



METROPLAN

GREATER  FLAGSTAFF

FLAGSTAFF TRIP DIARY SURVEY

2024 Report

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EXECUTIVE SUMMARY

Study Overview & Introduction

The MetroPlan Trip Diary Study is a recurring travel study of Flagstaff area residents' travel patterns and mode selection. The study has two components. The first is an initial sign-up survey to capture household characteristics, typical travel and commuting behaviors, and Flagstaff transportation perceptions. The second survey is a travel day diary to capture all trips taken on a randomly assigned weekday travel day where Flagstaff residents report each trip they took whether driving, using transit, biking, or walking. The 2024 Trip Diary Study represents the fourth iteration of the survey. The study was first implemented in 2006, and subsequent iterations were conducted in 2012 and 2018. It is important to consider that between the third iteration of the study in 2018 and the fourth in 2024, a global pandemic significantly disrupted travel behaviors. Changes in work commute flexibility, as well as shifts in shopping habits—such as increased reliance on food and goods delivery—contributed to the evolving landscape observed between these two study periods. The study is designed to provide feedback to MetroPlan staff and its partners on current travel patterns, measure changes over time by using each iteration as a point in time and inform future transportation planning.

The 2024 Trip Diary Study was conducted from September 20th to November 4th, 2024. During this period, a total of 434 households completed the survey, providing valuable insights into current travel behaviors in the Flagstaff area.

Highlights of Study Results

The 2024 Flagstaff Trip Diary Study provides a detailed analysis of travel behaviors, modal share, and trip characteristics within the Flagstaff area, with comparisons to previous iterations (2006, 2012, 2018) and national data from the National Household Transportation Survey (NHTS). Notable changes in participation mode, from paper to online surveys, and shifts in post-COVID travel behaviors influenced key findings. This study captures evolving travel patterns and highlights shifts in commuting behaviors, delivery service reliance, and transportation options.

Key Findings:

1. Increase in Walking Mode Share

- The reporting of walking, jogging, and running trips significantly increased in 2024 (22.7%, up from 11.7% in 2018). This change is likely due to the enhanced reporting capabilities of the online survey format, which facilitated easier logging of smaller recreational trips, in addition to behavior changes with more flexibility in typical workdays post-pandemic.
- However, as a portion of all miles traveled the pedestrian mode share remained relatively similar to 2018 (4% of all miles traveled versus 3% in 2018).

2. Consistent Commuting Patterns with Emerging Flexibility

- Work commute trips remain largely dominated by personal vehicles (75.1%), but there is a slight decline in SOV usage (61.7%, down from 66.6% in 2018).



- Flexible work schedules and telecommuting have become more prevalent, with 44% of employed respondents traveling to work five days a week, down from 63.3% in 2018.
 - Among those with access to teleworking, 95% utilized the option, reflecting a post-COVID shift towards more flexible work arrangements.
- 3. Increase in the percentage of people not traveling on their travel day**
- Overall, more Flagstaff residents stayed home and did not leave their house on their assigned travel day (6.8% in 2024 vs 4.3% in 2018).
 - This difference was even more pronounced outside of the city’s Core area. In the Rest of Flagstaff, 7.1% of persons stayed home versus 4.5% in 2018 and in the Rest of FMPO area, 12.5% stayed home versus 4.5% in 2018.
- 4. Increased Adoption of Delivery Services**
- The proportion of residents receiving at least one delivery on their travel day rose from 8% in 2018 to 25% in 2024. Overall, across all participants 19% indicated receiving deliveries that directly replaced trips which is a huge increase from the previous 3% seen in 2018, 2012, and 2006.
 - This shift underscores a lasting change in the availability and use of deliveries and the convenience of home delivery services for some local trips.
 - While significantly more residents indicate receiving a delivery that replaced a trip, most are still making a similar number of trips throughout the day, just for other purposes. Overall, the average number of trips per day per person decreased from 5.0 trips (2018) to 4.5 trips (2024).

The 2024 Flagstaff Trip Diary Survey provides valuable insights for planners to enhance transportation infrastructure, promote sustainable travel options, and accommodate evolving commuter needs in the Flagstaff region. The transition to an online survey platform makes it easier for residents to report shorter or easily forgotten trips during their travel day. The online format makes the process of entering daily travel easier and also allows for the prompting of each data field as you enter your responses. Among those residents who make trips, the average number of trips is similar to previous years. However, the modal share of pedestrian trips is higher. While a higher percentage of participants are staying home on any given weekday, residents still travel for work on at least a few weekdays.



INTRODUCTION

Survey Background

The Trip Diary Study is a recurring travel study of MetroPlan area residents' travel patterns and mode selection. The 2024 Trip Diary Study represents the fourth iteration of the survey. The Flagstaff Trip Diary Study was first implemented in 2006, and subsequent iterations were conducted in 2012 and 2018. It is important to consider that between the third iteration of the study in 2018 and the fourth in 2024, a global pandemic significantly disrupted travel behaviors. Changes in work commute flexibility, as well as shifts in shopping habits—such as increased reliance on food and goods delivery—contributed to the evolving landscape observed between these two study periods. The study is designed to provide feedback to MetroPlan staff and its partners on current travel patterns, measure changes over time by using each iteration as a point in time and inform future transportation planning. The 2024 Trip Diary Study was conducted from September 20th to November 4th, 2024. During this period, a total of 434 households completed the survey, providing valuable insights into current travel behaviors in the Flagstaff area.

In the 2024 study, a total of 9,331 households were invited to participate. The total sample is a combination of 5,000 households selected through address-based sampling, a sample of 1,000 NAU students, and an additional convenience sample of community forum participants. Of the households invited, 749 households signed up to complete the travel diary and answered the initial sign-up survey questions for their household and 434 completed the full travel diary survey, resulting in a final response rate of approximately 5%. This response rate is lower than the 2018 response rate, but typical for household travel surveys in 2024 and consistent with household travel survey response trends. Data collection also took place at the same time as the 2024 election cycle and political polling. Other survey research efforts that occur in the fall of an election cycle often face similar challenges with response rates. Additional details are provided in the sampling methods section of this report.

Participants in the study were asked to keep a log or “diary” of their travel for one randomly assigned day during the week (Monday-Friday) of the survey period. For every trip made during the 24-hour period, participants recorded their destination, the travel mode used, the purpose for the trip, the time of day, the number of people in the vehicle (if applicable), and the number of miles traveled. A trip was defined as any “one-way travel from one point to another that takes you farther than one city block (about 200 yards) from the original location.”

In addition to the trip diary, participants completed a survey regarding their attitudes towards the quality of local transportation, alternative transportation options provided by employers, number of vehicles, and general socioeconomic information about the household and the study participant. Results of the survey and trip diary were statistically weighted so that respondent demographics matched population demographics.

The confidence interval (or “margin of error”) for the 2024 study is $\pm 5.0\%$, based on the number of completed surveys. While the response rate is lower than in 2018, the margin of error remains comparable due to the increased number of respondents.



SURVEY DESIGN

Study Overview

This study was designed to maintain comparability with previous iterations conducted in 2006, 2012, and 2018. The 2024 study retained all key questions from earlier waves in both the initial sign-up survey and the travel diary but incorporated additional questions to capture changes in work commutes and teleworking behaviors post-COVID-19. Data collection for the 2024 study occurred between **September 20th and November 4th**, resulting in **434 completed travel diaries**. The objective was to gather responses from at least 400 participants within the MetroPlan, Flagstaff Metropolitan Planning Organization, area.

The study consisted of two main components:

1. Sign-Up Survey

Participants completed an online sign-up survey where they provided key household-level and individual-level information, as well as their attitudes toward transportation in Flagstaff. Upon completing the survey, each participant was randomly assigned a specific weekday travel diary day (M-F).

2. Travel Diary

The second part of the study involved participants completing an online travel diary on their assigned travel day. In this diary, they reported details about each trip they made, including the destination, purpose, mode of transportation, departure and arrival times, and the distance traveled. Participants also reported all deliveries received on their travel day. Participants who completed the full study and travel diary were provided with a \$10 gift card incentive to encourage participation. MetroPlan also provided two \$200 Apple gift cards to encourage participation with a drawing for these gift cards.

Key Study Design Changes in 2024

Several key design updates were made for the 2024 iteration to improve data collection efficiency and better capture post-COVID-19 transportation trends:

- **Shift to Online Data Collection.** Unlike previous waves, where participants were mailed paper diaries and surveys after sign-up, the 2024 study transitioned to an online participation format. Selected households received mailed letter invitations via an address-based sample, prompting them to visit the study website. Participants provided information about their household and general travel behaviors during the sign-up process. Once registered, they were randomly assigned a travel diary day and given detailed instructions on what information to report for each trip. These travel day instructions were provided via email. Participants were also reminded to complete their travel diary survey on the morning of their travel day, the day after their travel day, and again two days later. Examples of study materials are shared in Appendix E: 2024 Survey Materials.



- **New Post-Covid-19 Survey Questions.** The study team added questions about teleworking, including a question about the number of days that employed participants work and then the number of days that they travel to work.
- **Enhanced Reminders.** In 2024, participants received reminder emails before their assigned travel day, on the morning of their travel day, and three additional reminders afterward to complete the diary. Of the **9,331 households invited, 749 signed up, and 434 fully completed travel diaries**, resulting in a **5% response rate** and a **58% conversion rate** from sign-up to completion. These enhanced reminders and participant support via email and telephone with the study team, may have also contributed to the increase in the reporting of a complete picture and the reporting of shorter trips like pedestrian trips. In 2018, selected households were mailed a pre-notification postcard informing them they had been randomly selected to participate in the Trip Diary Study, while the selected students in University group quarters were sent a postcard and an e-mail pre-notification. One week after their pre-notification, the full travel study packets were sent to all those selected for the study. Additionally, a reminder postcard was sent to residents one week after the travel study packets were sent.

Key Considerations & Lessons Learned

When interpreting the results, it is essential to consider the following factors:

- **Self-Reported Data.** As in previous studies, this survey relied on self-reported travel behaviors rather than GPS-tracked data. While this method introduces the potential for reporting bias, consistency in survey methodology across waves helps mitigate concerns about data accuracy. Notably, an increase in reported walking, running, and biking trips may reflect the ease of online reporting and more explicit instructions encouraging participants to include these types of trips, which may have been underreported in previous waves. Given Flagstaff's popularity as a destination for outdoor recreation and training, it is reasonable to assume that the online format facilitated more comprehensive reporting of such trips. Participants could enter the data online with their computer, tablet, or smartphone.
- **Prompting for All Trips.** An important lesson learned during data collection was the need for improved prompts to ensure participants reported all trips, including the final return home. Initially, participants were asked whether they made another trip, but some neglected to report their return trip home. After the first day of data collection, the study team revised the prompt to ask, "**Where did you go next?**", with an option to select "**I ended my day here**" if no further trips were made. This change significantly improved data completeness. An online participation design allows for immediate adjustments to make sure that the study is working properly and an increase in the completeness and accuracy of the data captured.
- **Methodological Changes of the MetroPlan Trip Diary Study versus the NHTS.** One key consideration when reviewing this iteration of the trip data, especially as it relates to comparisons with the most recent NHTS study, is that while the MetroPlan



methods were updated to include easier reporting of small trips like walk trips and the study specifically included examples of trips like recreational walk trips and how to capture a that trip when making a loop, the NHTS study design in the 2022 NHTS did not explicitly prompt respondents to include walk and bike trips. The previous NHTS studies in 2009 and 2017 explicitly prompted respondents to include walk and bike trips, including those for exercise, but 2024 did not.¹

- Additional Examples to Level-Set Understanding.** The study team reviewed additional regional transportation studies with publicly available data from 2023/2024 to compare modal share post-pandemic and changes in modal share versus pre-pandemic levels. In the Puget Sound Regional Council (PSRC) Bicycle Pedestrian Advisory Committee report, there was a higher percentage of walk trips in the geographic region in and around the city of Seattle (24% of person trips in 2023) compared to just 10% or less mode share in the more rural counties.² In the recent, Valley Metro TDM report the biggest shift occurred in the percent of commuters who indicated using a traditional alternative mode of transportation (i.e., bus, bike, light rail, walk, carpool or vanpool). This percentage increased to 30%, which continues the yearly increases seen since 2020. In addition, the mode share of walking as a work commute mode at least once per week increased from 4% in 2023 to 10% in 2024.³

After reviewing these considerations, the study team recommends the following adjustments to future studies from lessons learned:

- Travel Purpose Codes in Future Studies.** The study team recommends adding a specific code for a trip purpose of “exercise” and adding additional clarification to the “drive a passenger” purpose. Current travel purpose codes identify social/recreational trip purposes, but do not specifically identify exercise and/or outdoor recreation activities such as hiking. We recommend including a specific travel purpose survey code for exercise and outdoor recreation in the next iteration of the study. This would help to differentiate the purpose of walk and bike trips in Flagstaff for exercise versus the travel mode for a social/recreational gathering with another purpose beyond exercise. For example, you may walk to the bookstore and back for a book club meeting and the mode is walking but the purpose is social/recreational or you may walk to the bookstore and back for exercise and the sole purpose is exercise as it related to the recreation category and you would never drive your car as a substitute mode for that trip. In the

¹ The 2022 NHTS report outlining “Changes to the 2022 NHTS Data Collection Methods” states that the 2017 NHTS explicitly prompted respondents to include walk and bike trips, but the 2022 NHTS did not explicitly prompt respondents to include walk or bike trips. https://nhts.ornl.gov/assets/2022/pub/2022_NHTS_Summary_Travel_Trends.pdf.

² PSRC Bicycle Pedestrian Advisory Committee 2023 Data Report. September 10, 2024. <https://www.psrc.org/media/9020>

³ Valley Metro TDM Report. Spring 2024. <https://vulcan-production.nyc3.cdn.digitaloceanspaces.com/pages/downloads/about/agency/surveys-studies/tdm-research-reports/240823-tdmsurveyspring2024.pdf>



instance of the “drive a passenger” purpose, many residents write out a text response that they “drove their kids to school” and needed to be coded into the correct category, so it is possible that there is confusion with this travel purpose category. The next iteration of the study could provide additional clarification on this travel purpose.

- **Work From Home (WFH) Questions on Travel Day for Next Iteration.** The 2024 study captured typical working behavior, number of days traveling to work, and work from home questions in the sign-up survey. However, all respondents are still traveling to work and the study did not include a specific question on the trip diary about the percentage of time the participant worked from home on their assigned travel day. We recommend including a question about working from home on the assigned travel day to be able to analyze trips among WFH participants.



SURVEY SAMPLING

The primary objective of the 2024 Trip Diary Study was to collect travel behavior data from a representative sample of households in the Flagstaff study region to update trends in travel behavior and modal choice. The sampling strategy was designed to achieve this objective by (1) identifying key geographic and demographic segments of interest and (2) setting sampling targets and response rate goals for each segment.

To ensure adequate representation of specific demographic groups, the study targeted higher sampling rates for certain segments, such as Hispanic households, compared to the general population. The decision to oversample Hispanic households at a **2:1 ratio** was based on insights from the 2018 study, which showed that Hispanic households had lower response rates relative to other demographic groups. By oversampling this group, the study aimed to improve representation in the final dataset and reduce the need for extreme weighting adjustments. This approach was successful, resulting in a higher proportion of Hispanic participants and better representativeness in the final data.

The sampling plan for 2024 included a combination of **address-based sampling (ABS)**—a probability sampling method—and **non-probability sampling** to achieve the desired response rate. The initial ABS sample was drawn based on ZIP codes from the Flagstaff region to ensure proportionate geographic representation. Additionally, a deliberate oversample of Hispanic households was achieved by purchasing mailing addresses flagged as likely Hispanic from Marketing Systems Group (MSG), which uses data from the U.S. Postal Service’s Computerized Delivery Sequence file.

Despite efforts to reach the sample target through the ABS method, response rates were lower than expected. To meet study goals, the study team supplemented the sample with non-probability sources, including **831 households** that had recently participated in other Flagstaff-related survey research conducted by WestGroup and a community forum sample provided by MetroPlan. The non-probability sample response rates were notably higher. For example, while additional community forum members were available, the study team strategically selected a **random subset of 2,500 members** to balance response rates while minimizing sample fatigue. This mixed approach ultimately allowed the study to exceed its goal, resulting in **434 completed travel diaries**, surpassing the target of 400 households.

Key Study Design Changes in 2024

Two significant changes to the sampling approach were implemented in 2024:

- **Oversampling Hispanic Households.** The study team oversampled Hispanic households in the ABS sample to improve representation in the final dataset. This strategy successfully increased the proportion of Hispanic participants, resulting in more accurate demographic representation in the study findings.
- **Inclusion of Non-Probability Samples.** Initially, the study team intended to rely solely on the ABS sample to reach the target of 400 completed diaries, based on response rates



observed in the 2018 study. However, response rates across all types of survey research efforts have declined in recent years and this affected the trip diary study as well. Furthermore, the 2024 presidential election cycle presented additional challenges to survey participation. As a result, the study incorporated a non-probability sample to ensure the completion of 400 travel diaries. After data collection, the study team reviewed the demographic makeup and unweighted survey results from both probability and non-probability samples. The analysis showed minimal differences in unweighted demographic characteristics and survey responses between the two samples, suggesting that no additional weighting adjustments were necessary to correct for the probability and non-probability samples. As further explanation of these similarities, the study team has included unweighted modal share results in the Appendix by sampling group (Appendix D: 2024 Unweighted Modal Share Comparisons Between Sample Groups).

Key Considerations & Lessons Learned

There is a trade-off between using probability-based and non-probability-based samples. In this case, the inclusion of non-probability samples was crucial to meeting response rate goals and adapting to the constraints of the study. Moving forward, the study team recommends:

- **Small Sample Size.** As in previous waves, the relatively small sample size limits the level of detail available for subgroup analysis and specific travel behaviors, such as work commutes. Despite this limitation, modal share trends at the trip and mileage levels were found to be consistent with previous iterations of the study.
- **Timing of Future Studies.** Avoid conducting future iterations of this Trip Diary Study during a presidential election cycle, when survey fatigue and lower response rates are more likely.
- **Integrating Non-Probability Samples.** The study team recommends that non-probability sample sources be incorporated into the initial sampling plan in future studies. This approach will help meet challenging demographic targets, such as Hispanic and non-white populations, more efficiently while managing budget constraints. Properly managing non-probability sample sources from the start can reduce mid-study adjustments and improve overall study outcomes.



DATA QUALITY CONTROL, ANALYSIS, AND WEIGHTING

The study team placed a high importance in the design data preparation and quality control of the 2024 travel diary study to ensure high quality data and consistency across all iterations of this study. During the study design, WestGroup Research tested the online survey instruments thoroughly as well as building in enough time between the launch of this study to review the initial data provided and adjust if needed. This is reflected in the fact that after the first initial travel diaries were completed, the study team was able to make a quick design change to the wording between the first trip and subsequent trips to encourage participants to provide all parts of the journey. This included the destination as well as returning home from the destination, or leaving work to go to the destination, and returning to work after the destination. These quick adjustments and quality control measures ensured better data results.

