11.41%	2.27%
		2	†	-	-	-
		3+	†	-	-	-
	2	*0*	171	19.15%	16.34%	2.45%
		1	109	12.21%	9.53%	1.51%
		2	139	15.57%	12.68%	2.01%
		3+	†	-	-	-
	3	*0*	†	-	-	-
		1	35	3.92%	4.78%	1.55%
		2	58	6.49%	8.03%	1.96%
		3+	†	-	-	-
	4+	*0*	†	-	‡	-
		1	†	-	-	-
		2	54	6.05%	9.45%	2.53%
		3+	23	2.58%	3.81%	1.62%

Home Region	HH Size	HH Workers	N	Unweighted	Weighted	MOE (95%)
WM	1	0	99	17.49%	15.52%	2.97%
		1	77	13.60%	13.14%	2.59%
		2	†	-	-	-
		3+	†	-	-	-
	2	0	105	18.55%	15.40%	3.13%
		1	69	12.19%	10.06%	2.04%
		2	85	15.02%	12.24%	2.60%
		3+	†	-	-	-
	3	0	†	-	!	-
		1	†	-	-	-
		2	†	-	-	-
		3+	†	-	-	-
	4+	0	†	-	-	-
		1	†	-	-	-
		2	31	5.48%	9.43%	2.93%
		3+	†	-	!	-
Total	1	0	1,289	15.51%	13.73%	0.70%
		1	1,375	16.54%	14.44%	0.70%
		2	†	-	-	-
		3+	†	-	-	-
	2	0	1,082	13.02%	10.93%	0.60%
		1	1,013	12.19%	9.76%	0.55%
		2	1,311	15.77%	13.23%	0.60%
		3+	†	-	-	-
	3	0	81	0.97%	1.07%	0.27%
		1	328	3.95%	4.77%	0.48%
		2	524	6.30%	7.36%	0.61%
		3+	188	2.26%	2.92%	0.42%
	4+	0	37	0.45%	0.63%	0.25%
		1	271	3.26%	5.28%	0.59%
		2	585	7.04%	11.53%	0.75%
		3+	229	2.75%	4.35%	0.65%

Table 44.   Vehicles by Household Size

Home Region	HH Size	HH Vehicles	N	Unweighted	Weighted	MOE (95%)
BMR	*1*	*0*	411	6.00%	5.10%	0.53%
		1	1,505	21.96%	19.39%	0.76%
		2	259	3.78%	3.04%	0.39%
		3+	65	0.95%	0.96%	0.22%
	2	*0*	131	1.91%	1.39%	0.32%
		1	548	8.00%	7.12%	0.65%
		2	1,534	22.38%	18.14%	0.74%
		3+	515	7.51%	6.27%	0.55%
	3	*0*	42	0.61%	0.56%	0.20%
		1	159	2.32%	2.78%	0.51%
		2	374	5.46%	6.36%	0.62%
		3+	355	5.18%	6.41%	0.58%
	4+	*0*	32	0.47%	0.58%	0.26%
		1	81	1.18%	1.79%	0.42%
		2	467	6.81%	11.72%	0.98%
		3+	376	5.49%	8.41%	0.93%
ES	*1*	*0*	†	-	-	-
		1	175	19.60%	18.53%	2.50%
		2	41	4.59%	4.21%	1.21%
		3+	†	-	-	-
	2	*0*	†	-	‡	-
		1	52	5.82%	5.09%	1.46%
		2	212	23.74%	19.79%	2.47%
		3+	153	17.13%	13.52%	2.01%
	3	*0*	†	-	‡	-
		1	†	-	-	-
		2	49	5.49%	7.09%	1.90%
		3+	55	6.16%	7.34%	1.66%
	4+	*0*	†	-	-	-
		1	†	-	!	-
		2	35	3.92%	6.90%	2.21%
		3+	61	6.83%	10.69%	2.57%

Home Region	HH Size	HH Vehicles	N	Unweighted	Weighted	MOE (95%)
WM	1	0	†	-	-	-
		1	126	22.26%	20.83%	2.78%
		2	†	-	-	-
		3+	†	-	!	-
	2	0	†	-	‡	-
		1	42	7.42%	6.81%	2.12%
		2	129	22.79%	18.39%	3.33%
		3+	86	15.19%	12.01%	2.78%
	3	0	†	-	‡	-
		1	†	-	!	-
		2	†	-	-	-
		3+	43	7.60%	8.85%	2.69%
	4+	0	†	-	‡	-
		1	†	-	!	-
		2	†	-	-	-
		3+	33	5.83%	9.99%	3.29%
Total	1	0	439	5.28%	4.46%	0.42%
		1	1,806	21.73%	19.40%	0.61%
		2	328	3.95%	3.26%	0.37%
		3+	91	1.09%	1.05%	0.21%
	2	0	135	1.62%	1.18%	0.26%
		1	642	7.72%	6.86%	0.51%
		2	1,875	22.56%	18.35%	0.62%
		3+	754	9.07%	7.53%	0.53%
	3	0	44	0.53%	0.51%	0.18%
		1	182	2.19%	2.65%	0.42%
		2	442	5.32%	6.27%	0.52%
		3+	453	5.45%	6.69%	0.52%
	4+	0	33	0.40%	0.48%	0.21%
		1	95	1.14%	1.72%	0.40%
		2	524	6.30%	10.80%	0.81%
		3+	470	5.65%	8.79%	0.81%

Table 45. Workers by Vehicles

Home Region	HH Workers	HH Vehicles	N	Unweighted	Weighted	MOE (95%)
BMR	*0*	*0*	417	6.08%	4.82%	0.57%
		1	846	12.34%	11.29%	0.77%
		2	527	7.69%	6.57%	0.63%
		3+	160	2.33%	2.14%	0.36%
	1	*0*	168	2.45%	2.32%	0.45%
		1	1,252	18.27%	16.83%	0.85%
		2	797	11.63%	11.25%	1.00%
		3+	311	4.54%	4.48%	0.62%
	2	*0*	†	-	-	-
		1	186	2.71%	2.74%	0.38%
		2	1,259	18.37%	20.35%	1.20%
		3+	555	8.10%	9.33%	0.84%
	3+	*0*	†	-	‡	-
		1	†	-	!	-
		2	51	0.74%	1.09%	0.37%
		3+	285	4.16%	6.09%	0.81%
ES	*0*	*0*	†	-	-	-
		1	141	15.79%	14.75%	2.39%
		2	117	13.10%	11.85%	2.40%
		3+	53	5.94%	4.87%	1.35%
	1	*0*	†	-	‡	-
		1	98	10.97%	10.89%	2.30%
		2	105	11.76%	11.86%	2.26%
		3+	70	7.84%	7.50%	1.98%
	2	*0*	†	-	‡	-
		1	†	-	-	-
		2	108	12.09%	13.06%	2.46%
		3+	130	14.56%	15.69%	2.63%
	3+	*0*	†	-	-	-
		1	†	-	‡	-
		2	†	-	!	-
		3+	32	3.58%	4.88%	1.73%

Home Region	HH Workers	HH Vehicles	N	Unweighted	Weighted	MOE (95%)
WM	0	0	†	-	-	-
		1	93	16.43%	15.00%	2.79%
		2	72	12.72%	10.50%	2.69%
		3+	34	6.01%	4.90%	1.72%
	1	0	†	-	‡	-
		1	77	13.60%	14.07%	3.10%
		2	58	10.25%	10.01%	2.83%
		3+	47	8.30%	8.53%	2.52%
	2	0	†	-	‡	-
		1	†	-	!	-
		2	64	11.31%	11.73%	2.66%
		3+	68	12.01%	13.26%	2.65%
	3+	0	†	-	-	-
		1	†	-	-	-
		2	†	-	‡	-
		3+	†	-	-	-
Total	0	0	446	5.37%	4.27%	0.45%
		1	1,080	12.99%	11.96%	0.70%
		2	716	8.61%	7.47%	0.60%
		3+	247	2.97%	2.66%	0.37%
	1	0	172	2.07%	1.95%	0.36%
		1	1,427	17.17%	15.94%	0.83%
		2	960	11.55%	11.23%	0.90%
		3+	428	5.15%	5.13%	0.52%
	2	0	†	-	-	-
		1	208	2.50%	2.53%	0.31%
		2	1,431	17.21%	18.87%	0.97%
		3+	753	9.06%	10.36%	0.77%
	3+	0	†	-	‡	-
		1	†	-	!	-
		2	62	0.75%	1.10%	0.33%
		3+	340	4.09%	5.92%	0.69%

6.2. Person-level Frequency Tables

In Table 46 through Table 51, the weighted frequencies for a variety of key person-level demographic values (e.g., person sex, age, ethnicity, number of jobs etc.) are presented individually, and cross-tabbed, by region or home region.