In addition, the WestGroup Research team worked closely with MetroPlan on the look and feel of the study website as well as the materials provided on MetroPlan's website and a press release to legitimize the study, ensuring participants felt comfortable that the data collected was going to be used for research purposes for MetroPlan. The study also utilized its telephone interviewing center to call participants who had not yet completed their sign-up survey or travel diary if phone numbers were available to ensure the highest response rate possible from the probability-based sample.

The study team monitored data collection throughout fielding to ensure that respondents questions were answered quickly. An e-mail address was set up specifically for this study to assist with survey questions and provide incentives quickly.

Data Analysis and Dataset Preparation

During and after data collection, responses were cleaned to assure quality of the final data. The study team reviewed all destination addresses provided and updated them to the best of our ability to provide the most accurate data set possible. The study team also reviewed the complete picture from each survey respondent and updated the data provided if participants failed to provide a trip home and one was clearly needed.

Finally, inclusion in the final data analysis meant that the household completed the full sign-up survey by answering all questions and completed the travel diary data set with a thoroughness showing they self-reported trips as accurately as possible. A few travel diary completes were removed from the final count of survey completes due to a lack of information on trips. In a few cases, the initial number of trips provided in the travel diary was much larger than the trips recorded, so the study team reviewed those records and determined the participants did not fully complete the travel diary and needed to be removed.



Weighting

The data in this study was weighted based on demographic and geographic characteristics in a similar method to the weighting procedures from 2018. Table 1 displays demographic and geographic breakdowns of unweighted and weighted data along with population estimates. The one difference between the weighting in 2024 and the weighting in 2018 is that the 2024 study did not have a specific sample of adults in college dorms and did not have weights for households living in dorms or outside of dorms. In addition, there were two participants with weights higher than 10.0 and the study team capped all weights at 10.0. Most participants have a weight lower than 5.0, with very few participants receiving weights between 5.0 and 10.0.

The raked weighting procedure balances underrepresented groups across a number of different characteristics. Raked weights (also called iterative proportional fitting) are used in survey reporting to ensure that the final data accurately represents the target population. When conducting a survey, certain groups may be overrepresented or underrepresented due to differences in response rates. Raking adjusts the survey weights so that key demographic and household characteristics (such as age, gender, race, home ownership, or region) align with known population benchmarks, such as Census data. Overall, the distribution of weights in the 2024 data is similar to 2018. Furthermore, both studies compared the same demographic characteristics and area variables.



Table 1: Weighting Table

	Population Norm*	Unweighted Data	Weighted Data
Home Ownership			
Own home	51%	77%	54%
Rent home	49%	23%	46%
Ethnicity			
Hispanic	18%	8%	16%
Not Hispanic	82%	92%	84%
Race			
White	68%	93%	70%
Non-white	32%	7%	30%
Gender and Age			
Males 18-34	23%	7%	24%
Males 35-54	13%	14%	13%
Males 55+	13%	19%	12%
Females 18-34	26%	11%	27%
Females 35-54	12%	24%	12%
Females 55+	13%	25%	13%
Area			
Core of Flagstaff in Households	25%	24%	25%
Rest of Flagstaff in Households	52%	59%	51%
Rest of FMPO in Households	23%	18%	24%

*2023 5-year ACS estimates, when available



Geographic Coverage

The 2024 Trip Diary Study participants were classified into three areas for the purposes of analysis and reporting: Core, Rest of Flagstaff, and Rest of FMPO. These areas are outlined in Figure 1 and Figure 2. In this report results by area are shown by Core of Flagstaff, Rest of Flagstaff, and Rest of FMPO, when the area of Flagstaff is also included this is a combination of Core and Rest of Flagstaff.

Figure 1: Map of the Study Area Showing "Core," the "Rest of Flagstaff" and the "Rest of FMPO"

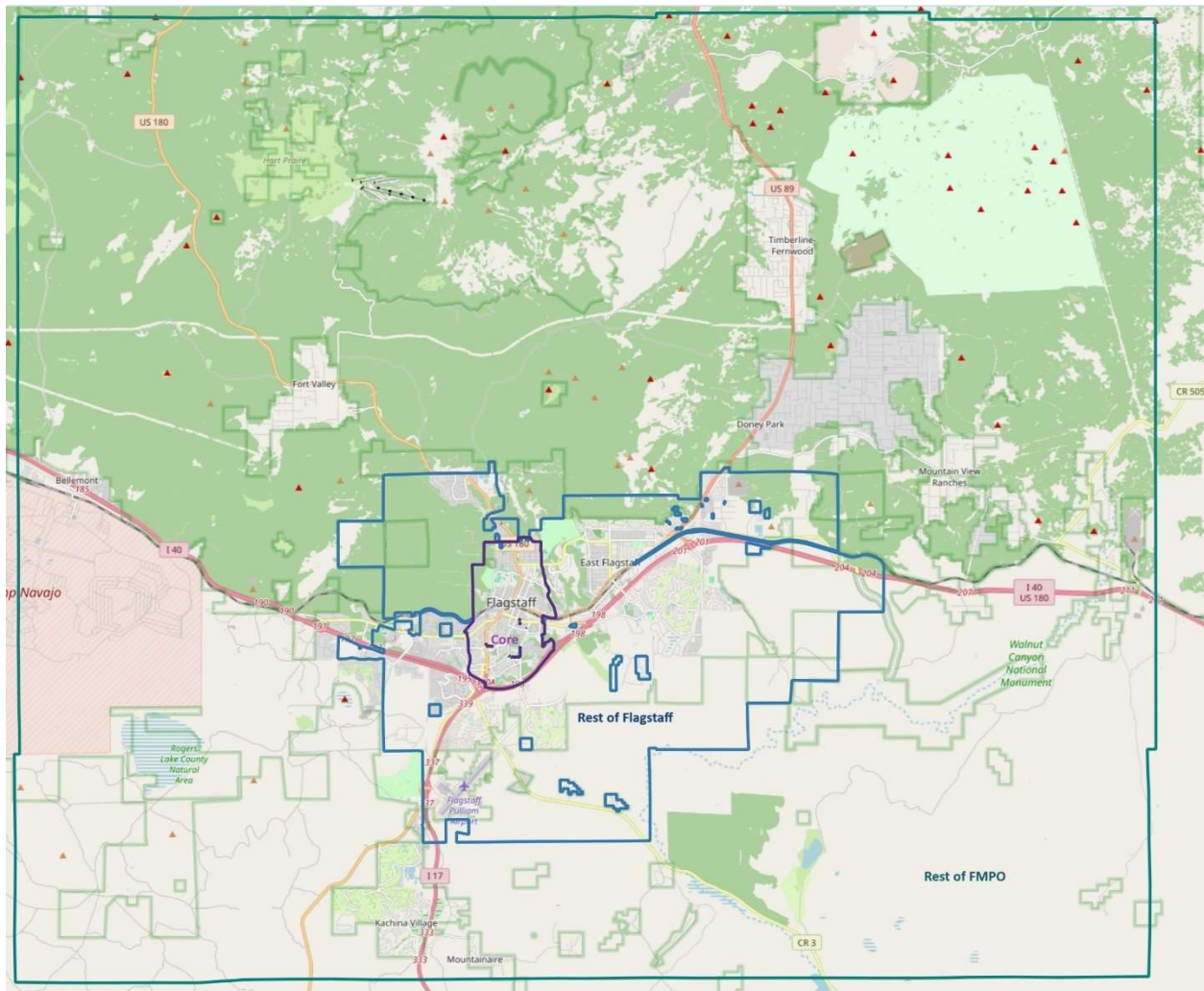


Figure 2: Additional Detail of the Core of Flagstaff Area



Weather Conditions During the Study Period

The study period for the 2024 Trip Diary Study included weekday travel diaries from September 20, 2024 to November 4, 2024. The study team reviewed the weather during these data collection days and added overall weekday averages into Table 2. The daily highs were usually in the 70s, however temperatures dropped into the forties and fifties for the last week of fielding. Overall, the weather was very similar to the weather in 2012 and 2006 and higher than 2018, which contributed to the study capturing more walk/pedestrian trips than in 2018.

Table 2: Weather Conditions During the Study Period, by Year

Flagstaff Weather*		Monday	Tuesday	Wednesday	Thursday	Friday
2024 (avg)	High Temperature	68 °F	71 °F	71 °F	72 °F	70 °F
	Low Temperature	29 °F	30 °F	29 °F	29 °F	29 °F
	Inches of Precipitation	---	0.17	---	---	0.09
2018	High Temperature	43 °F	36 °F	43 °F	53 °F	53 °F
	Low Temperature	30 °F	29 °F	29 °F	26 °F	35 °F
	Inches of Precipitation	---	0.23	---	---	---
2012	High Temperature	74 °F	78 °F	76 °F	73 °F	71 °F
	Low Temperature	29 °F	34 °F	31 °F	35 °F	NA
	Inches of Precipitation	---	---	---	---	---
2006	High Temperature	72 °F	69 °F	72 °F	72 °F	70 °F
	Low Temperature	41 °F	39 °F	35 °F	38 °F	48 °F
	Inches of Precipitation	---	---	---	trace	0.8"

*From the NOAA National Data Centers, as recorded at the FLAGSTAFF 4 SW station



SURVEY RESULTS

In this section, the study team presents key travel diary characteristics that have been tracked through the recurring Trip Diary Study in addition to a few key post-COVID-19 characteristics about traveling to work and school.

Trip Characteristics

As seen below in Table 3, more participants stayed home and did not leave their house on their assigned travel day as compared to 2018 (6.8% vs. 4.3% 2018). This shift contributed to overall fewer trips per person per day. The 2024 Trip Diary Study captured more pedestrian trips where people were walking, running, jogging which has led to a few changes in overall trip characteristics, like a slower average in miles per hour.

Table 3: Summary Trip Characteristics of Trips Made Via All Modes, by Year

Trip Characteristics	2024	2018	2012	2006
Percent of people who did not leave the house on assigned travel day	6.8%	4.3%	2.5%	5.5%
Average number of trips per day per person	4.5 trips	5.0 trips	5.2 trips	5.3 trips
Average number of trips per day per person who made at least one trip	4.8 trips	5.2 trips	5.3 trips	5.6 trips
Average number of miles traveled per day per person ⁴	21.3 miles	21.0 miles	26.9 miles	27.5 miles
Average number of miles traveled per day per person who made at least one trip ⁴	22.9 miles	22.0 miles	27.0 miles	29.1 miles
Average estimated trip length in miles ⁴	4.7 miles	4.2 miles	5.1 miles	5.3 miles
Average estimated trip time in minutes	21 minutes	15 minutes	15 minutes	17 minutes
Average miles per hour	13.2 mph	17.0 mph	17.5 mph	17.0 mph

⁴ Trip Diary Study participants are asked to record the estimated distance in miles or blocks of every trip they make. Thus, trip distance is not measured objectively, but is determined by the respondents' self-report. Two trips were excluded from all distance calculations because they were extreme outliers and over 250 miles.



Comparisons of Trip Characteristics of U.S. Residents to Flagstaff Area Adult Residents

The National Household Transportation Survey (NHTS), commissioned by the U.S. Department of Transportation, studied the travel patterns of the nation as a whole using a diary methodology similar to the one used in this research project. Although the NHTS data were collected in years different than the Flagstaff area trip diary data, the comparisons are helpful in understanding how Flagstaff travel patterns and trends may differ from those seen nationally.

When comparing trip characteristics for Flagstaff to the NHTS, there are a few differences that are consistent across years (Table 4). The average trip distance in Flagstaff is lower than that in the NHTS (4.7 vs. 12.6 NHTS). However, that is consistent with prior waves of data collection.

Interestingly, the average number of trips per person per day is trending downwards for both the Flagstaff and national data. For example, in the NHTS data the most recent trips per person per day is 2.3 versus the previous iteration which was 3.4 and in Flagstaff the average trips per day is 4.5 whereas in 2018 it was 5.0.

Table 4: Travel Characteristics, Flagstaff Compared to the U.S., by Year

Characteristic	Flagstaff Area				NHTS*				
	2024	2018	2012	2006	2022	2017	2009	2001	1995
Average number of trips (Trips per person per day)	4.5	5.0	5.2	5.3	2.3	3.4	3.8	4.1	4.3
Average trip distance, all trips in miles	4.7	5.2	5.1	5.3	12.6	10.7	9.8	10.0	9.1
Average daily distance traveled in miles	21.3	21	26.9	27.5	28.6	36.1	36.1	40.3	38.7
Average work-related trip distance in miles	5.7	5.0	6.2	6.5	13.4	11.5	11.8	12.1	11.6

* National Household Transportation Study



Table 5 shows that in the Core of Flagstaff area very few residents did not leave their house in 2024 (less than 1%). This finding is similar to 2012 survey results (0%). This is one case, among others, where 2024 results look a bit more like 2012 results rather than 2018. Conversely, the Rest of the FMPO region, which is more rural and further from the city, showed a higher percentage of people who stayed home on their assigned travel day (12.5% vs. 4.5% 2018). Additionally, the higher number of walk trips in the core Flagstaff area brought down the average miles traveled per day, which is to be expected. There were much fewer differences in the Rest of Flagstaff than there was in Flagstaff Core and in the Rest of the FMPO areas.

Table 5: Summary Trip Characteristics of Trips Made Via All Modes by Area of Residence, by Year

Trip Characteristics	Core of Flagstaff				Rest of Flagstaff				Flagstaff				Rest of FMPO			
	2024	2018	2012	2006	2024	2018	2012	2006	2024	2018	2012	2006	2024	2018	2012	2006
Percent of people who did not leave the house on assigned travel day	<1%	4.4%	0.0%	4.8%	7.1%	4.5%	2.8%	6.6%	5.0%	4.5%	1.9%	6.0%	12.5%	4.5%	5.3%	3.0%
Average number of trips per day per person	5.7	4.8	5.6	5.2	4.2	5.4	5.1	5.5	4.7	5.3	5.1	5.4	4.0	4.4	5.4	4.9
Average number of trips per day per person who made at least one trip	5.7	5.0	5.6	5.5	4.5	5.7	5.0	5.9	4.9	5.5	5.2	5.7	4.6	4.6	5.7	5.1
Average number of miles traveled per day per person ⁴	9.5	16.2	14.5	23.5	19.8	19.9	26.1	27.6	16.4	19.0	22.4	26.2	37.3	30.6	43.8	34.1
Average number of miles traveled per day per person who made at least one trip ⁴	9.6	17.0	14.6	24.6	21.3	21.0	27.0	29.6	17.3	20.0	22.9	27.9	42.7	32.0	46.5	35.4
Average estimated trip length in miles ⁴	1.7	2.9	2.2	4.8	4.8	3.8	5.3	5.1	3.5	3.5	4.2	5.0	9.3	6.8	8.0	6.9
Average estimated trip time in minutes	16	14	14	14	22	14	15	17	20	14	15	16	25	18	17	17



Modal Share

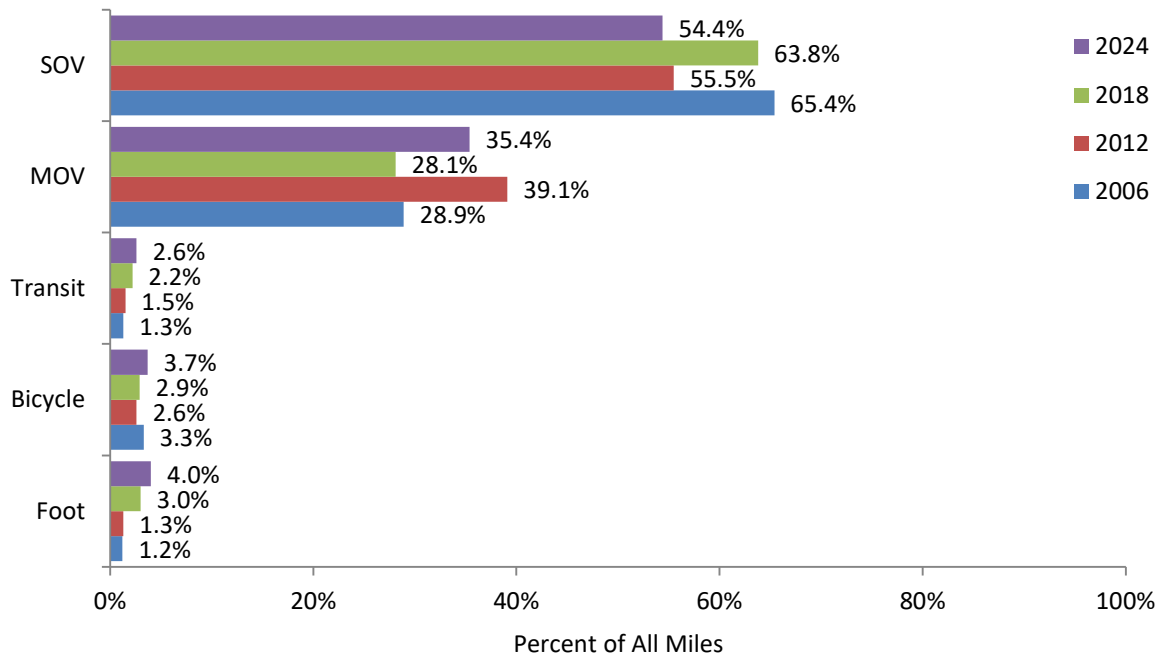
Transportation mode choice, or "modal share," refers to the distribution of travel across different transportation modes, measured by the number of trips or miles traveled. In this study, modal share is calculated based on both the number of trips and the miles traveled. The modes are categorized as single-occupancy vehicle (SOV)⁵, multiple-occupancy vehicle (MOV)⁶, transit (including NAU school bus service), walking, bicycling, and other motorized vehicles such as motorcycles and trucks.⁷

Modal Share of All Miles Traveled

Modal share of all miles traveled is an example of a metric that much more closely resembles 2012 results than 2018 results when comparing SOV share and MOV share. Directionally, the distributions have remained the same, but SOV share has decreased in comparison to 2018 (54.4% vs 63.8%) and is similar to 2012 (54.4% vs. 55.5%) (Figure 3). MOV share is 35.4% compared to 28.1% in 2018 and 39.1% in 2012.

When viewing modal share as a percentage of all miles traveled, there are very few differences in bike and walk trips compared to previous years. There is an increase in all non-vehicle modes, but this increase is small as a percentage of all miles traveled.

Figure 3: Modal Share of All Miles Traveled, by Year



⁵ A single-occupancy vehicle refers to an automobile, van, truck or motorcycle which has only one occupant.

⁶ A multiple-occupancy vehicle is an automobile, truck or motorcycle with more than one occupant.