Table 46.　　　Person Gender Distribution by Home Region

Home Region	Gender	N	Unweighted	Weighted	MOE (95%)
BMR	*Not ascertained*	†	-	!	-
	Female	7,847	53.22%	52.86%	0.79%
	Male	6,880	46.66%	46.96%	0.81%
ES	*Not ascertained*	†	-	-	-
	Female	1,025	52.97%	52.15%	1.86%
	Male	910	47.03%	47.85%	1.86%
WM	*Not ascertained*	†	-	‡	-
	Female	618	52.46%	50.95%	2.13%
	Male	559	47.45%	48.96%	2.15%
Total	*Not ascertained*	†	-	!	-
	Female	9,490	53.14%	52.64%	0.65%
	Male	8,349	46.75%	47.21%	0.65%

Table 47.　　　Person Age Distribution by Home Region

Home Region	Age	N	Unweighted	Weighted	MOE (95%)
BMR	*Not ascertained*	117	0.79%	0.81%	0.35%
	Under 5	693	4.70%	6.49%	0.57%
	5 - 12	1,051	7.13%	10.28%	0.78%
	13 - 15	383	2.60%	3.31%	0.37%
	16 - 17	247	1.68%	1.93%	0.27%
	18 - 44	4,358	29.56%	31.64%	0.95%
	45 - 64	4,540	30.79%	27.33%	1.01%
	65 or older	3,356	22.76%	18.21%	0.79%
ES	*Not ascertained*	†	-	‡	-
	Under 5	50	2.58%	4.03%	1.24%
	5 - 12	133	6.87%	9.32%	1.74%

Home Region	Age	N	Unweighted	Weighted	MOE (95%)
	13 - 15	51	2.64%	3.51%	0.94%
	16 - 17	44	2.27%	2.81%	0.79%
	18 - 44	418	21.60%	25.59%	2.47%
	45 - 64	628	32.45%	29.89%	2.60%
	65 or older	604	31.21%	24.63%	2.88%
WM	Not ascertained	†	-	‡	-
	Under 5	45	3.82%	5.25%	1.58%
	5 - 12	71	6.03%	9.04%	2.33%
	13 - 15	†	-	-	-
	16 - 17	†	-	-	-
	18 - 44	265	22.50%	26.38%	2.43%
	45 - 64	403	34.21%	31.14%	3.37%
	65 or older	339	28.78%	22.24%	2.96%
Total	Not ascertained	128	0.72%	0.70%	0.29%
	Under 5	788	4.41%	6.12%	0.47%
	5 - 12	1,255	7.03%	10.08%	0.63%
	13 - 15	462	2.59%	3.31%	0.32%
	16 - 17	314	1.76%	2.08%	0.24%
	18 - 44	5,041	28.23%	30.58%	0.84%
	45 - 64	5,571	31.20%	27.90%	0.87%
	65 or older	4,299	24.07%	19.23%	0.71%

Table 48.   Person Hispanic Ethnicity

Home Region	Hispanic Origin	N	Unweighted	Weighted	MOE (95%)
BMR	*Not ascertained*	165	1.12%	1.62%	0.54%
	Yes	500	3.39%	3.28%	0.67%
	No	14,080	95.49%	95.11%	0.89%
ES	*Not ascertained*	†	-	‡	-
	Yes	48	2.48%	3.24%	1.75%
	No	1,882	97.26%	96.53%	1.77%
WM	*Not ascertained*	†	-	‡	-
	Yes	†	-	-	-
	No	1,162	98.64%	98.93%	0.54%
Total	*Not ascertained*	173	0.97%	1.36%	0.44%
	Yes	561	3.14%	3.10%	0.58%
	No	17,124	95.89%	95.54%	0.75%

Table 49.   Person Number of Jobs

Home Region	Jobs	N	Unweighted	Weighted	MOE (95%)
BMR	*1*	6,926	46.97%	45.74%	0.91%
	2	667	4.52%	4.39%	0.44%
	3+	100	0.68%	0.66%	0.20%
ES	*1*	806	41.65%	40.76%	2.47%
	2	93	4.81%	4.64%	1.03%
	3+	†	-	!	-
WM	*1*	499	42.36%	42.03%	3.34%
	2	47	3.99%	4.09%	1.08%
	3+	†	-	!	-
Total	*1*	8,231	46.09%	44.91%	0.80%
	2	807	4.52%	4.40%	0.38%
	3+	113	0.63%	0.61%	0.18%