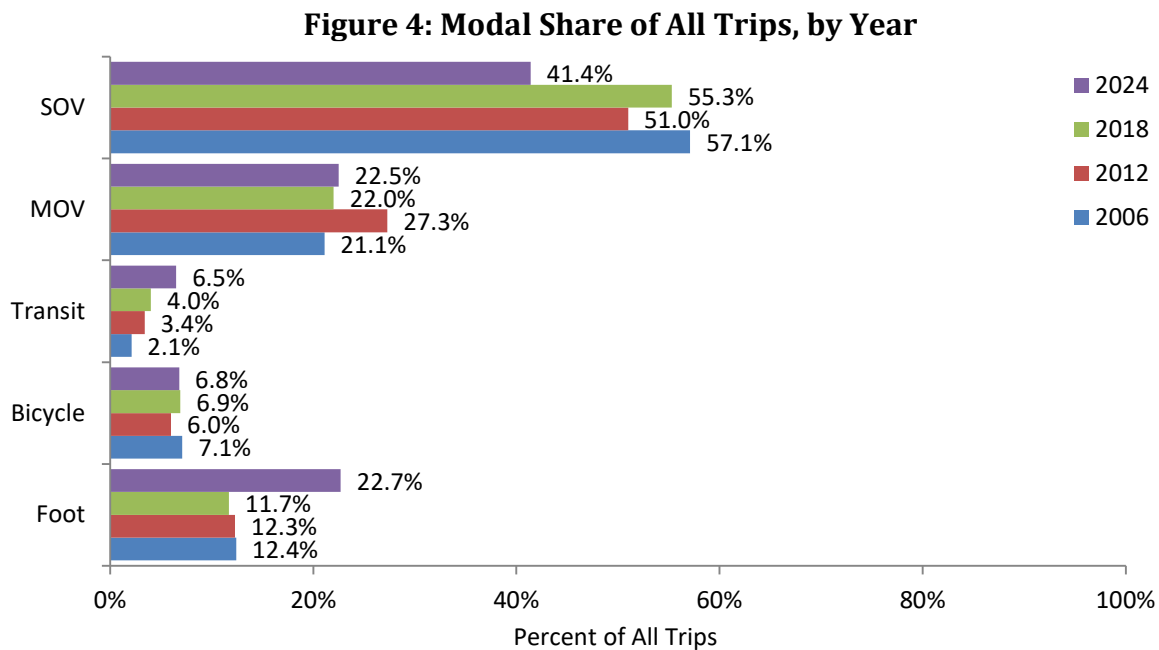
⁷ These modes were recoded into the SOV and MOV categories, based on the number of occupants in the vehicle. Truck and motorcycle trips make up a very small proportion of the trips made.



Modal Share of All Trips

When looking at modal share as a percentage of all trips, the 2024 iteration of the study saw a significant increase in walk, jog, and run trips (22.7%, up from 11.7%) which is likely due to a few different factors. One factor is that this year’s survey participation mode (online) likely made it easier for participants to enter shorter trips where they walked as their travel mode, including being able to complete the study on their smartphone. Second, is a behavior change post-pandemic with more flexible working schedules allowing more flexibility to walk during the day. It is also important to note that participants indicated in the sign-up survey that they do walk frequently for recreation and commuting. In the sign-up survey 34% of respondents said that they walk for recreation or work “five or more times a week” and another 41% indicated that they walk at least “two to four times a week.” This sign-up survey data is included in Table 70.

As seen in Figure 4, there was very little difference in multiple occupancy vehicle share (22.5%) and bike share (6.8%) in 2024 compared to 2018. Of note, transit activity includes NAU school bus services. In Appendix C: 2024 Selected Study Results Compared by Respondent Characteristics modal share is also compared across respondent characteristics. Households with income under \$50,000 were more likely to report transit trips and households with income of \$50,000 and over were more likely to report bike trips.



Unsurprisingly, foot traffic trips occurred heavily in the Core of Flagstaff and become less frequent the further people live from the Core of Flagstaff area (46% Core vs. 8.9% Rest of FMPO and 13.1% Rest of Flagstaff). To note, the region differences found in Figure 5 are similar to 2018 findings, however they are more pronounced in 2024.

Interestingly, while the number of foot trips reduce as you get further from the Core of Flagstaff, the number of multiple occupancy vehicle (MOV) trips increase, showing a higher need or interest for shared trips (8.1% Core Flagstaff vs. 28.7% Rest of Flagstaff and 30.3% Rest of FMPO).



Lastly, transit trips across all areas in 2024 are consistent with 2018. All historical differences can be viewed in Table 6.

Figure 5: Modal Share of All Trips by Area of Residence, 2024

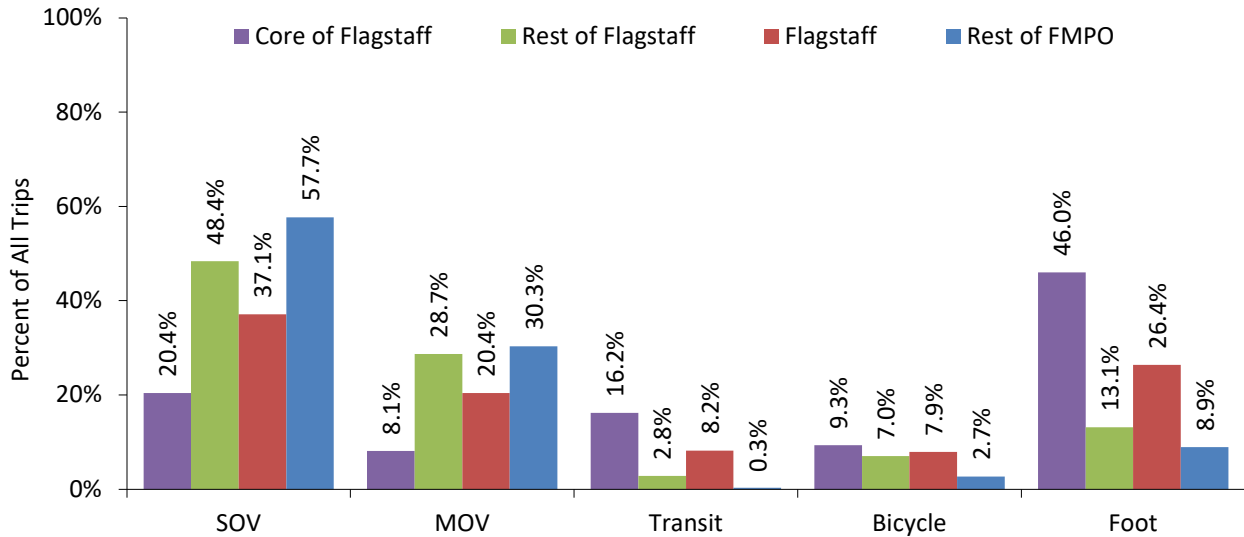


Table 6: Modal Share of All Trips by Area of Residence, by Year

Travel Mode		SOV	MOV	Transit	Bicycle	Walk	TOTAL
Core of Flagstaff	2024	20.4%	8.1%	16.2%	9.3%	46.0%	100%
	2018	33.0%	13.2%	9.6%	15.9%	28.3%	100%
	2012	26.0%	16.1%	11.3%	14.0%	32.5%	100%
	2006	50.5%	18.7%	1.4%	10.0%	19.4%	100%
Rest of Flagstaff	2024	48.4%	28.7%	2.8%	7.0%	13.1%	100%
	2018	62.7%	21.8%	2.9%	4.4%	8.3%	100%
	2012	60.8%	28.6%	0.4%	4.2%	5.9%	100%
	2006	56.3%	20.4%	3.4%	8.1%	11.8%	100%
Flagstaff	2024	37.1%	20.4%	8.2%	7.9%	26.4%	100%
	2018	53.8%	19.2%	4.9%	7.8%	14.3%	100%
	2012	48.7%	24.3%	4.3%	7.6%	15.1%	100%
	2006	54.4%	19.8%	2.8%	8.7%	14.2%	100%
Rest of FMPO	2024	57.7%	30.3%	0.3%	2.7%	8.9%	100%
	2018	61.3%	32.8%	0.7%	3.4%	1.8%	100%
	2012	57.4%	38.0%	0.5%	1.0%	3.1%	100%
	2006	67.7%	26.6%	0.0%	0.6%	5.0%	100%



Nationally, mode share remained relatively consistent between 2017 and 2022 (Table 7). This leads us to believe that the increase in walk trips we see in Flagstaff this year is mainly due to the ability to capture recreational trips more effectively with an online survey than the previous paper survey iterations as opposed to an actual change in travel behavior. However, there may be travel behavior changes in Flagstaff in 2024, we just cannot isolate these from participation mode changes. However, it is important to note that any decrease in the modal share of walk trips at a national level is likely due to a methodological change in the 2022 NHTS study where participants were not explicitly prompted to enter walk and bike trips, when in the 2017 NHTS study participants were explicitly prompted to enter walk and bike trips.

As shown in Table 8, mode share out of all trip miles remains very consistent in Flagstaff as well as nationally. Notably, this shows a return to pre-COVID trip mileage patterns. By looking at mode share out of all trip miles, the effects of the additional walk trips in 2024 are reduced in comparison to 2018 data.

Table 7: Modal Share of All Trips, Flagstaff Compared to the U.S., by Year

Travel Mode	Flagstaff Area								NHTS*				
	2024		2018		2012		2006		2022	2017	2009	2001	1995
SOV	41.4%	63.9%	55.1%	75.9%	51.0%	78.3%	57.1%	78.2%	86.9%	82.6%	83.4%	86.3%	86.4%
MOV	22.5%		20.7%		27.3%		21.1%						
Transit	6.5%		4.0%		3.4%		2.1%		1.4%	2.5%	1.9%	1.6%	1.8%
Walk	22.7%		11.7%		12.3%		12.4%		6.9% ⁸	10.5%	10.4%	8.6%	5.4%
Other	6.8%		8.4%		6%		7.1%		4.8%	4.4%	4.2%	3.4%	3.2%
Total	100%		100%		100%		100%		100%	100%	100%	100%	100%

*National Household Transportation Survey.

Table 8: Modal Share of All Trip Miles, Flagstaff Compared to the U.S., by Year

Travel Mode	Flagstaff Area								NHTS*				
	2024		2018		2012		2006		2022	2017	2009	2001	1995
SOV	54.4%	89.7%	63.6%	89.5%	55.5%	78.1%	65.4%	94.3%	83.0%	78.1%	88.3%	88.2%	91.2%
MOV	35.4%		25.9%		39.1%		28.9%						
Transit	2.6%		2.2%		1.5%		1.3%		1.2%	2.6%	1.5%	1.2%	2.1%
Other	7.7%		8.3%		3.9%		4.5%		15.8%	21.0%	10.2%	10.2%	5.7%
Total	100%		100%		100%		100%		100%	100%	100%	100%	100%

*National Household Transportation Survey.

⁸ The 2022 NHTS report outlining “Changes to the 2022 NHTS Data Collection Methods” states that the 2017 NHTS explicitly prompted respondents to include walk and bike trips, but the 2022 NHTS did not explicitly prompt respondents to include walk or bike trips.

https://nhts.ornl.gov/assets/2022/pub/2022_NHTS_Summary_Travel_Trends.pdf.



Purpose of Travel

Overall, trip purpose remains consistent between 2024 and 2018. The trip purpose of “drive a passenger” seems to have had a slight dip in 2024, however, this trip purpose is sometimes confused with the “school” purpose in self-reported data and the team may add some additional clarity for the next iteration.. Although minimal, all other differences can be viewed below in Table 9.

Table 9: Trip Purpose, by Year

Purpose of Trip	Percent of Trips				Percent of Miles			
	2024	2018	2012	2006	2024	2018	2012	2006
Go home	34%	32%	31%	30%	34%	33%	29%	35%
Work commute	10%	12%	11%	12%	13%	14%	14%	13%
Other work/business	5%	8%	10%	10%	16%	8%	14%	13%
Shopping	12%	12%	11%	9%	10%	8%	7%	5%
Drive passenger	5%	9%	8%	6%	5%	10%	10%	11%
Social/recreation	10%	8%	8%	9%	10%	11%	14%	8%
Personal business	6%	6%	9%	11%	4%	8%	7%	10%
Eat a meal	6%	5%	6%	5%	3%	3%	2%	2%
Change travel mode	2%	5%	1%	3%	<1%	2%	0%	1%
School	9%	3%	5%	5%	4%	1%	3%	2%
Other	2%	0%	<1%	<1%	<1%	0%	<1%	<1%
Total	100%	100%	100%	100%	100%	100%	100%	100%



As shown in Table 10, there has been little change among single or multiple occupant vehicle usage over the years in regard to trip purpose. However, there is a much higher percentage of people overall who reported using a bicycle for recreational purposes in 2024 than in prior years (20.1% vs. 2.7%-6.3%). All other differences between 2024 and 2018 are minimal across travel modes. To note, transit and bicycle travel modes have a smaller sample size and fewer trips overall so any differences noted in these categories should be used with caution.

Table 10: Mode of Travel for Each Trip Purpose, by Year

Purpose of Trip	Percent of Trips																			
	SOV				MOV				Transit				Bicycle				Foot			
	2024	2018	2012	2006	2024	2018	2012	2006	2024	2018	2012	2006	2024	2018	2012	2006	2024	2018	2012	2006
Go home	34.6%	34.5%	33.4%	29.6%	34.7%	28.7%	22.9%	33.2%	34.3%	14.5%	27.7%	32.8%	32.5%	28.7%	37.3%	27.6%	31.4%	33.5%	33.5%	28.1%
Work commute	16.1%	16.7%	17.0%	15.7%	2.5%	1.3%	3.9%	5.4%	5.7%	1.3%	4.4%	0.0%	17.3%	23.3%	6.0%	6.3%	5.2%	10.1%	8.4%	8.8%
Other work/ business	4.4%	9.3%	8.7%	13.2%	10.9%	6.3%	14.2%	4.6%	0.0%	2.7%	0.0%	0.0%	1.4%	14.3%	9.2%	7.4%	4.7%	3.0%	9.3%	8.1%
Shopping	16.2%	13.0%	13.6%	9.2%	10.7%	14.8%	12.8%	12.4%	8.4%	4.2%	5.0%	5.7%	1.4%	4.6%	0.5%	14.8%	10.1%	7.9%	6.1%	1.2%
Personal business	7.3%	8.2%	12.0%	12.0%	4.8%	6.5%	7.6%	10.1%	6.5%	0.0%	11.2%	0.0%	1.6%	4.1%	0.5%	19.2%	5.1%	1.1%	5.4%	6.7%
Social/recreation	6.3%	6.1%	7.1%	6.3%	5.5%	8.4%	8.1%	9.2%	2.8%	11.7%	0.0%	32.8%	20.1%	2.7%	3.3%	6.3%	18.4%	19.5%	12.8%	17.2%
Eat a meal	4.9%	5.0%	3.5%	4.0%	6.3%	5.0%	8.9%	6.8%	2.9%	0.0%	0.0%	5.7%	4.5%	0.8%	6.8%	2.2%	8.2%	7.3%	13.4%	7.0%
Drive passenger	2.3%	4.9%	3.8%	4.0%	16.9%	26.6%	18.6%	17.6%	0.0%	0.0%	15.8%	0.0%	1.2%	0.0%	0.0%	0.0%	<1%	0.0%	1.7%	1.0%
School	3.8%	1.6%	0.7%	3.2%	4.8%	1.0%	2.8%	0.6%	31.1%	4.1%	23.7%	5.4%	17.6%	18.2%	36.4%	16.2%	12.8%	7.2%	7.8%	10.7%
Change travel mode	<1%	0.8%	0.0%	2.4%	<1%	1.3%	0.2%	0.1%	7.6%	61.4%	12.2%	17.6%	<1%	3.4%	0.0%	0.0%	3.8%	10.5%	1.5%	10.5%
Other	3.7%	0.0%	0.1%	0.4%	2.2%	0.2%	0.0%	0.0%	<1%	0.0%	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%	<1%	0.0%	0.0%	0.7%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%



Table 11: Modal Share by Trip Purpose, by Year

Modal Share of All Trips		SOV	MOV	Transit	Bicycle	Foot	Total
Go home	2024	42.5%	23.1%	6.7%	6.6%	21.2%	100%
	2018	59.8%	19.8%	1.8%	6.2%	12.3%	100%
	2012	55.6%	20.4%	3.1%	7.4%	13.5%	100%
	2006	56.2%	23.3%	2.5%	6.5%	11.6%	100%
Personal business	2024	52.1%	18.6%	7.4%	1.9%	20.0%	100%
	2018	71.3%	22.2%	0.0%	4.5%	2.0%	100%
	2012	66.0%	22.3%	4.1%	0.3%	7.2%	100%
	2006	61.3%	19.0%	0.0%	12.2%	7.4%	100%
Shopping	2024	55.6%	20.0%	4.6%	<1%	19.0%	100%
	2018	60.6%	27.5%	1.4%	2.7%	7.8%	100%
	2012	61.0%	30.7%	1.5%	0.3%	6.6%	100%
	2006	57.0%	28.4%	1.4%	11.5%	1.6%	100%
School	2024	17.9%	12.2%	23.3%	13.6%	33.0%	100%
	2018	26.0%	6.3%	4.9%	37.6%	25.2%	100%
	2012	6.9%	15.1%	15.8%	43.2%	19.1%	100%
	2006	40.0%	2.7%	2.7%	25.4%	29.2%	100%
Work commute	2024	66.8%	5.7%	3.8%	11.9%	11.9%	100%
	2018	74.6%	2.3%	0.4%	13.1%	9.6%	100%
	2012	76.9%	9.4%	1.3%	3.2%	9.2%	100%
	2006	77.0%	9.8%	0.0%	3.9%	9.4%	100%
Other work/ business	2024	33.7%	44.9%	0.0%	1.7%	19.8%	100%
	2018	64.5%	17.5%	1.4%	12.4%	4.3%	100%
	2012	44.4%	38.6%	0.0%	5.5%	11.4%	100%
	2006	75.0%	9.7%	0.0%	5.3%	10.0%	100%
Social/ recreation	2024	27.1%	12.9%	1.9%	14.3%	43.7%	100%
	2018	41.3%	22.5%	5.8%	2.3%	28.1%	100%
	2012	47.5%	29.1%	0.0%	2.7%	20.7%	100%
	2006	40.6%	21.9%	8.3%	5.1%	24.1%	100%
Eat a meal	2024	35.0%	24.3%	3.3%	5.4%	32.1%	100%
	2018	57.7%	23.2%	0.0%	1.1%	18.1%	100%
	2012	28.2%	38.8%	0.0%	6.5%	26.5%	100%
	2006	47.0%	29.3%	2.7%	3.2%	17.8%	100%
Drive passenger	2024	19.4%	78.5%	0.0%	1.7%	<1%	100%
	2018	31.9%	68.1%	0.0%	0.0%	0.0%	100%
	2012	24.8%	65.5%	6.9%	0.0%	2.8%	100%
	2006	37.1%	60.9%	0.0%	0.0%	2.1%	100%
Change travel mode	2024	11.2%	9.8%	28.0%	2.3%	48.7%	100%
	2018	9.0%	6.0%	53.3%	5.1%	26.5%	100%
	2012	3.6%	8.1%	60.4%	0.0%	27.9%	100%
	2006	44.2%	0.9%	12.9%	0.0%	42.1%	100%



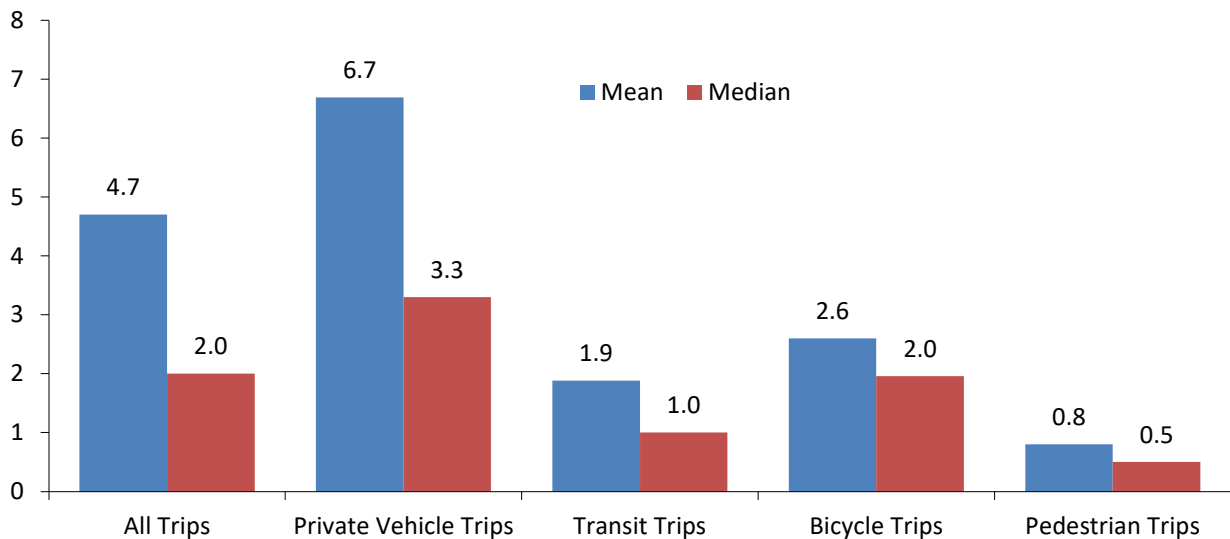
Trip Distance

The distances that residents in Flagstaff travelled in 2024 is comparable to the travel distances reported in 2018. Per Table 12, the distance that people walk is much shorter than if they were to travel by other modes (47.3% <.5 miles walking vs. 0.7%-3.6% <.5 miles other modes). As expected, private vehicle trips show the longest average trip distance with an average of 6.7 miles per trip (Figure 6). Additionally, nearly all trips over 10 miles were made by private vehicles.