Table 50. Person Employment Status

Home Region	Employment Status	N	Unweighted	Weighted	MOE (95%)
BMR	Worker	7,672	52.03%	50.62%	0.88%
	Not a worker	7,073	47.97%	49.38%	0.88%
ES	Worker	906	46.82%	45.76%	2.53%
	Not a worker	1,029	53.18%	54.24%	2.53%
WM	Worker	552	46.86%	46.49%	3.12%
	Not a worker	626	53.14%	53.51%	3.12%
Total	Worker	9,130	51.13%	49.77%	0.82%
	Not a worker	8,728	48.87%	50.23%	0.82%

Table 51. Person Unemployment Status

Home Region	Unemployment Status	N	Unweighted	Weighted	MOE (95%)
BMR	Not ascertained	2,200	14.92%	20.55%	0.93%
	Worker, including self employed	7,672	52.03%	50.62%	0.88%
	Retired	2,868	19.45%	15.40%	0.68%
	Volunteer	81	0.55%	0.54%	0.12%
	Homemaker	407	2.76%	3.07%	0.33%
	Unemployed but looking for work	383	2.60%	2.46%	0.32%
	Unemployed, not seeking employment	109	0.74%	0.67%	0.18%
	Student (part-time or full-time)	461	3.13%	3.58%	0.43%
	Disabled non-worker	564	3.83%	3.12%	0.31%
ES	Not ascertained	240	12.40%	17.19%	2.29%
	Worker, including self employed	906	46.82%	45.76%	2.53%
	Retired	548	28.32%	22.53%	2.70%
	Volunteer	†	-	!	-
	Homemaker	50	2.58%	2.74%	0.76%

Home Region	Unemployment Status	N	Unweighted	Weighted	MOE (95%)
	Unemployed but looking for work	†	-	-	-
	Unemployed, not seeking employment	†	-	!	-
	Student (part-time or full-time)	63	3.26%	4.06%	0.94%
	Disabled non-worker	77	3.98%	4.09%	1.21%
WM	*Not ascertained*	153	12.99%	18.08%	2.97%
	Worker, including self employed	552	46.86%	46.49%	3.12%
	Retired	294	24.96%	19.13%	2.77%
	Volunteer	†	-	!	-
	Homemaker	43	3.65%	3.77%	1.15%
	Unemployed but looking for work	†	-	-	-
	Unemployed, not seeking employment	†	-	!	-
	Student (part-time or full-time)	†	-	-	-
	Disabled non-worker	64	5.43%	5.41%	1.24%
Total	*Not ascertained*	2,593	14.52%	19.99%	0.81%
	Worker, including self employed	9,130	51.13%	49.77%	0.82%
	Retired	3,710	20.78%	16.48%	0.65%
	Volunteer	97	0.54%	0.53%	0.11%
	Homemaker	500	2.80%	3.08%	0.31%
	Unemployed but looking for work	440	2.46%	2.42%	0.30%
	Unemployed, not seeking employment	131	0.73%	0.73%	0.20%
	Student (part-time or full-time)	552	3.09%	3.61%	0.37%
	Disabled non-worker	705	3.95%	3.39%	0.29%

6.3. Trip-level Frequency Tables

Note that Table 55 and Table 56 exclude results for both ES and WM because the sample sizes in each cell with two levels of aggregation lead to smaller than adequate sample sizes that do not meet reporting standards.