Table 13 shows the inverse relationship of pedestrian and vehicle trips related to mode and trip distance. For example, as a trip distance increases in miles, the percentage of walking trips will decrease while the percentage of vehicle trips will increase. Notably, the majority of trips under half a mile were walking trips (80%).

Note, the mean trip distance is calculated by summing all trip distances for a given travel mode and dividing by the total number of trips. This value can be influenced by extreme values (e.g., a few very long trips can make the mean higher than the typical trip distance). There is more of a difference in the mean and median for private vehicle trips, because the trip distance in miles ranges from very small trips of a couple blocks to trips over 100 miles. Looking at trip distance by mode, there are 5.4% of trips that are over 20 miles. There were two trips removed from all distance and miles traveled calculations because they were extreme outliers (over 250 miles). The median trip distance represents the midpoint of all trips when arranged from shortest to longest. Half of the trips are shorter than the median, and half are longer. Unlike the mean, the median is less affected by extremely long or short trips.

Figure 6: Trip Distance by Travel Mode, 2024



Note, transit trips include all individual transit trips in Table 12 and Table 13. These are not calculated as combined distances for chained trips.

Table 12: Trip Distance by Mode of Travel, 2024

Trip Distance	Percent of Trips				
	Private Vehicle	Transit	Bicycle	Pedestrian	All Modes
0 - 0.49 miles	3.6%	3.4%	0.7%	47.3%	6.3%
0.5 thru 0.99 miles	5.3%	21.8%	26.7%	27.8%	10.7%
1.00 thru 2.49 miles	25.7%	54.3%	31.2%	17.5%	30.4%
2.50 thru 4.99 miles	33.1%	9.4%	29.3%	4.2%	28.4%
5.00 thru 9.99 miles	19.0%	10.7%	9.6%	3.2%	17.4%
10.00 thru 14.99 miles	6.3%	0.4%	1.9%	0.0%	4.6%
15.00 thru 19.99 miles	1.7%	0.0%	0.7%	0.0%	0.5%
20.00 or more miles	5.4%	0.0%	0.0%	0.0%	1.6%
Total	100%	100%	100%	100%	100%

Table 13: Mode of Travel by Trip Distance, 2024

Travel Mode	0.00 - 0.49 miles	0.50 thru 0.99 miles	1.00 thru 2.49 miles	2.50 thru 4.99 miles	5.00 thru 9.99 miles	10.00 thru 14.99 miles	15.00 thru 19.99 miles	20.00 or more miles	Total
Private Vehicle	17.3%	26.0%	62.9%	85.5%	85.4%	96.3%	95.6%	100.0%	63.9%
Transit	1.7%	11.0%	13.6%	2.5%	4.9%	0.6%	0.0%	0.0%	6.5%
Bicycle	0.4%	14.1%	8.2%	8.1%	4.6%	3.1%	4.4%	0.0%	6.8%
Pedestrian	80.6%	48.9%	15.2%	3.9%	5.1%	0.0%	0.0%	0.0%	22.7%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%



Vehicle Occupancy

As shown in Table 14, there were slightly fewer respondents reporting just one occupant per vehicle in 2024 than in 2018 (64.8%, down from 72% 2018). However, this is similar to the 64.6% reported in 2012. In all other regards, vehicle occupancy remains similar between 2024 and 2018.

Multiple occupant vehicle trips were more likely to have included at least one child in addition to the adult respondent over another adult occupant with 44.2% of MOV trips including children compared to 37.4% including another household adult and 30.9% another non-household adult (Table 15). The average number of occupants per vehicle trip in 2024 was 1.29 for all personal vehicle trips and 2.39 for MOV trips (Table 16).

Table 14: Vehicle Occupancy, by Year

Number of Occupants	Percent of Trips			
	2024	2018	2012	2006
1	64.8%	72%	64.6%	72.4%
2	26.0%	23%	27.0%	19.1%
3	5.7%	4%	6.8%	5.6%
4 or more	3.5%	1%	1.6%	2.9%
Total	100%	100%	100%	100%
Average vehicle occupancy for all automobiles	1.49 persons	1.36 persons	1.46 persons	1.41 persons
Average vehicle occupancy for autos with at least two passengers	2.39 persons	2.37 persons	2.30 persons	2.47 persons

Table 15: Percent of Trips with Various Occupants, 2024

Type of Occupant	Percent of Trips that Included Each Occupant Type*	
	All Personal Vehicle Trips	MOV Trips
Any adult	100%	100%
An adult from the household	100%	100%
More than one adult from household	13.2%	37.4%
Other adult(s), not from household	10.9%	30.9%
Child(ren)	15.5%	44.2%
Child(ren) from household	13.3%	37.8%
Other child(ren)	2.7%	7.7%

* Percents add to more than 100% as each trip could have multiple types of occupants.



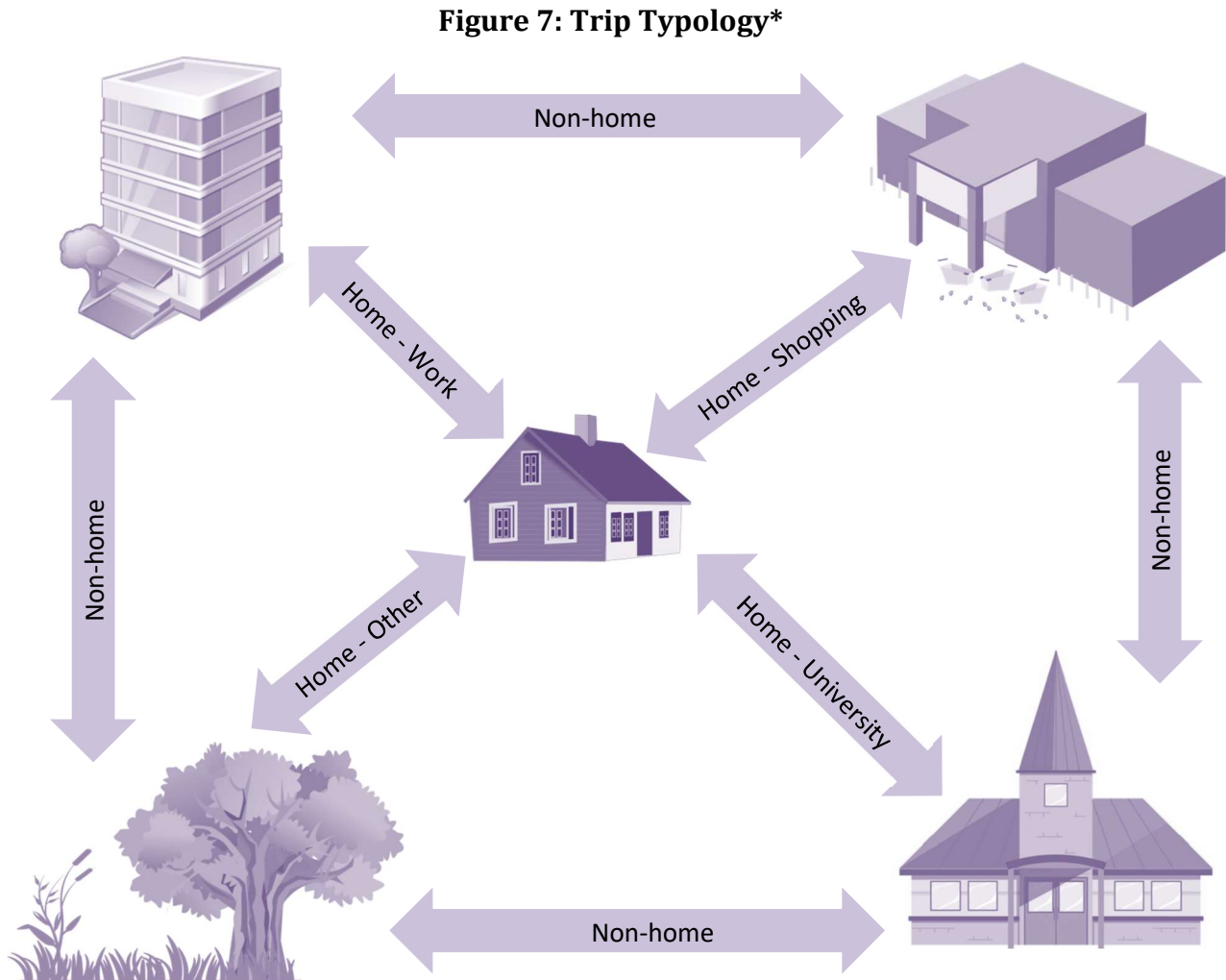
Table 16: Average Number of Type of Occupants per Vehicle, 2024

Type of Occupant	Average Number of People in Vehicle	
	All Personal Vehicle Trips	MOV Trips
Persons in vehicle	1.49	2.39
Adults in vehicle	1.29	2.15
Children in vehicle	0.19	0.64
Adults from HH in vehicle	1.13	1.38
Other adults in vehicle	0.13	0.38
Children from HH in vehicle	0.19	0.54
Other children in vehicle	0.03	0.09



Trip Typology

The WestGroup Research study team utilized the same trip typology classifications as the team in 2018 to keep the classification scheme consistent and comparable. The trips have often been classified in more aggregated categories depicting “home-based work” trips, “home-based other” trips and “non-home” trips. For the purposes of the Flagstaff Trip Diary Survey, two additional trip purposes were added to the classification scheme, as shown in the Figure 7 below.



**Trip Typology classification scheme is taken from the 2018 study and mirrored for comparability with 2024.*

Figure 8 below shows there are fewer trips in 2024 that are directly from work to home or home to work compared to 2018 (14.7% vs. 20.5%). It’s possible this could be a reflection that fewer people are traveling five days a week to work and home from work. Additionally, there is a higher percentage of school-related trips this year with 9.5% trips being categorized as home to university or university to home.

There is a higher modal share of multiple occupant vehicle (MOV) trips this year for direct trips from home to work and work to home compared to 2018 (15.1%, up from 3.7%) while home to university trips (and vice versa) via transit options increased greatly from 0% to 31.0% in 2024. These transit trips include “NAU school bus” reported trips with the NAU campus and are similar to the way they were reported in previous years, combined with transit. All other differences by modal share per year can be viewed in Table 17.

Figure 8: Trip Type, by Year

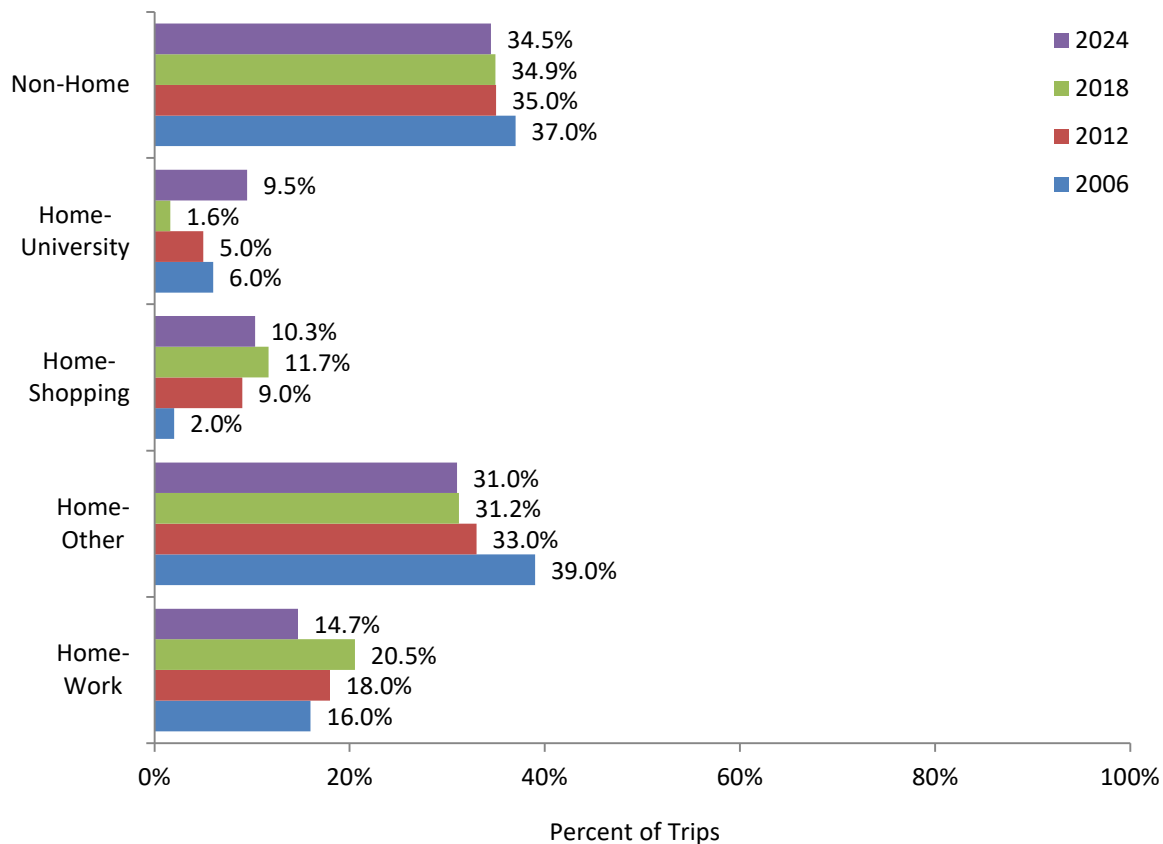


Table 17: Modal Share by Trip Type, by Year

Modal Share of All Trips		SOV	MOV	Transit	Bicycle	Foot	Total
Home-Other	2024	36.9%	28.9%	4.2%	4.0%	26.1%	100%
	2018	48.9%	33.7%	3.2%	2.3%	12.0%	100%
	2012	47.5%	27.5%	2.6%	4.4%	17.9%	100%
	2006	51.2%	29.6%	1.0%	5.8%	12.4%	100%
Home-Work	2024	57.1%	15.1%	3.2%	11.8%	12.8%	100%
	2018	76.2%	3.7%	0.5%	10.5%	9.1%	100%
	2012	78.2%	9.1%	1.0%	1.9%	9.8%	100%
	2006	78.8%	8.9%	0.0%	3.0%	9.3%	100%
Home-Shopping	2024	59.2%	22.8%	<1%	1.6%	15.8%	100%
	2018	52.8%	18.9%	1.6%	9.1%	17.6%	100%
	2012	43.4%	38.9%	0.8%	10.8%	6.2%	100%
	2006	64.6%	28.6%	0.0%	3.9%	2.9%	100%
Home-University	2024	18.8%	14.0%	31.0%	10.8%	25.4%	100%
	2018	49.7%	10.1%	0.0%	8.6%	31.6%	100%
	2012	7.6%	16.0%	5.6%	46.3%	24.6%	100%
	2006	41.1%	5.0%	26.8%	17.0%	10.1%	100%
Non-Home	2024	39.7%	22.2%	5.0%	7.7%	25.4%	100%
	2018	50.1%	23.7%	7.8%	8.2%	10.2%	100%
	2012	48.3%	34.7%	5.7%	2.8%	8.6%	100%
	2006	55.4%	19.9%	0.8%	9.0%	15.0%	100%



Table 18: Trip Type by Mode of Travel, by Year

Modal Share of All Trips		Home-Other	Home-Work	Home-Shopping	Home-University	Non-Home	Total
SOV	2024	27.4%	20.4%	14.9%	4.4%	33.0%	100%
	2018	27.6%	27.9%	11.2%	1.5%	31.8%	100%
	2012	30.2%	27.4%	8.1%	0.7%	33.6%	100%
	2006	34.6%	22.3%	2.8%	4.3%	35.9%	100%
MOV	2024	39.5%	9.9%	10.5%	6.0%	37.9%	100%
	2018	47.8%	3.4%	10.1%	0.8%	37.9%	100%
	2012	32.6%	5.9%	13.5%	2.8%	45.1%	100%
	2006	53.8%	6.7%	3.4%	1.4%	34.6%	100%
Transit	2024	19.9%	7.3%	1.0%	45.6%	26.1%	100%
	2018	24.5%	2.6%	4.7%	0.0%	68.2%	100%
	2012	24.9%	5.3%	2.1%	7.9%	59.8%	100%
	2006	16.4%	0.0%	0.0%	71.0%	12.6%	100%
Bicycle	2024	18.0%	25.5%	2.4%	15.2%	38.8%	100%
	2018	10.2%	30.7%	15.4%	2.1%	41.6%	100%
	2012	23.8%	5.7%	17.1%	36.9%	16.5%	100%
	2006	31.4%	6.7%	1.4%	14.3%	46.3%	100%
Foot	2024	35.3%	8.3%	7.2%	10.8%	38.5%	100%
	2018	31.9%	15.7%	17.6%	4.4%	30.4%	100%
	2012	46.9%	14.1%	4.7%	9.6%	24.7%	100%
	2006	38.3%	12.1%	0.6%	4.9%	44.2%	100%



Trip Chaining

Trip chaining refers to a series of trips that are linked together. One typical example of this is a work commute chain where someone combines a trip to get a coffee with their work commute or someone drops off a child at school on their way to work. An example of a non-commute trip chain is the combining of multiple errands where someone goes to the pharmacy on their way to the grocery store. Similar to the 2018 study, trips were coded as “chains” if the time spent at the destination was less than 20 minutes.