Table 52.   Total Persons Traveling on Trip by Region

Region	Persons on Trip	N	Unweighted	Weighted	MOE (95%)
BMR	1	27,731	59.84%	56.22%	1.25%
	2	12,238	26.41%	26.51%	0.93%
	3	3,819	8.24%	9.56%	0.92%
	4+	2,407	5.19%	7.38%	1.01%
ES	1	3,542	57.60%	53.59%	3.87%
	2	1,677	27.27%	26.44%	2.72%
	3	564	9.17%	11.03%	3.14%
	4+	351	5.71%	8.60%	3.68%
WM	1	2,031	57.45%	53.69%	4.61%
	2	1,099	31.09%	31.34%	3.96%
	3	238	6.73%	8.34%	2.92%
	4+	148	4.19%	5.89%	3.40%
Other	1	2,373	61.03%	59.26%	4.16%
	2	993	25.54%	24.92%	2.83%
	3	249	6.40%	6.91%	1.86%
	4+	268	6.89%	8.86%	3.20%
Total	1	35,677	59.55%	55.96%	1.12%
	2	16,007	26.72%	26.71%	0.82%
	3	4,870	8.13%	9.49%	0.84%
	4+	3,174	5.30%	7.51%	0.92%

Table 53.   Household Members Traveling on Trip by Region

Region	HH Members on Trip	N	Unweighted	Weighted	MOE (95%)
BMR	*1*	31,904	68.85%	64.74%	1.40%
	2	10,484	22.62%	23.35%	1.01%
	3	2,747	5.93%	7.93%	1.02%
	4+	1,206	2.60%	3.97%	0.79%
ES	*1*	4,125	67.08%	62.34%	4.31%
	2	1,430	23.26%	22.99%	2.62%
	3	370	6.02%	8.22%	2.84%
	4+	224	3.64%	6.45%	3.71%
WM	*1*	2,353	66.56%	62.42%	5.01%
	2	914	25.86%	26.54%	3.57%
	3	178	5.04%	7.23%	3.02%
	4+	90	2.55%	!	-
Other	*1*	2,906	74.74%	73.15%	4.85%
	2	744	19.14%	17.91%	3.16%
	3	111	2.85%	3.58%	1.41%
	4+	127	3.27%	!	-
Total	*1*	41,288	68.91%	64.84%	1.26%
	2	13,572	22.65%	23.19%	0.86%
	3	3,406	5.68%	7.66%	0.86%
	4+	1,647	2.75%	4.31%	0.78%

Table 54. Non-Household Members Traveling on Trip by Region

Region	Non-HH Members on Trip	N	Unweighted	Weighted	MOE (95%)
BMR	0	40,374	87.12%	87.18%	0.80%
	1	4,354	9.40%	8.84%	0.67%
	2	784	1.69%	1.64%	0.24%
	3+	711	1.53%	2.09%	0.35%
ES	0	5,307	86.31%	86.80%	2.04%
	1	652	10.60%	10.08%	1.74%
	2	102	1.66%	1.68%	0.63%
	3+	77	1.25%	1.21%	0.56%
WM	0	3,094	87.52%	87.36%	2.25%
	1	361	10.21%	10.23%	1.84%
	2	51	1.44%	1.34%	0.69%
	3+	†	-	!	-
Other	0	3,191	82.07%	82.01%	2.52%
	1	465	11.96%	12.34%	2.37%
	2	138	3.55%	3.07%	1.24%
	3+	89	2.29%	2.53%	1.04%
Total	0	51,966	86.74%	86.84%	0.66%
	1	5,832	9.73%	9.27%	0.57%
	2	1,075	1.79%	1.71%	0.23%
	3+	891	1.49%	1.92%	0.27%

Table 55.   Trip Duration (In Minutes) by Mode by Region

Region	Trip Duration	Travel Mode	N	Unweighted	Weighted	MOE (95%)
BMR	0 - 5	Walk	1,171	2.53%	2.55%	0.30%
		Bike	35	0.08%	!	-
		POV	6,537	14.11%	14.14%	0.63%
		Public Transit	35	0.08%	0.06%	0.03%
		Other	86	0.19%	0.22%	0.08%
	6 - 10	Walk	814	1.76%	1.80%	0.23%
		Bike	44	0.09%	0.09%	0.05%
		POV	8,453	18.24%	18.38%	0.81%
		Public Transit	40	0.09%	0.07%	0.03%
		Other	235	0.51%	0.69%	0.16%
	11 - 20	Walk	775	1.67%	1.68%	0.30%
		Bike	50	0.11%	0.09%	0.05%
		POV	11,877	25.63%	25.47%	0.82%
		Public Transit	187	0.40%	0.35%	0.12%
		Other	615	1.33%	1.81%	0.23%
	21 - 30	Walk	247	0.53%	0.50%	0.10%
		Bike	32	0.07%	!	-
		POV	6,320	13.64%	13.66%	0.60%
		Public Transit	226	0.49%	0.36%	0.07%
		Other	402	0.87%	1.19%	0.21%
	31 - 45	Walk	100	0.22%	0.21%	0.06%
		Bike	†	-	-	-
		POV	3,791	8.18%	7.87%	0.54%
		Public Transit	291	0.63%	0.50%	0.12%
		Other	214	0.46%	0.57%	0.11%
	46 - 60	Walk	44	0.09%	!	-
		Bike	†	-	-	-
		POV	1,511	3.26%	3.16%	0.24%
		Public Transit	269	0.58%	0.54%	0.11%
		Other	85	0.18%	0.23%	0.09%
	61 - 90	Walk	†	-	!	-
		Bike	†	-	-	-