Although there is very little difference between 2024 and 2018 regarding the overall number of chained trips versus non-chained trips, Table 19 shows the percentage of respondents who do not chain any of their trips decreased in 2024 compared to 2018 (70.4%, down from 77.1%). There are a number of factors that may cause residents to be chaining at least one trip such as an increased price in gas and wanting to combine trips when using a personal vehicle in combination with the ease of reporting online and the potential that participants reported more of these smaller chained trips like those to “grab a coffee” or “stop at the pharmacy.”

Figure 9: Trip Chaining, by Year

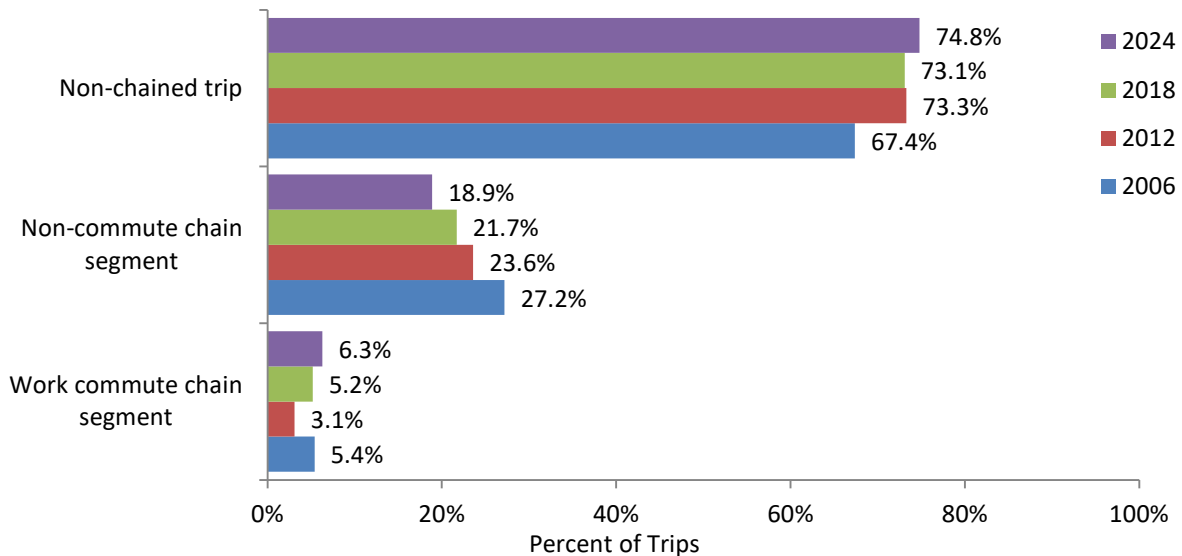


Table 19: Number of Trip Chains Made by Respondents, by Year

Number of Trip Chains Made	Percent of Respondents			
	2024	2018	2012	2006
None	70.4%	77.1%	69.0%	47.9%
1	18.7%	6.8%	26.1%	24.8%
2	7.5%	12.7%	4.4%	19.8%
3	2.0%	2.1%	0.5%	5.8%
4	1.0%	0.6%	0.0%	1.5%
5	<1%	0.7%	0.0%	0.3%
Total	100%	100%	100%	100%



Table 20 through Table 23 display additional information about trip chaining. Work commute chains are more often made by personal vehicles than any other mode (84% vs. 3.1%-8.5% other modes).

Table 20: Modal Share by Trip Chaining, 2024

Modal Share of All Trips	Percent of Trips		
	Non-chained trip	Non-commute chain segment	Work commute chain segment
SOV	40.0%	42.4%	55.1%
MOV	20.9%	26.7%	28.9%
Transit	7.7%	3.2%	3.1%
Bicycle	8.2%	2.4%	4.3%
Foot	23.3%	25.2%	8.6%
Total	100%	100%	100%

Table 21: Trip Chaining by Mode of Travel, 2024

Trip Chaining	Percent of Trips				
	SOV	MOV	Transit	Bicycle	Foot
Non-chained trip	72.2%	69.4%	87.6%	89.3%	76.7%
Non-commute chain segment	19.3%	22.4%	9.3%	6.7%	20.9%
Work commute chain segment	8.5%	8.2%	3.1%	4.0%	2.4
Total	100%	100%	100%	100%	100%

Table 22: Trip Chaining by Trip Purpose, 2024

Trip Chaining	Go home	Personal business	Shopping	School	Work commute	Other work/business	Social/recreation	Eat a meal	Drive passenger	Change travel mode
Non-chained trip	86.0%	61.9%	62.8%	87.3%	79.6%	60.5%	88.5%	64.5%	38.6%	23.9%
Non-commute chain segment	10.8%	35.6%	35.1%	12.0%	6.2%	28.5%	11.0%	25.6%	36.4%	49.9%
Work commute chain segment	3.2%	2.6%	2.1%	<1%	14.2%	11.0%	<1%	9.9%	25.0%	26.2%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%



Table 23: Trip Chaining by Area of Residence, by Year

Trip Chaining		Non-chained trip	Non-commute chain segment	Work commute chain segment	Total
Core of Flagstaff	2024	75.5%	21.2%	3.3%	100%
	2018	78.2%	17.8%	4.0%	100%
	2012	78.9%	19.4%	1.8%	100%
	2006	80.2%	16.0%	3.8%	100%
Rest of Flagstaff	2024	77.5%	14.4%	8.1%	100%
	2018	73.5%	22.8%	3.6%	100%
	2012	72.9%	23.5%	3.5%	100%
	2006	63.5%	30.6%	5.9%	100%
Flagstaff	2024	76.7%	17.2%	6.2%	100%
	2018	75.0%	21.3%	3.7%	100%
	2012	75.0%	22.1%	2.9%	100%
	2006	68.9%	25.9%	5.2%	100%
Rest of FMPO	2024	67.8%	25.4%	6.7%	100%
	2018	65.9%	23.1%	11.0%	100%
	2012	67.0%	29.4%	3.6%	100%
	2006	61.0%	32.9%	6.2%	100%



Trip Characteristics of the Work Commute

The work commute, when Flagstaff residents make a commuting trip, has remained consistent between 2024 and previous iterations of the study. As shown in Table 24, the average estimated trip length in miles for commuting trips is almost 6 miles on average (5.7 miles in 2024) which is similar to previous years. While 2018’s average trip length was a bit lower, the trip length in 2012 was 6.2 miles on average.

Table 24: Summary Trip Characteristics of All Work Commute Trips⁹, by Year

Work Commute Trip Characteristics	2024	2018	2012	2006
Average estimated trip length in miles	5.7 miles	5.0 miles	6.2 miles	6.5 miles
Average estimated trip time in minutes	17 minutes	17 minutes	16 minutes	17 minutes
Average miles per hour	16.8 mph	19.1 mph	20.6 mph	20.6 mph

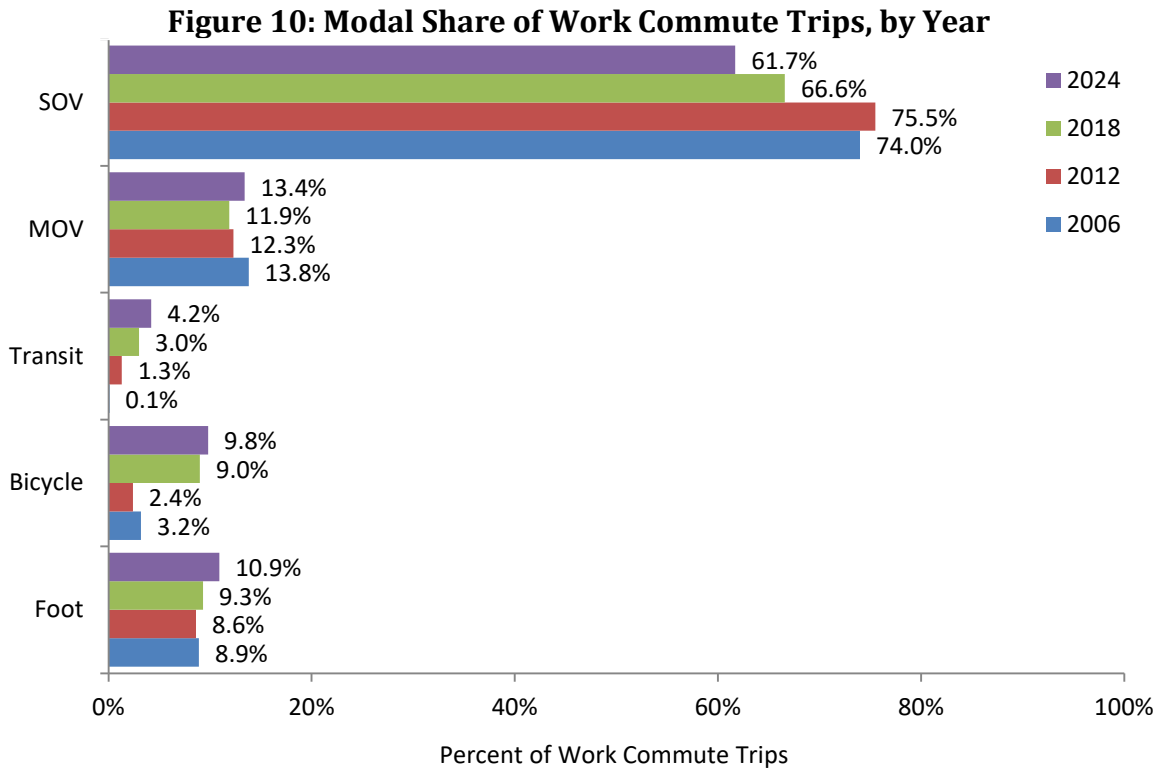
⁹ “Work commute trips” include linked trips to work to maintain consistency with 2018 reporting.

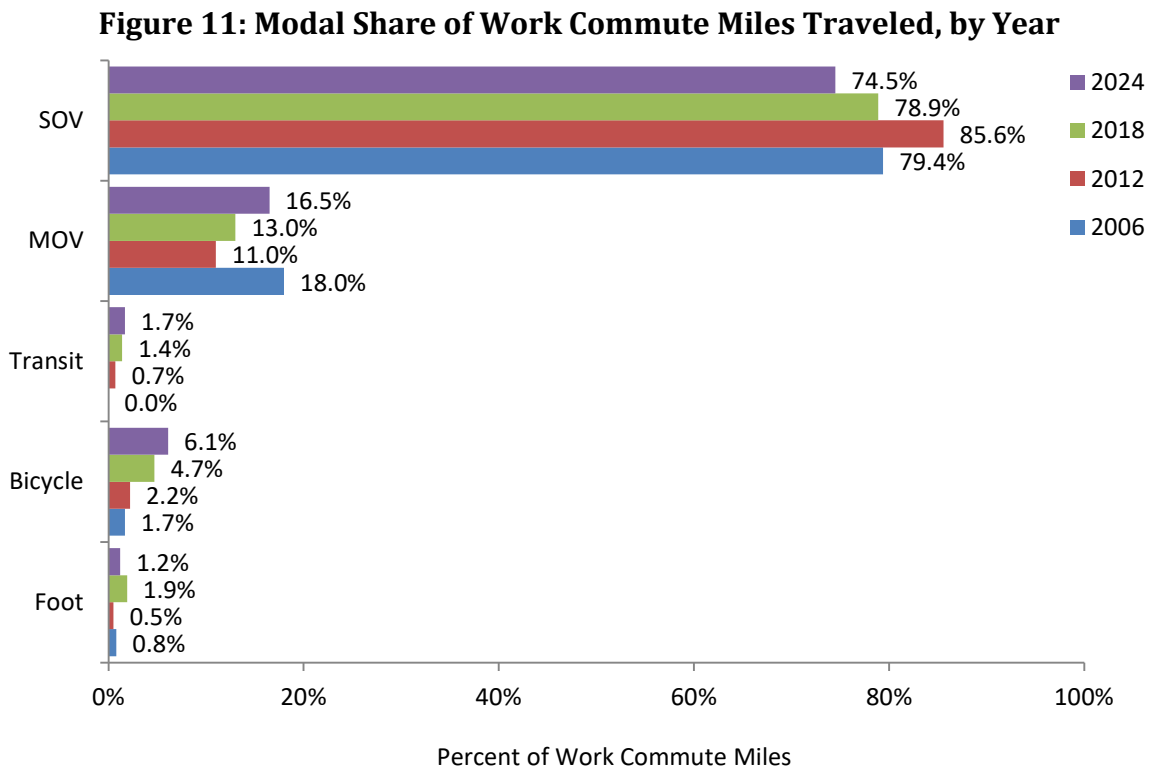


Modal Share of the Work Commute

Work commute mode is also consistent with 2018 results. There was a slight decrease in single occupancy vehicle trips (61.7% vs 66.6%) to make way for a very slight increase in MOV, Transit, Bike, and pedestrian trips (Figure 10).

Overall, personal vehicles are still the preferred commuting mode of transportation. Even within vehicles, most are not carpooling to work. Work commute trips are solo and in vehicles. In total 75.1% of work commute trips were via a personal vehicle and 91% of commuting miles utilized a personal vehicle (See Figure 10 and Figure 11).





12.7% of people indicated they don't have a typical work commute and it's more often that they work from home (Figure 12). In addition, of those who are employed, 10.5% said that they travel for work 2 days a week or less frequently. The new survey questions to capture the number of work days and frequency of work commutes will help to track work commuting and commuting travel behaviors going forward in a post-covid survey environment. While most respondents still work 5 days a week (63.3%), their travel to work is more flexible and only 44% of all employed respondents travel to work 5 days a week. Residents in Flagstaff are still traveling for work, but those commuting days are fewer and their work schedules are significantly more flexible in the post-pandemic work environment. While 1.2% of people reported going to work less than monthly, none reported only working from home in 2024. (Table 25 and Table 26).

Figure 12: Typical Commute Status, 2024

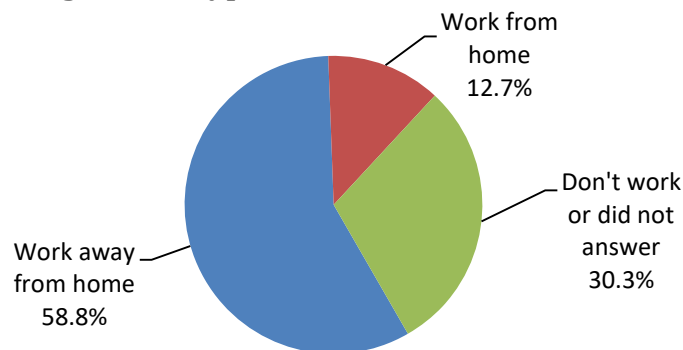


Table 25: Work Frequency, 2024

How many days do you typically work each week?	Percent of those Employed
6-7 days a week	5.9%
5 days a week	63.3%
4 days a week	11.6%
3 days a week	13.1%
2 days a week	4.7%
1 day a week	1.3%

Table 26: Frequency of Work Commute, 2024

How often do you typically travel to work?	Percent of those Employed
6-7 days a week	3.8%
5 days a week	44.0%
4 days a week	22.2%
3 days a week	19.7%
2 days a week	8.1%
1 day a week	0.3%
1-3 days a month	0.7%
Less than monthly	1.2%



Two-thirds of households reported they most often drive alone to work or school (66.7%) while one-quarter most often walk for the same purpose (26.6%) (Table 27).

Table 27: Modal Share of Employed Adults' Work Commute Among Households (2024)

For the people 16 or older living in your household, please check the box that indicates their most frequently used travel mode to work or school.	Percent of Households
Drive alone	66.7%
Walk	26.6%
Telecommute/work from home	18.7%
Bicycle	16.3%
Take Mountain Line bus	6.2%
Drive with adult from household	6.0%
Drive with children from household	4.3%
Drive with adult NOT from household	1.7%
Take school bus	0.9%
Drive with children NOT from household	0.1%



Unsurprisingly, foot traffic is most popular in Flagstaff Core compared to other areas (30.1% vs. 2.8%-13.2%). However, when looking at more rural areas of FMPO, single occupant vehicle trips garner the highest proportion (84.4%) (Figure 13).

According to Table 28, 2024 modal share of work commute trips in Flagstaff Core was very similar to 2018. However, there were less people reporting MOV trips in “Rest of FMPO” compared to 2018 (11.5%, down from 31.2%).

Figure 13: Modal Share of Work Commute Trips by Area of Residence, 2024

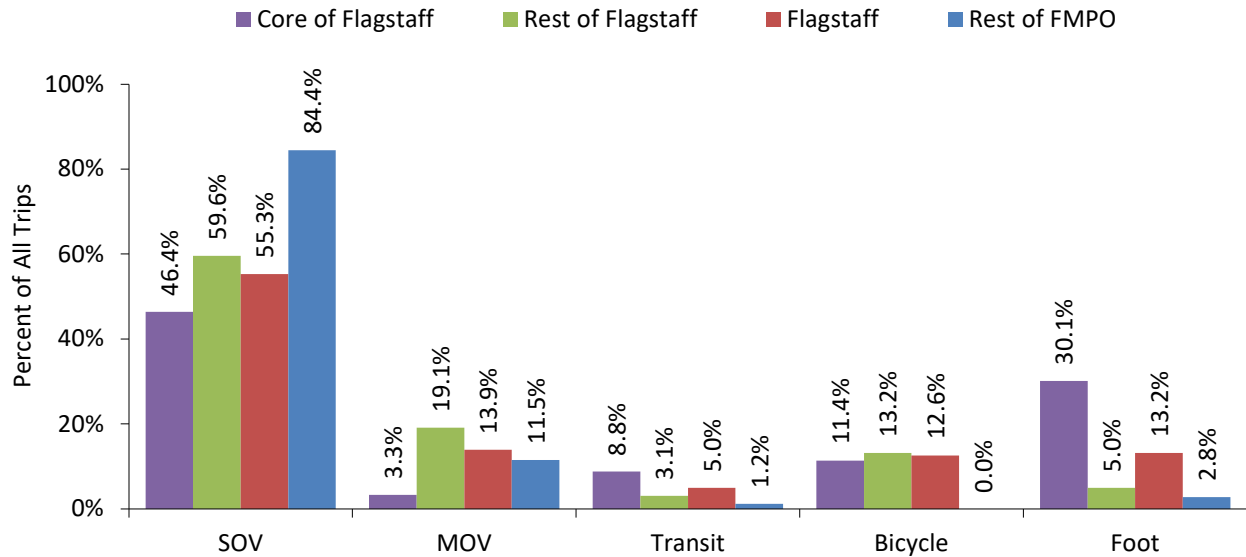


Table 28: Modal Share of Work Commute Trips by Area of Residence, by Year

Travel Mode	Year	SOV	MOV	Transit	Bicycle	Walk	TOTAL
Core of Flagstaff	2024	46.4%	3.3%	8.8%	11.4%	30.1%	100%
	2018	39.1%	1.8%	7.5%	22.0%	29.6%	100%
	2012	50.6%	9.9%	2.5%	2.5%	34.6%	100%
	2006	72.2%	7.0%	0.0%	1.7%	19.1%	100%
Rest of Flagstaff	2024	59.6%	19.1%	3.1%	13.2%	5.0%	100%
	2018	81.6%	7.2%	1.8%	5.5%	4.0%	100%
	2012	86.3%	9.5%	0.9%	1.4%	1.9%	100%
	2006	71.4%	17.6%	0.0%	4.9%	6.0%	100%
Flagstaff	2024	55.3%	13.9%	5.0%	12.6%	13.2%	100%
	2018	67.8%	5.4%	3.7%	10.8%	12.3%	100%
	2012	76.6%	9.6%	1.0%	1.7%	11.0%	100%
	2006	71.7%	13.5%	0.0%	3.7%	11.1%	100%
Rest of FMPO	2024	84.4%	11.5%	1.2%	<1%	2.8%	100%
	2018	63.3%	31.2%	1.1%	3.8%	0.6%	100%
	2012	71.1%	21.1%	2.2%	4.4%	1.1%	100%
	2006	82.2%	16.4%	0.0%	1.4%	0.0%	100%



The NHTS also analyzed trip-making behavior for the work commute. Overall, commute trips remained consistent in Flagstaff and nationally (Table 29).

As shown in Table 30, modal share for private vehicles among work commute miles is also similar in 2024 to national levels (91.0% Flagstaff vs. 97.4% national).

According to the U.S. Census in Table 31, driving alone for work commutes increased in Flagstaff while it slightly decreased nationally.

Table 29: Modal Share of Work Commute Trips, Flagstaff Compared to the U.S., by Year

Travel Mode	Flagstaff Area						NHTS*						
	2024		2018		2012		2006		2022	2017	2009	2001	1995
SOV	61.7%	75.1%	66.5%	75.7%	75.5%	87.8%	74.0%	87.8%	92.9%	92.8%	91.4%	92.4%	92.8%
MOV	13.4%		9.3%		12.3%		13.8%						
Transit	4.2%		3.0%		1.3%		0.1%		2.5%	5.5%	3.7%	3.7%	3.6%
Walk	10.9%		9.3%		8.6%		8.9%		2.5%	3.9%	3.0%	2.8%	2.3%
Other	9.8%		11.9%		2.4%		3.2%		2.1%	2.4%	1.9%	1.0%	1.3%
Total	100%		100%		100%		100%		100%	100%	100%	100%	100%

*National Household Transportation Survey.

Table 30: Modal Share of Work Commute Miles, Flagstaff Compared to the U.S., by Year

Travel Mode	Flagstaff Area						NHTS*						
	2024		2018		2012		2006		2022	2017	2009	2001	1995
SOV	74.5%	91.0%	78.9%	86.4%	85.6%	96.6%	79.4%	97.4%	92.6%	91.2%	94.5%	92.8%	93.1%
MOV	16.5%		7.5%		11.0%		18.0%						
Transit	1.7%		1.4%		0.7%		0.0%		1.8%	5.8%	2.6%	3.1%	3.5%
Other	7.3%		12.2%		2.7%		2.5%		5.6%	3.0%	2.9%	4.0%	3.5%
Total	100%		100%		100%		100%		100%	100%	100%	100%	100%

*National Household Transportation Survey.



Table 31: Census Journey to Work Data, Flagstaff Compared to the U.S., by Year

Travel Mode	Percent of Employed Residents Using Each Mode											
	Flagstaff				Flagstaff Area**				U.S.			
	2020	2011*	2000	1990	2020	2011*	2000	1990	2020	2010	2000	1990
Drive alone	67.4%	61.7%	69.4%	na	69.1%	67.6%	71.1%	71.0%	74.9%	76.4%	75.7%	73.2%
Carpooled	10.0%	14.7%	14.7%	na	10.7%	12.7%	14.7%	12.8%	8.9%	9.7%	12.2%	13.4%
Transit	1.8%	2.4%	0.6%	na	1.5%	1.4%	0.6%	0.5%	4.6%	5.0%	4.6%	5.1%
Bicycle	2.5%	5.3%	3.7%	na	2.0%	3.7%	2.8%	2.3%	0.5%	0.6%	0.4%	0.4%
Walk	10.2%	10.3%	7.2%	na	8.1%	7.6%	5.8%	9.2%	2.6%	2.8%	2.9%	3.9%
Other	0.9%	1.0%	0.9%	na	1.1%	1.0%	0.8%	1.1%	1.2%	1.2%	1.0%	1.1%
Worked at home	7.2%	4.6%	3.5%	na	7.5%	5.9%	4.2%	3.1%	7.3%	4.3%	3.3%	3.0%
TOTAL	100%	100%	100%	na	100%	100%	100%	100%	100%	100%	100%	100%

*2011=2007-2011 American Community Survey, 2000 and 1990 from Decennial Census SF3

**Coconino CCD (subdivision of Coconino County) for 1990 and 2000, Flagstaff CCD for 2011 and 2020



Modal Share of Children's School Commute

In 2024, a lower percentage of children commuted to school by school bus or carpool (with other children) compared to 2018 (19%, down from 33% school bus; 19%, down from 29% drive with other children). Conversely, more children are being driven alone, biking, or being homeschooled (previously not captured) than in the past. This change was affected by the transit change effective in January 24 which discontinued school bus services and Mountain Line passes were purchased by FUSD for students (Table 32).

As shown in Table 33, children ages 0-5 are most likely driven alone to school while children ages 6-10 are most likely to take the bus. Older children are more likely to be driven with other children than younger students.

Table 32: Modal Share of Respondents' Children's School Commute, by Year

For all children (under the age of 16) living in your household, please... check the box that indicates their most frequently used travel mode to school	Percent of Respondents' Children			
	2024 (N=89)	2018 (N=50)	2012 (N=70)	2006 (N=70)
Driven alone	35%	31%	27%	38%
Driven with other children	19%	29%	24%	37%
School bus	19%	33%	27%	14%
Homeschooled	9%	n/a	n/a	n/a
Walk	7%	9%	20%	10%
Bicycle	5%	0%	1%	1%
Mountain Line bus	2%	0%	1%	0%
Scooter, moped, skateboard	0.3%	n/a	n/a	n/a
N/A (Too young for school)	36%	n/a	n/a	n/a

**Percents may add to more than 100% as children in same household may use different modes.*



Table 33: Modal Share of Respondents' Children's School Commute by Age of Child, September & October 2024

'For all children (under the age of 16) living in your household, please indicate their age and then check the box that indicates their most frequently used travel mode to school.	Percent of Respondents' Children			
	Aged 0 to 5	Aged 6 to 10	Aged 11 to 15	All Children
Walk	4%	2%	14%	7%
Bicycle	5%	2%	4%	5%
School bus	18%	41%	19%	19%
Mountain Line bus	0%	2%	7%	2%
Homeschooled	13%	4%	3%	9%
Scooter, moped, skateboard	0%	0%	1%	0.3%
Driven alone	35%	34%	32%	35%
Driven with other children	11%	29%	40%	19%
N/A (Too young for school)	56.5%	55.5%	8.4%	36%



Alternative Work Commute Options Offered by Employers

In the initial sign-up survey, participants were asked several transportation-related questions about the Flagstaff area. One key focus was on programs provided by employers or available in the community that encourage alternative transportation. If participants had access to these options, they were asked whether they had used them in the past six months. For those who hadn't, a follow-up question asked whether they would consider using the options if available.

As shown in Figure 14, bike parking, flexible hours, safe and comfortable walking/biking routes, and telecommuting (working from home) were the most commonly available options, offered to more than half of employed respondents. These four options stand out for their broad availability and popularity. Among those with access, teleworking had the highest usage rate, with 95% of respondents utilizing this option, followed closely by flexible hours at 84%. In contrast, only 38% of respondents with bike parking available reported using it.

The transportation options with lower availability but the highest potential interest are “employer incentives or recognition for employees who carpool, bus, bike, or walk,” “information about carpooling, taking the bus, biking, and walking,” and “subsidized or free bus passes.” Of those who do not currently use these options, 68% would be interested in “employer incentives or recognition for employees who carpool, bus, bike, or walk”, 61% would utilize “information about carpooling, taking the bus, biking, and walking” and 53% would like to utilize employer provided “subsidized or free bus passes.” Childcare, while one of the least available options, shows employee interest—26% of respondents who currently lack access indicated they would use it if offered.

Figure 15 highlights the overall utilization of each transportation option among all employed respondents, regardless of whether the option was available to them. This broader analysis allows for a comparison of total uptake across the workforce. The results reveal that flexible hours (60%) and teleworking (52%) have the highest overall utilization, followed by safe and comfortable walking/biking routes, used by 38% of employed Flagstaff residents.



Figure 14: Employed Respondents Access to, Use of and Willingness to Use Employer-Provided Transportation Options, 2024

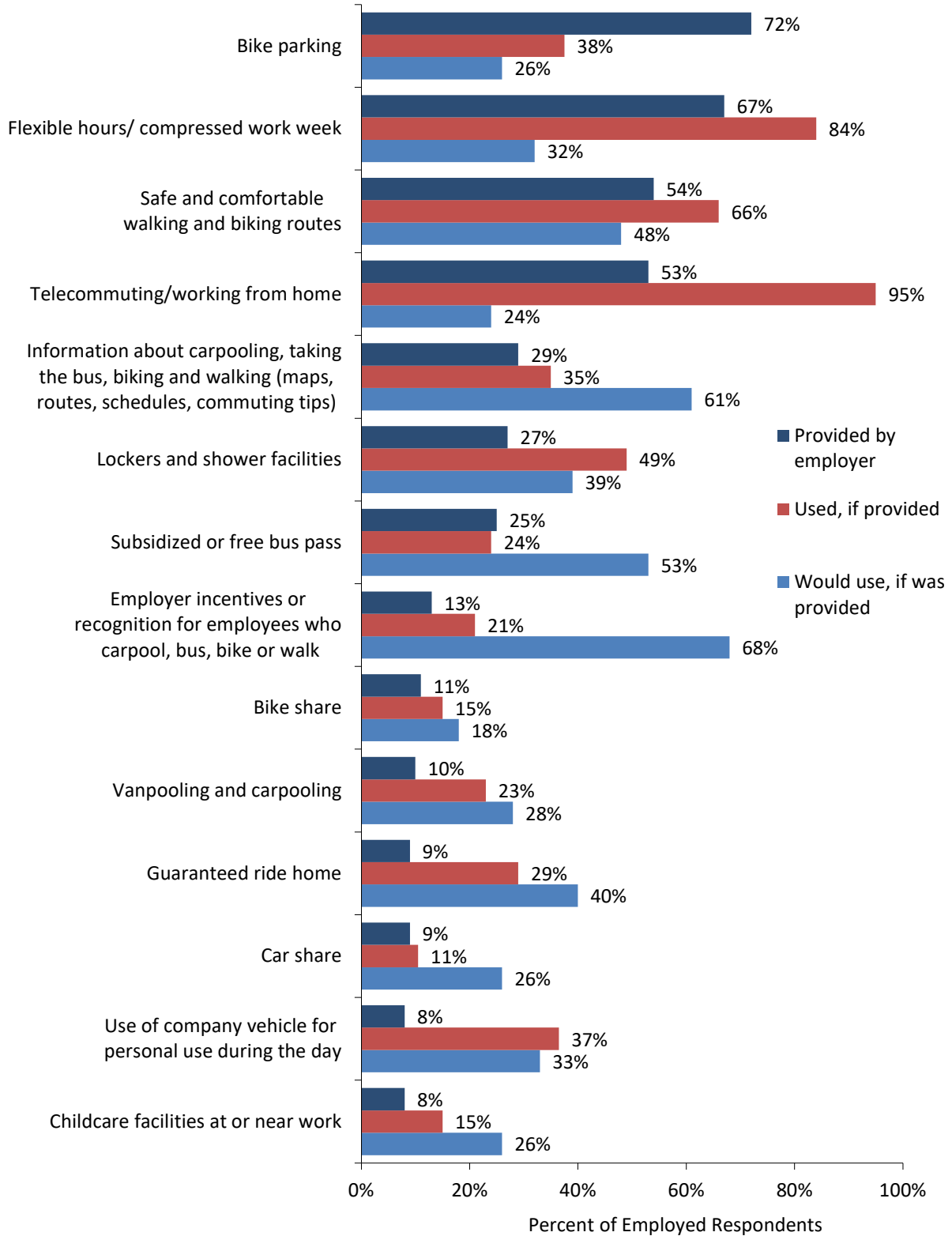
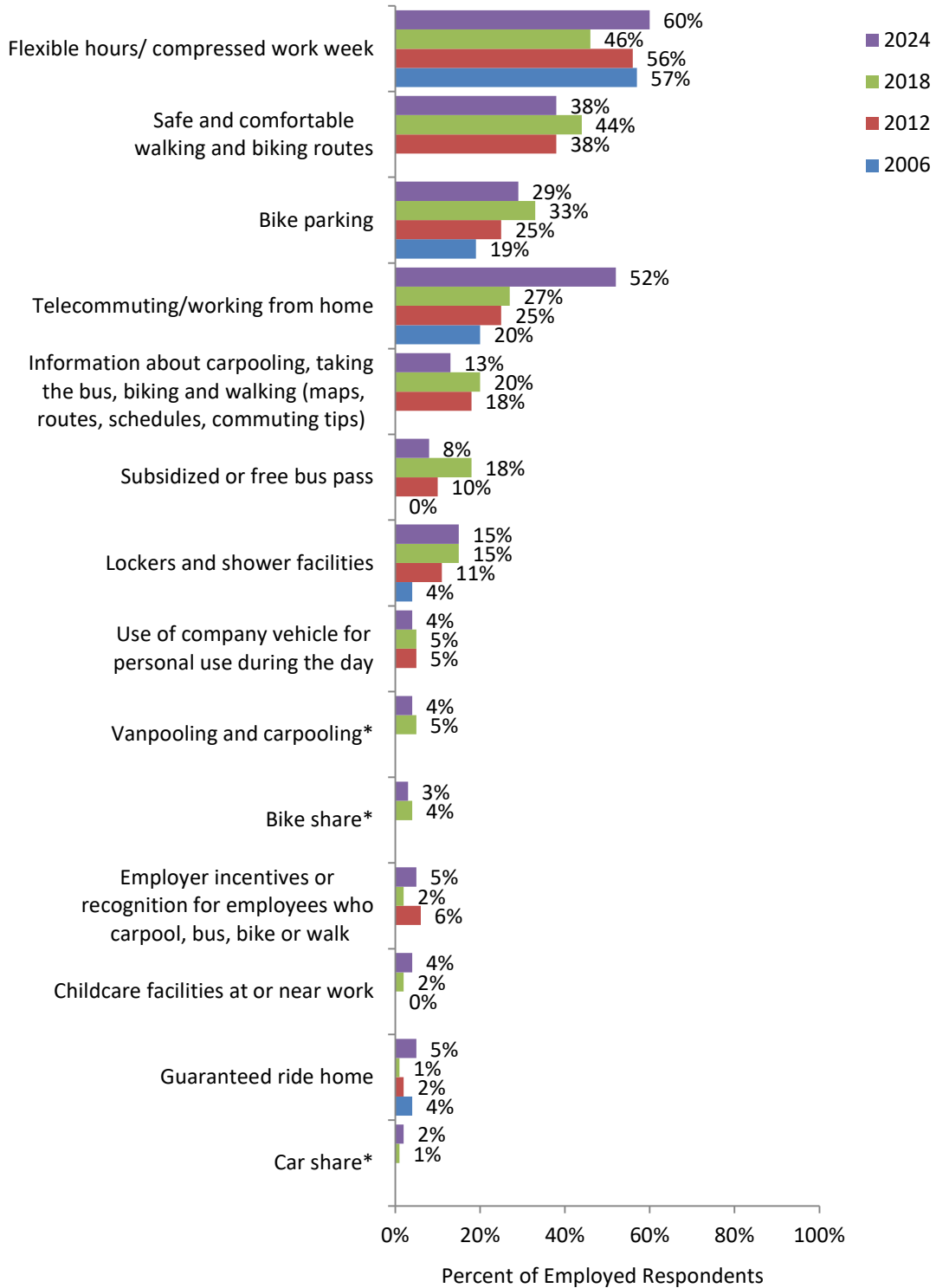