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Region	Trip Duration	Travel Mode	N	Unweighted	Weighted	MOE (95%)
		POV	800	1.73%	1.59%	0.18%
		Public Transit	345	0.74%	0.52%	0.09%
		Other	43	0.09%	0.10%	0.05%
	91 - 120	Walk	†	-	‡	-
		Bike	†	-	-	-
		POV	200	0.43%	0.46%	0.09%
		Public Transit	149	0.32%	0.23%	0.05%
		Other	†	-	-	-
	121 or more	Walk	†	-	‡	-
		Bike	†	-	-	-
		POV	126	0.27%	0.27%	0.06%
		Public Transit	97	0.21%	0.20%	0.05%
		Other	†	-	!	-
Total	0 - 5	Walk	1,438	2.40%	2.40%	0.24%
		Bike	42	0.07%	!	-
		POV	8,567	14.30%	14.42%	0.65%
		Public Transit	41	0.07%	0.05%	0.02%
		Other	131	0.22%	0.27%	0.08%
	6 - 10	Walk	939	1.57%	1.61%	0.18%
		Bike	44	0.07%	0.07%	0.04%
		POV	10,953	18.28%	18.51%	0.72%
		Public Transit	44	0.07%	0.06%	0.03%
		Other	285	0.48%	0.64%	0.13%
	11 - 20	Walk	897	1.50%	1.53%	0.25%
		Bike	61	0.10%	0.09%	0.04%
		POV	15,227	25.42%	25.27%	0.76%
		Public Transit	211	0.35%	0.31%	0.10%
		Other	730	1.22%	1.65%	0.20%
	21 - 30	Walk	284	0.47%	0.45%	0.08%
		Bike	39	0.07%	!	-
		POV	8,072	13.47%	13.47%	0.58%
		Public Transit	239	0.40%	0.29%	0.05%
		Other	495	0.83%	1.10%	0.17%

Region	Trip Duration	Travel Mode	N	Unweighted	Weighted	MOE (95%)
	31 - 45	*Walk*	109	0.18%	0.17%	0.05%
		Bike	†	-	‡	-
		POV	4,928	8.23%	7.90%	0.45%
		Public Transit	305	0.51%	0.41%	0.09%
		Other	278	0.46%	0.57%	0.10%
	46 - 60	*Walk*	48	0.08%	0.09%	0.05%
		Bike	†	-	‡	-
		POV	2,114	3.53%	3.38%	0.25%
		Public Transit	300	0.50%	0.45%	0.08%
		Other	113	0.19%	0.23%	0.08%
	61 - 90	*Walk*	†	-	-	-
		Bike	†	-	-	-
		POV	1,303	2.17%	2.04%	0.21%
		Public Transit	427	0.71%	0.48%	0.08%
		Other	62	0.10%	0.11%	0.05%
	91 - 120	*Walk*	†	-	‡	-
		Bike	†	-	-	-
		POV	360	0.60%	0.61%	0.09%
		Public Transit	213	0.36%	0.27%	0.05%
		Other	†	-	!	-
	121 or more	*Walk*	†	-	‡	-
		Bike	†	-	-	-
		POV	330	0.55%	0.53%	0.09%
		Public Transit	132	0.22%	0.22%	0.06%
		Other	51	0.09%	0.08%	0.04%

Table 56. Trip Duration (In Minutes) by Primary Trip Purpose by Region

Region	Trip Duration	Activity	N	Unweighted	Weighted	MOE (95%)
BMR	0 - 5	Home	2,212	4.78%	5.02%	0.35%
		Work	760	1.64%	1.70%	0.17%
		School	262	0.57%	0.69%	0.13%
		Volunteer	63	0.14%	0.13%	0.05%
		Social / Recreational	1,584	3.42%	3.40%	0.26%
		Maintenance / Errands	2,189	4.73%	4.21%	0.29%
		Escorting / Mode change	710	1.53%	1.79%	0.22%
		Something Else	81	0.17%	0.16%	0.05%
	6 - 10	Home	3,212	6.94%	7.08%	0.41%
		Work	947	2.04%	2.00%	0.17%
		School	343	0.74%	1.09%	0.15%
		Volunteer	74	0.16%	0.14%	0.04%
		Social / Recreational	1,772	3.83%	3.72%	0.29%
		Maintenance / Errands	2,427	5.24%	4.75%	0.39%
		Escorting / Mode change	730	1.58%	2.06%	0.25%
		Something Else	74	0.16%	0.20%	0.07%
	11 - 20	Home	4,686	10.12%	10.25%	0.42%
		Work	1,757	3.79%	3.80%	0.28%
		School	632	1.36%	1.95%	0.25%
		Volunteer	94	0.20%	0.17%	0.04%
		Social / Recreational	2,250	4.86%	4.73%	0.37%
		Maintenance / Errands	3,039	6.56%	5.94%	0.36%
		Escorting / Mode change	934	2.02%	2.30%	0.27%
		Something Else	106	0.23%	0.28%	0.09%
	21 - 30	Home	2,566	5.54%	5.78%	0.31%
		Work	1,347	2.91%	2.94%	0.23%
		School	322	0.70%	0.92%	0.15%
		Volunteer	46	0.10%	0.08%	0.03%
		Social / Recreational	1,088	2.35%	2.24%	0.22%

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Region	Trip Duration	Activity	N	Unweighted	Weighted	MOE (95%)
		Maintenance / Errands	1,347	2.91%	2.66%	0.20%
		Escorting / Mode change	449	0.97%	1.03%	0.14%
		Something Else	57	0.12%	0.12%	0.06%
	31 - 45	Home	1,646	3.55%	3.40%	0.27%
		Work	1,005	2.17%	2.21%	0.21%
		School	163	0.35%	0.44%	0.10%
		Volunteer	†	-	-	-
		Social / Recreational	511	1.10%	1.05%	0.15%
		Maintenance / Errands	717	1.55%	1.27%	0.17%
		Escorting / Mode change	300	0.65%	0.69%	0.13%
		Something Else	31	0.07%	!	-
	46 - 60	Home	770	1.66%	1.64%	0.17%
		Work	446	0.96%	0.99%	0.12%
		School	53	0.11%	0.13%	0.05%
		Volunteer	†	-	‡	-
		Social / Recreational	223	0.48%	0.42%	0.08%
		Maintenance / Errands	300	0.65%	0.58%	0.10%
		Escorting / Mode change	92	0.20%	0.23%	0.09%
		Something Else	†	-	!	-
	61 - 90	Home	565	1.22%	1.03%	0.12%
		Work	243	0.52%	0.49%	0.08%
		School	†	-	!	-
		Volunteer	†	-	‡	-
		Social / Recreational	124	0.27%	0.21%	0.05%
		Maintenance / Errands	184	0.40%	0.31%	0.06%
		Escorting / Mode change	60	0.13%	0.14%	0.04%
		Something Else	†	-	‡	-
	91 - 120	Home	198	0.43%	0.41%	0.09%
		Work	46	0.10%	0.07%	0.03%

Region	Trip Duration	Activity	N	Unweighted	Weighted	MOE (95%)
		School	†	-	‡	-
		Volunteer	†	-	-	-
		Social / Recreational	46	0.10%	0.08%	0.04%
		Maintenance / Errands	53	0.11%	0.10%	0.04%
		Escorting / Mode change	†	-	!	-
		Something Else	†	-	-	-
	121 or more	Home	111	0.24%	0.23%	0.05%
		Work	†	-	-	-
		School	†	-	‡	-
		Volunteer	†	-	‡	-
		Social / Recreational	45	0.10%	0.08%	0.03%
		Maintenance / Errands	43	0.09%	0.09%	0.03%
		Escorting / Mode change	†	-	!	-
		Something Else	†	-	-	-
Total	0 - 5	Home	2,743	4.58%	4.86%	0.31%
		Work	1,076	1.80%	1.82%	0.17%
		School	353	0.59%	0.75%	0.12%
		Volunteer	75	0.13%	0.12%	0.04%
		Social / Recreational	2,086	3.48%	3.48%	0.22%
		Maintenance / Errands	2,905	4.85%	4.36%	0.28%
		Escorting / Mode change	866	1.45%	1.70%	0.19%
		Something Else	105	0.18%	0.16%	0.05%
	6 - 10	Home	3,951	6.60%	6.78%	0.36%
		Work	1,241	2.07%	2.03%	0.15%
		School	433	0.72%	1.06%	0.13%
		Volunteer	99	0.17%	0.15%	0.04%
		Social / Recreational	2,359	3.94%	3.93%	0.26%
		Maintenance / Errands	3,178	5.31%	4.86%	0.32%
		Escorting / Mode change	884	1.48%	1.87%	0.22%