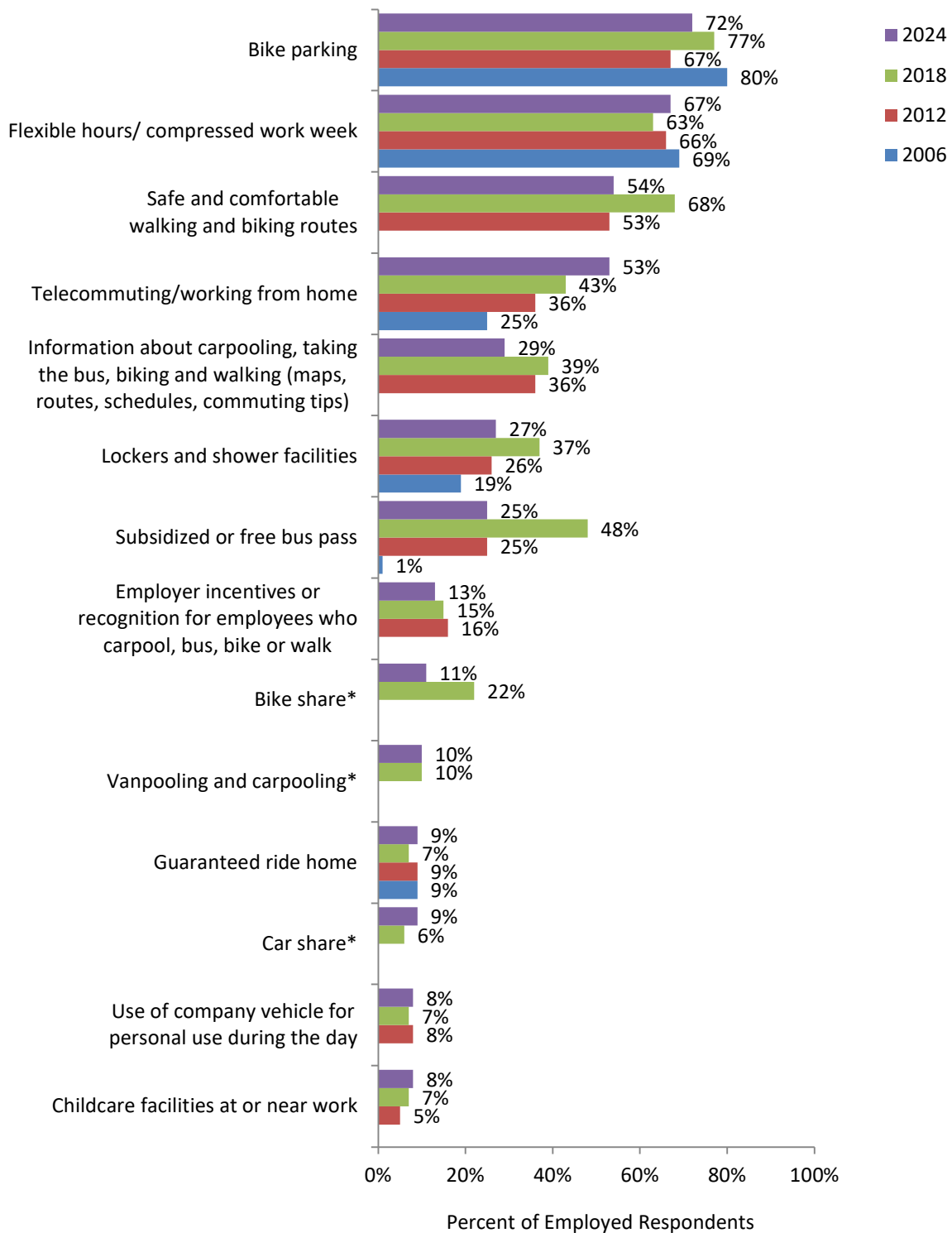
Figure 15: All Employed Respondents Use of Transportation Options, by Year



*In 2006 and 2012 items were combined "Ridesharing, car or vanpooling, car sharing" (5% in 2006 and 7% in 2012)



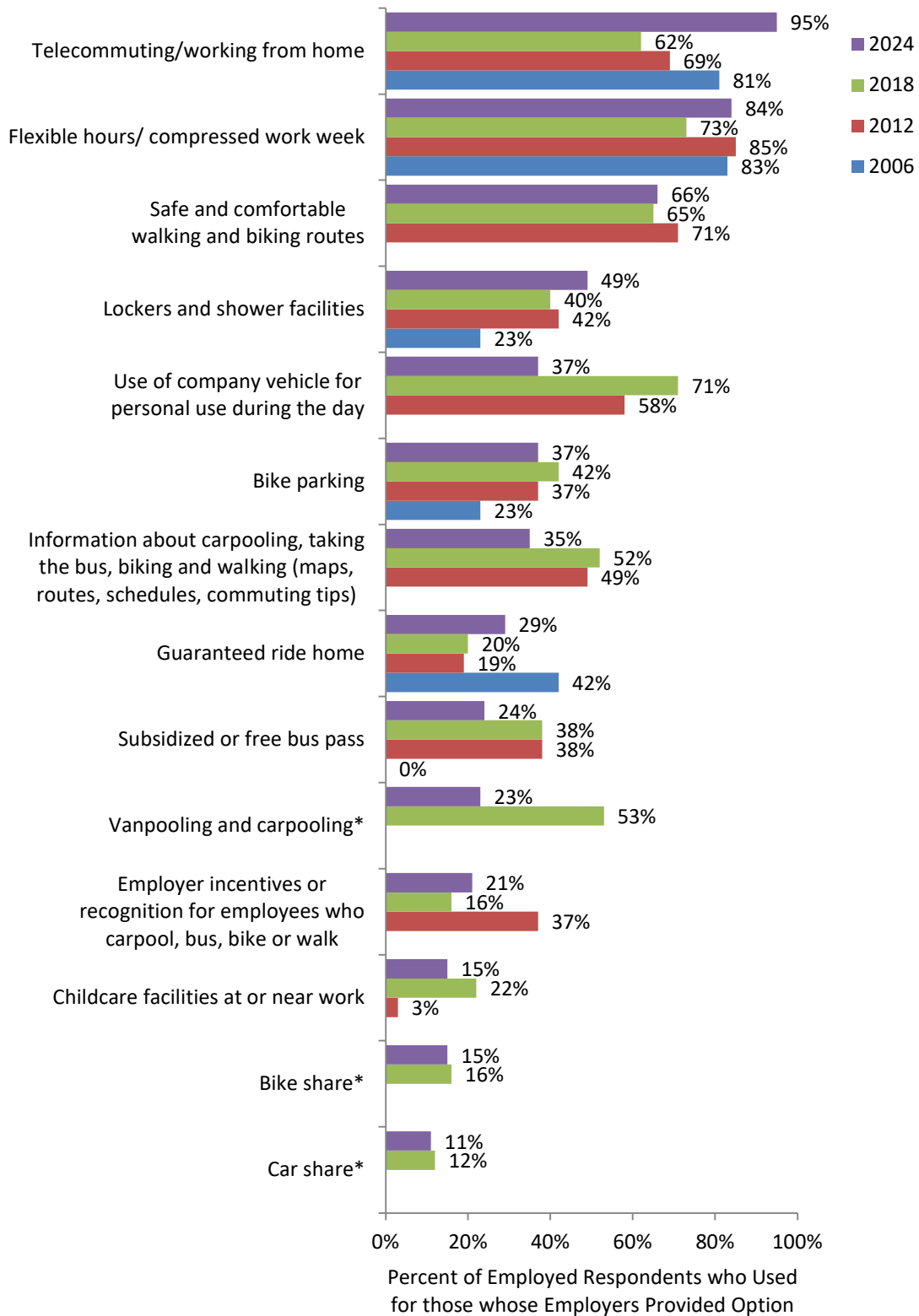
Figure 16: Employer-Provided Transportation Options for Employed Respondents, by Year



*In 2006 and 2012 items were combined "Ridesharing, car or vanpooling, car sharing" (12% in 2006 and 16% in 2012)



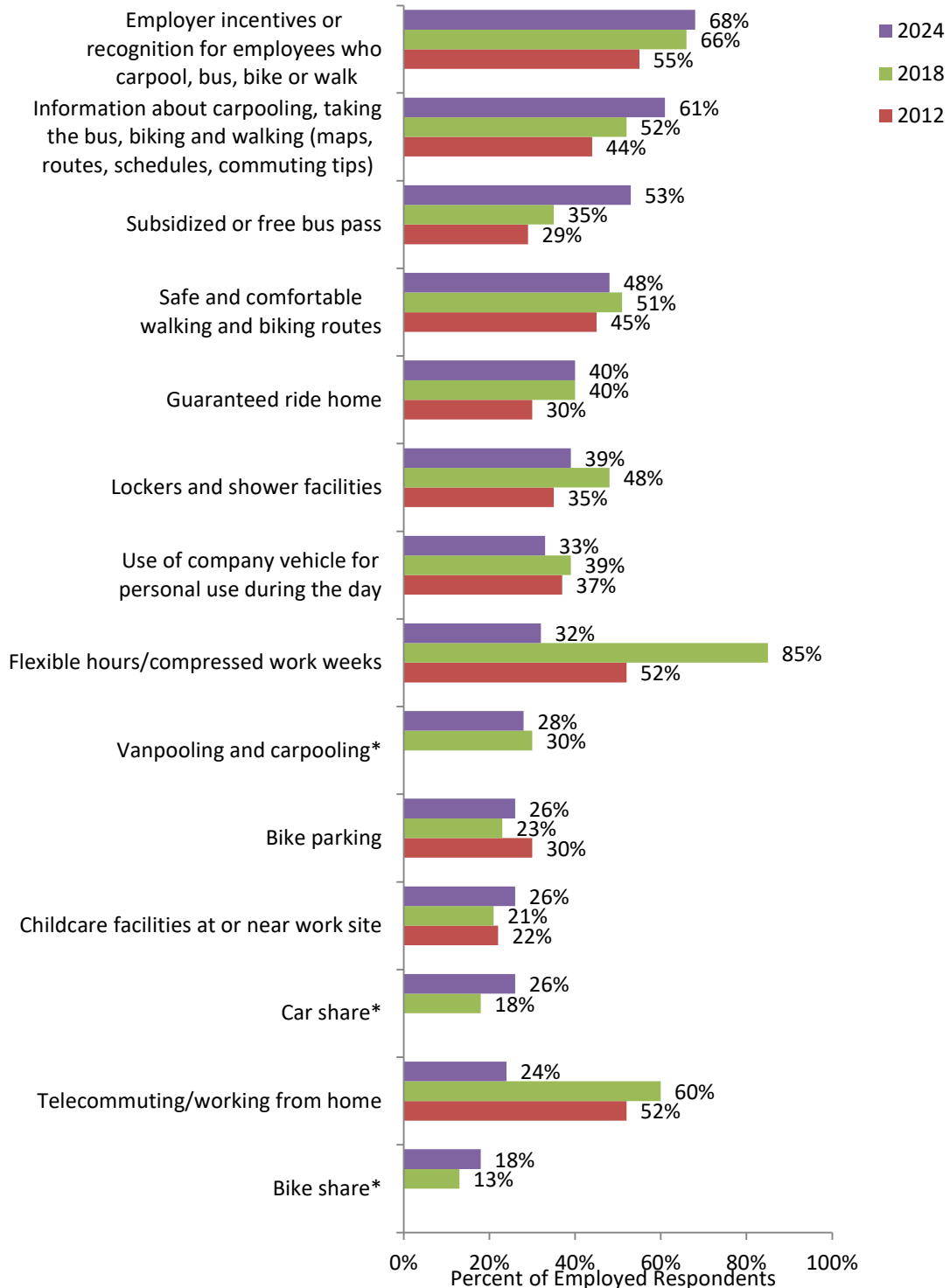
Figure 17: Employed Respondents Use of Employer-Provided Transportation Options, by Year



*In 2006 and 2012 items were combined "Ridesharing, car or vanpooling, car sharing" (42% in 2006 and 43% in 2012)



Figure 18: Employed Respondents Willingness to Use Transportation Options, *if they were Provided*, by Year



*In 2012 items were combined "Ridesharing, car or vanpooling, car sharing" (7% in 2012). This part of the question was not included in 2006.



Personal Motorized Vehicle Trip Characteristics

There are fewer overall single occupancy vehicle (SOV) trips per person per day (1.8 vs. 2.7 in 2018). However, among those who made at least one SOV trip, the average number of SOV trips is similar to 2018 (3.1 vs 3.8 trips per day).

Table 34: Summary Trip Characteristics of Single Occupancy Vehicle Trips, by Year

Trip Characteristics	2024	2018	2012	2006
Average number of SOV trips per day per person	1.8 trips	2.7 trips	2.6 trips	3.0 trips
Percent of people making at least one SOV trip	73.0 %	73.0 %	71.4%	75.5%
Average number of SOV trips per day per person who made at least one SOV trip	3.1 trips	3.8 trips	3.7 trips	4.0 trips
Average estimated trip length in miles	6.2 miles	4.8 miles	5.6 miles	6.2 miles
Average estimated trip time in minutes	20 minutes	14 minutes	14 minutes	16 minutes
Average miles per hour of SOV trips	17.2 mph	19.9 mph	21.1 mph	20.0 mph

Table 35: Summary Trip Characteristics of Multiple Occupancy Vehicle Trips, by Year

Trip Characteristics	2024	2018	2012	2006
Average number of MOV trips per day per person	1.0 trips	1.1 trips	1.4 trips	1.1 trips
Percent of people making at least one MOV trip	36.1 %	34.0 %	37.3%	32.5%
Average number of MOV trips per day per person who made at least one MOV trip	2.8 trips	3.2 trips	3.8 trips	3.3 trips
Average estimated trip length in miles	7.5 miles	5.4 miles	7.3 miles	7.2 miles
Average estimated trip time in minutes	19 minutes	14 minutes	18 minutes	20 minutes
Average miles per hour of MOV trips	20.2 mph	19.3 mph	20.2 mph	20.5 mph



Overall private vehicle trips have reduced since 2018 with just 73.5% of people making at least one private vehicle trip compared to 82.1% who reported the same in 2018. However, the average trip distance and time has increased since 2018.

When compared to the National Household Travel Survey, there are more personal vehicle trips in Flagstaff (3.8 average trips vs. 1.9 nationally) but shorter trip distances (6.7 miles/trip Flagstaff vs. 11.5 miles/trip nationally).

Table 36: Summary Trip Characteristics of Private Vehicle Trips, by Year

Trip Characteristics	2024	2018	2012	2006
Average number of private vehicle trips per day per person	2.8 trips	3.8 trips	4.0 trips	4.1 trips
Percent of people making at least one private vehicle trip	73.5%	82.1%	82.7%	82.3%
Average number of private vehicle trips per day per person who made at least one such trip	3.8 trips	5.5 trips	4.8 trips	5.0 trips
Average estimated trip length in miles	6.7 miles	5.0 miles	6.2 miles	6.4 miles
Average estimated trip time in minutes	20 minutes	14 minutes	15 minutes	17 minutes
Average miles per hour of private vehicle trips	18.3 mph	19.7 mph	20.8 mph	20.1 mph

Table 37: Travel Characteristics for Personal Vehicles, Flagstaff Compared to the U.S., by Year

Characteristic	Flagstaff Area				NHTS*				
	2024	2018	2012	2006	2022	2017	2009	2001	1995
Average number of personal vehicle trips (Vehicle trips per person per day)	3.8	3.8	4.0	4.1	1.9	2.7	3.0	3.4	3.6
Average trip distance, personal vehicle trips in miles	6.7	5.0	6.2	6.4	11.5	9.6	9.7	9.9	9.1
Personal vehicles per household	1.86	1.80	1.92	1.86	1.83	1.88	1.86	1.89	1.78

* National Household Transportation Study



Non-Personal Vehicle Trip Characteristics: Transit, Walking, and Biking

As we've seen across other metrics, there are more walking trips per person per day (one trip per person per day on average) and the percentage of people making at least one walking trip is about 32% (up from 22% in 2018). The percentage of people with bike trips is very similar to 2018 and the data on transit trips again is a pretty small sample size in 2024 as well as 2018 so these numbers are consistent across the two waves.

If the average number of trips per day per person has increased overall, but the average number of trips of those who made at least one trip has decreased from previous years, this means that there are more people who made trips, but a smaller number of trips. There may be more people who made one or two transit trips in 2024 which brings the overall average up and there are fewer people who made zero trips, but among those who made trips this average is still a bit lower than before since they were making one or two trips each and not three trips each.

Table 38: Summary Trip Characteristics of Transit Trips, by Year

Trip Characteristics	2024	2018	2012	2006
Average number of transit trips per day per person	0.29 trips	0.20 trips	0.17 trips	0.12 trips
Percent of people making at least one transit trip	13.3%	7.4%	7.2%	5.3%
Average number of transit trips per day per person who made at least one transit trip	2.2 trips	2.7 trips	2.4 trips	2.2 trips
Average estimated trip length in miles	1.9 miles	2.3 miles	2.3 miles	3.1 miles
Average estimated trip time in minutes	35 minutes	14 minutes	14 minutes	22 minutes
Average miles per hour of transit trips	5.7 mph	10.0 mph	9.3 mph	8.4 mph

Table 39: Summary Trip Characteristics of Walking Trips, by Year

Trip Characteristics	2024	2018	2012	2006
Average number of walking trips per day per person	1.0 trips	0.6 trips	0.6 trips	0.6 trips
Percent of people making at least one walking trip	31.7%	22.0%	20.4%	25.2%
Average number of walking trips per day per person who made at least one walking trip	3.2 trips	2.7 trips	3.1 trips	2.6 trips
Average estimated trip length in miles	0.8 miles	1.0 miles	0.5 miles	0.5 miles
Average estimated trip time in minutes	19 minutes	17minutes	12 minutes	13 minutes
Average miles per hour of walking trips	2.5 mph	4.2 mph	3.0 mph	2.4 mph

Table 40: Summary Trip Characteristics of Bicycle Trips, by Year

Trip Characteristics	2024	2018	2012	2006
Average number of bicycle trips per day per person	0.3 trips	0.3 trips	0.3 trips	0.4 trips



Trip Characteristics	2024	2018	2012	2006
Percent of people making at least one bicycle trip	10.0%	10.6%	8.4%	9.1%
Average number of bicycle trips per day per person who made at least one bicycle trip	3.0 trips	3.2 trips	3.7 trips	4.1 trips
Average estimated trip length in miles	2.6 miles	1.8 miles	2.2 miles	2.4 miles
Average estimated trip time in minutes	22minutes	15 minutes	21 minutes	14 minutes
Average miles per hour of bicycle trips	8.9 mph	7.6 mph	7.3 mph	9.6 mph



Walking and Biking for the Work Commute and for Recreation

In Table 41, 75% of residents said that they walk at least once a week for exercise. Conversely, almost 70% indicated they never walk when commuting.

Table 41: Walking for the Work Commute and for Recreation, 2024

In the last month, about how frequently have you walked:	Percent of Respondents		
	For Recreation	For Commuting	For Recreation OR Commuting
Five or more times a week	25%	15%	34%
2 to 4 times a week	39%	3%	41%
Once a week	11%	5%	13%
Twice a month or less	6%	8%	12%
Never	19%	69%	14%
Total	100%	100%	114%

In Table 42, residents indicated biking a similar amount to previous years. There were slight differences between 2024 and 2018 in biking for exercise but these levels are very similar to 2012 so it is likely not to be an overall change in behavior.

Table 42: Bicycle Use for the Work Commute and for Recreation, by Year

In the last month, about how frequently have you ridden a bicycle:	Percent of Respondents											
	For Recreation				For Commuting				For Recreation OR Commuting			
	2024	2018	2012	2006	2024	2018	2012	2006	2024	2018	2012	2006
Five or more times a week	6%	4%	4%	1%	12%	12%	9%	7%	12%	13%	9%	8%
2 to 4 times a week	17%	4%	19%	16%	9%	9%	7%	6%	19%	10%	22%	14%
Once a week	7%	10%	14%	10%	3%	3%	1%	2%	9%	6%	11%	8%
Twice a month or less	16%	21%	14%	17%	7%	7%	11%	5%	20%	16%	12%	19%
Never	54%	62%	49%	57%	69%	69%	73%	80%	52%	55%	47%	51%
Total	100%	100%	100%	100%	100%	100%	100%	100%	112%	100%	100%	100%



In Table 43, transit use is low, used by about a quarter of residents for both errands/personal business and commuting.