Region	Trip Duration	Activity	N	Unweighted	Weighted	MOE (95%)
		Something Else	110	0.18%	0.21%	0.06%
	11 - 20	Home	5,789	9.67%	9.84%	0.38%
		Work	2,288	3.82%	3.82%	0.22%
		School	754	1.26%	1.78%	0.20%
		Volunteer	128	0.21%	0.18%	0.04%
		Social / Recreational	2,972	4.96%	4.84%	0.31%
		Maintenance / Errands	3,892	6.50%	5.89%	0.28%
		Escorting / Mode change	1,148	1.92%	2.19%	0.23%
		Something Else	142	0.24%	0.29%	0.08%
	21 - 30	Home	3,108	5.19%	5.39%	0.27%
		Work	1,752	2.93%	2.95%	0.21%
		School	390	0.65%	0.86%	0.13%
		Volunteer	66	0.11%	0.09%	0.03%
		Social / Recreational	1,439	2.40%	2.31%	0.20%
		Maintenance / Errands	1,722	2.88%	2.64%	0.18%
		Escorting / Mode change	564	0.94%	0.99%	0.12%
		Something Else	83	0.14%	0.14%	0.06%
	31 - 45	Home	1,947	3.25%	3.15%	0.23%
		Work	1,394	2.33%	2.32%	0.17%
		School	205	0.34%	0.43%	0.08%
		Volunteer	40	0.07%	0.06%	0.02%
		Social / Recreational	705	1.18%	1.12%	0.15%
		Maintenance / Errands	923	1.54%	1.27%	0.14%
		Escorting / Mode change	369	0.62%	0.65%	0.11%
		Something Else	43	0.07%	0.06%	0.03%
	46 - 60	Home	901	1.50%	1.50%	0.15%
		Work	734	1.23%	1.19%	0.11%
		School	65	0.11%	0.12%	0.04%
		Volunteer	†	-	-	-

Region	Trip Duration	Activity	N	Unweighted	Weighted	MOE (95%)
		Social / Recreational	337	0.56%	0.49%	0.08%
		Maintenance / Errands	389	0.65%	0.58%	0.08%
		Escorting / Mode change	119	0.20%	0.22%	0.09%
		Something Else	†	-	!	-
	61 - 90	Home	655	1.09%	0.96%	0.10%
		Work	518	0.87%	0.80%	0.10%
		School	35	0.06%	!	-
		Volunteer	†	-	‡	-
		Social / Recreational	233	0.39%	0.32%	0.07%
		Maintenance / Errands	265	0.44%	0.36%	0.06%
		Escorting / Mode change	88	0.15%	0.15%	0.04%
		Something Else	†	-	!	-
	91 - 120	Home	231	0.39%	0.37%	0.07%
		Work	145	0.24%	0.20%	0.04%
		School	†	-	‡	-
		Volunteer	†	-	-	-
		Social / Recreational	93	0.16%	0.12%	0.04%
		Maintenance / Errands	92	0.15%	0.14%	0.04%
		Escorting / Mode change	†	-	-	-
		Something Else	†	-	‡	-
	121 or more	Home	167	0.28%	0.26%	0.05%
		Work	91	0.15%	0.14%	0.05%
		School	†	-	‡	-
		Volunteer	†	-	‡	-
		Social / Recreational	122	0.20%	0.19%	0.05%
		Maintenance / Errands	60	0.10%	0.10%	0.04%
		Escorting / Mode change	50	0.08%	0.08%	0.04%
		Something Else	†	-	!	-