Table 43: Transit Use for the Work Commute and Other Trips, 2024

	For Errands or other trips	For Commuting	For Errands or other trips OR Commuting
Five or more times a week	5%	10%	8%
2 to 4 times a week	4%	5%	7%
Once a week	2%	3%	4%
Twice a month or less	10%	7%	13%
Never	79%	75%	73%
Total	100%	100%	106%

Table 44: Ride and Bike Share Use, 2024

	Uber or Lyft rideshare	SPIN bike share
Five or more times a week	0%	0%
2 to 4 times a week	0%	<1%
Once a week	1%	<1%
Twice a month or less	11%	2%
Never	88%	97%



Vehicle and Bicycle Ownership and Availability

In Table 45, there is about one bike per person and one vehicle per person per household. This is very similar to vehicle availability nationally and bike and vehicle availability from previous study iterations.

Table 45: Vehicle and Bicycle Ownership and Availability, by Year

Number of Occupants	Flagstaff Area				NHTS*					
	2024	2018	2012	2006	2022	2017	2009	2001	1995	1990
Average vehicle availability (per person in household 16 or older)	0.93	0.98	1.02	1.03	1.00	1.00	0.99	1.06	1.00	1.01
Average number of motorized vehicles per household (HH)	1.86	1.83	1.92	1.86	1.83	1.88	1.86	1.89	1.78	1.77
Percent of households with 1 or more vehicles per household member age 16 or older	69%	80%	82%	84%						
Average bicycle availability (per person in household of any age)	1.00	1.07	1.15	0.88						
Average number of bicycles per household	2.19	1.90	2.25	1.62						
Percent of households with 1 or more bikes per household member	51%	71%	63%	56%						

* National Household Transportation Study



Deliveries to the Home or Work

Since COVID-19, the way communities approach the delivery of goods and services has undergone a lasting transformation. The pandemic accelerated widespread adoption of home delivery, making it a convenient alternative to traditional trips for local food, groceries, and other goods. This shift, fueled by the proliferation of delivery apps, has fundamentally changed how people manage everyday errands.

In the 2024 Flagstaff Trip Diary study, the proportion of residents receiving deliveries on their travel day rose dramatically—from just 8% in 2018 to 25% in 2024. More importantly, respondents reported that many of these deliveries directly replaced trips they would have otherwise made. As a result, the percentage of Flagstaff residents receiving at least one delivery that substituted a trip surged from a consistent 3% in prior years (2006, 2012, and 2018) to 19% in 2024 (Figure 19). This dramatic increase signals a permanent evolution in trip decisions. The growing reliance on delivery services has reshaped daily life and while it has not drastically reduced the trip rates that we see in this 2024 study it has changed behavior and the types of delivery vehicles making local deliveries.

Table 46: Deliveries Received by Respondents, by Year

On the day you completed the travel diary, did you have any goods or services delivered to your work or home, such as a meal (pizza, etc.), groceries, haircuts or other goods and services? (Please include deliveries for items you ordered by phone, through a mail order catalogue, or via modem or Internet.)	Percent of Respondents			
	2024	2018	2012	2006
No, did not receive deliveries	75%	92%	91%	94%
Yes, received deliveries	25%	8%	9%	6%
Total	100%	100%	100%	100%

Table 47: For Respondents who had a Delivery, Percent that Replaced a Trip, by Year

Did the delivery substitute for a travel trip you might have made to seek the good or service?	Percent of Respondents			
	2024	2018	2012	2006
Yes	74%	39%	39%	44%
No	26%	61%	61%	56%
Total	100%	100%	100%	100%

Figure 19: Percent of Respondents for whom a Delivery that Replaced a Trip, by Year

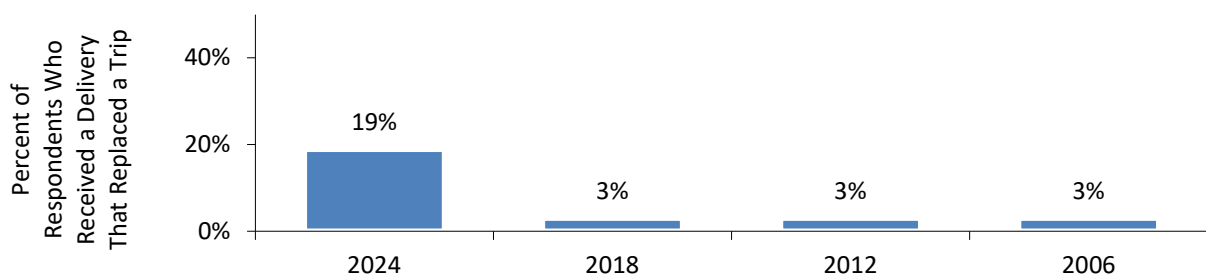


Table 48: Number of Trips Replaced by Receipt of Deliveries, for those with a Delivery

If deliveries substituted for a trip, how many trips were replaced?	2024
One	56%
Two or more	44%
Total	100%



Resident Perceptions of Travel in the Flagstaff Area

Flagstaff area residents’ perceptions of how well the transportation system in the Flagstaff region meets their needs is consistent with 2018. Overall, 84% of residents believe that the transportation system meets their needs “somewhat well” or “very well,” compared to a total of 85% of residents in 2018 who gave the same rating (Figure 20).

In Figure 21, Flagstaff residents reported similar perceptions on a variety of aspects of transportation relative to each other. The aspect of transportation in the region that remains rated the highest is the FUTS trails while traffic flow garners the lowest rating. The drop in Very Well from 32% to 25% might be reflected in the small but persistent drop in ratings for most aspects over the last three periods.

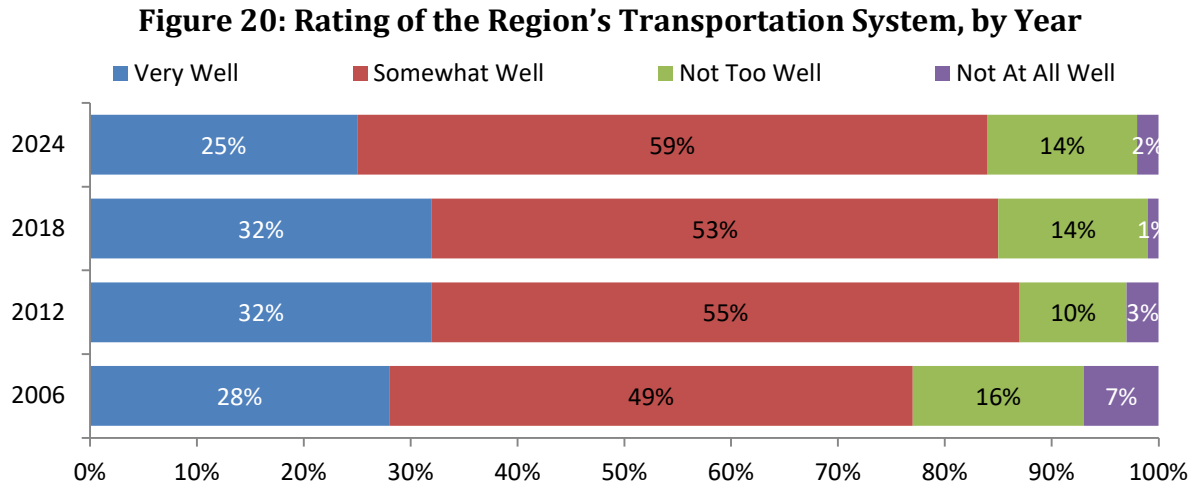
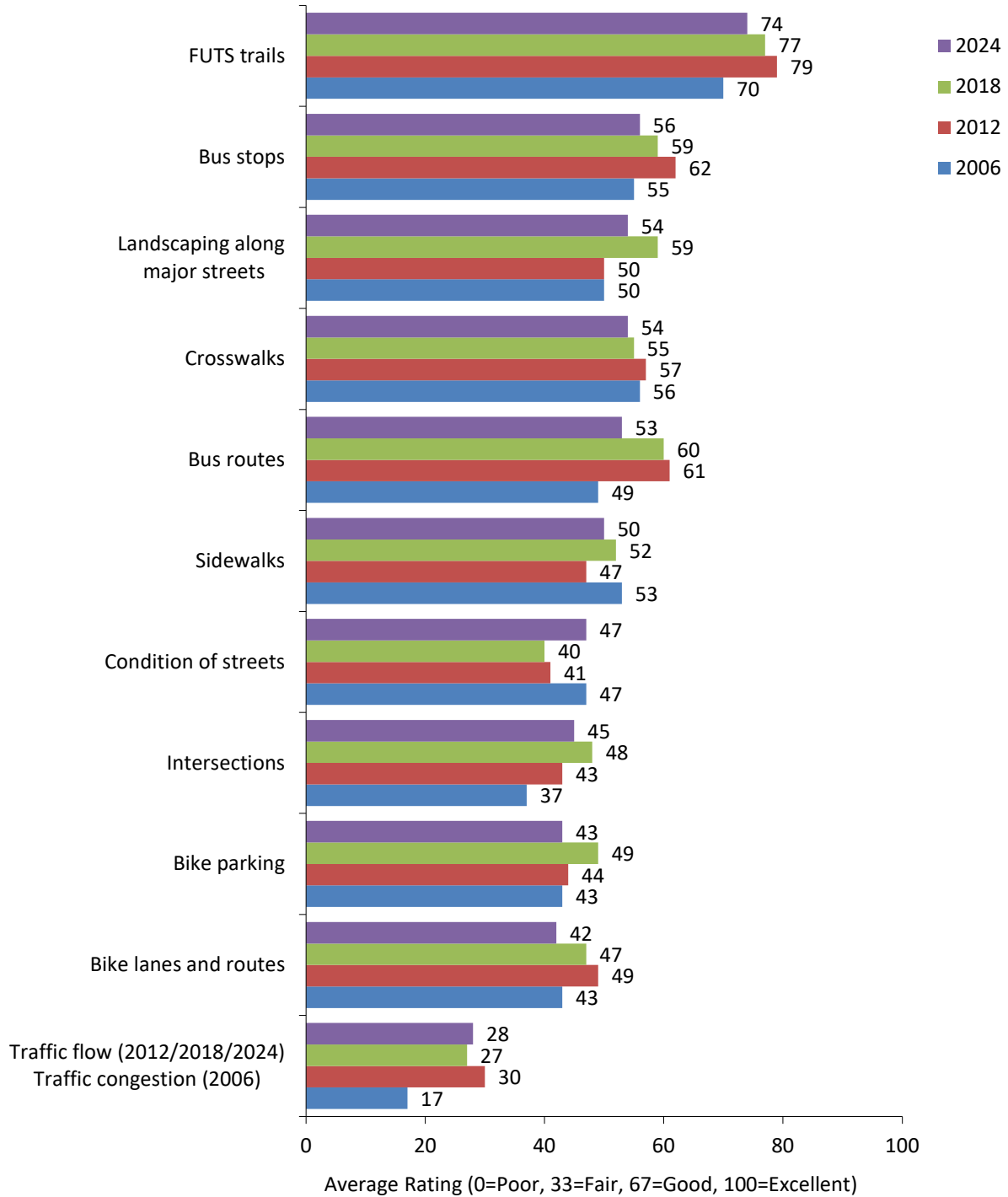


Figure 21: Transportation Ratings, by Year



Transportation Challenges

At the end of the sign-up survey, participants were asked what challenges their household faces regarding transportation. After reviewing their responses, the study team summarized residents' challenges into five main themes:

1. **Public Transportation Access and Limitations**
 - Challenges with availability, distance, or limited services in public transit and rideshare systems.
2. **Biking Infrastructure and Safety Concerns**
 - Issues with bike lane connectivity, safety, and accessibility. Includes dangers like blocked bike lanes and unsafe conditions.
3. **Driving-Related Challenges**
 - High costs such as the affordability of gas and costs of owning a car which means some residents need to share a car.
4. **Weather and Physical Accessibility**
 - Difficulties caused by snow, ice, and physical disabilities that limit mobility.
5. **Traffic and Time Management Issues**
 - Problems related to traffic congestion, traffic flow, delays, and time constraints for commuting.



APPENDIX A: 2024 HOUSEHOLD SURVEY RESULTS

Results from the household survey, including respondent demographic characteristics, are presented in this appendix. Data are weighted, as they are in the body of the report.

Table 49: Question 1

On the day you completed the travel diary, did you have any goods or services delivered to your work or home?	No	Yes	Total
On the day you completed the travel diary, did you have any goods or services delivered to your work or home, such as a meal (pizza, etc.), groceries, online orders or other goods and services?	75%	25%	100%

Table 50: Question 1a

From how many different sources did you receive deliveries?	Percent of respondents*
One	56%
Two or more	44%
Total	100%

*Responses only from those reporting receiving a delivery on diary day.

Table 51: Question 2

Did delivery or deliveries substitute for a travel trip you might have made to seek the good or service?	No	Yes	Total
Did the delivery or deliveries substitute for a travel trip you might have made to seek the good or service?	26%	74%	100%

Table 52: Question 3

Please rate each of the following aspects of transportation in Flagstaff.	Excellent	Good	Fair	Poor	Don't know
Sidewalks	12%	37%	39%	11%	1%
Intersections	4%	39%	45%	12%	0%
Bike lanes and routes	7%	28%	43%	17%	6%
Bus stops	13%	40%	22%	8%	17%
Condition of streets	8%	38%	40%	14%	0%
Traffic flow	3%	18%	37%	41%	1%
Landscaping along major streets	11%	46%	32%	7%	4%
Crosswalks	7%	54%	30%	8%	1%
Bike parking	6%	23%	29%	14%	28%
Flagstaff Urban Trails System	31%	41%	11%	1%	16%
Bus routes	7%	33%	22%	6%	32%



Table 53: Question 4

How well do you feel the transportation system meets your travel needs?	Very well	Somewhat well	Not too well	Not at all	Total
The transportation system in our region consists of roads, buses, sidewalks, Flagstaff Urban Trails System (FUTS) trails, and bike facilities. How well do you feel the transportation system meets your travel needs?	25%	59%	14%	2%	100%

Table 54: Question 5

Are you employed?	Percent of respondents
No	30%
Yes, part-time	12%
Yes, full-time	58%
Total	100%



Table 55: Employment Status by Area of Residence and Student Status, by Year

Are you employed?		No	Yes, part-time	Yes, full-time	TOTAL
Core of Flagstaff	2024	45.3%	17.0%	37.7%	100%
	2018	8.3%	16.2%	75.6%	100%
	2012	27.6%	39.1%	33.3%	100%
	2006	20.2%	32.1%	47.6%	100%
Rest of Flagstaff	2024	19.2%	13.3%	67.5%	100%
	2018	19.9%	15.7%	64.4%	100%
	2012	25.8%	21.9%	52.3%	100%
	2006	22.2%	24.1%	53.8%	100%
Flagstaff	2024	27.8%	14.5%	37.7%	100%
	2018	17.0%	15.8%	67.2%	100%
	2012	24.5%	30.2%	45.3%	100%
	2006	21.1%	28.5%	50.4%	100%
Rest of FMPO	2024	38.2%	3.5%	58.3%	100%
	2018	24.0%	15.8%	60.3%	100%
	2012	34.0%	15.1%	50.9%	100%
	2006	23.1%	16.9%	60.0%	100%
Entire FMPO Area	2024	30.3%	11.9%	57.8%	100%
	2018	18.6%	15.8%	65.5%	100%
	2012	25.9%	27.1%	47.0%	100%
	2006	21.5%	26.0%	52.4%	100%
Non-NAU/CCC Student	2024	25.6%	9.1%	65.3%	100%
	2018	21.9%	13.0%	65.1%	100%
	2012	27.1%	18.8%	54.1%	100%
	2006	23.3%	15.0%	61.7%	100%
NAU Student	2024	54.1%	26.8%	19.1%	100%
	2018	27.2%	32.0%	40.9%	100%
	2012	22.2%	53.1%	24.7%	100%
	2006	10.7%	75.0%	14.3%	100%
CCC Student	2024	100.0%	0%	0%	100%
	2018	0.0%	8.0%	92.0%	100%



Table 56: Question q7a

About how close is the nearest bus stop to your home?	Percent of respondents
Less than 1 block	28%
1-4 blocks (about 330 feet to a quarter-mile)	24%
4-8 blocks (quarter-mile to a half-mile)	15%
8-16 blocks (half-mile to a mile)	10%
More than 16 blocks (more than a mile)	23%
Total	100%

Table 57: Question q7b

About how close is the nearest bus stop to your primary work place?	Percent of respondents
Less than 1 block	32%
1-4 blocks (about 330 feet to a quarter-mile)	40%
4-8 blocks (quarter-mile to a half-mile)	13%
8-16 blocks (half-mile to a mile)	3%
More than 16 blocks (more than a mile)	12%
Total	100%

Table 58: Question q8a (Commute Status)

How long is your typical work commute? Summary of those who responded with a commuting distance, those who responded that they work from home, and those who do not work or did not answer.	Percent of respondents
Work away from home	58.8%
Work from home	12.7%
Don't work or didn't answer	30.3%

Table 59: Question q8b (Typical (Work) Commute Distance)

How long is your typical work commute?	Percent of Commuters
2 miles or less	23.0%
3-5 miles	42.1%
6-10 miles	16.9%
11 or more miles	18.0%

Table 60: Question q30 (Work Frequency)

How many days do you typically work each week?	Percent of those Employed
6-7 days a week	5.9%
5 days a week	63.3%
4 days a week	11.6%
3 days a week	13.1%
2 days a week	4.7%
1 day a week	1.3%



Table 61: Question q31 (Frequency of Work Commute)

How often do you typically travel to work?	Percent of those Employed
6-7 days a week	3.8%
5 days a week	44.0%
4 days a week	22.2%
3 days a week	19.7%
2 days a week	8.1%
1 day a week	0.3%
1-3 days a month	0.7%
Less than monthly	1.2%

Table 62: Question q35 (School Frequency)

How many days a week do you take classes?	Percent of Students
6-7 days a week	4.3%
5 days a week	60.2%
4 days a week	16.2%
3 days a week	5.7%
2 days a week	13.6%
1 day a week	0%

Table 63: Question q36 (Frequency of School Commute)

How many days a week do you attend classes in person?	Percent of Students
6-7 days a week	4.5%
5 days a week	57.6%
4 days a week	20.8%
3 days a week	3.8%
2 days a week	13.4%
1 day a week	0%
1-3 days a month	0%
Less than monthly	0%



Table 64: Distance from Home to Bus Stop, by Year

About how close is the nearest bus stop to your residence?	Percent of Respondents							
	2024		2018		2012		2006	
	Excluding "Don't know"	All	Excluding "Don't know"	All	Excluding "Don't know"	All	Excluding "Don't know"	All
less than 1 block	28%	25%	23%	20%	18%	17%	15%	13%
1-4 blocks (about 330 feet to a quarter-mile)	24%	22%	31%	28%	31%	30%	35%	30%
4-8 blocks (quarter-mile to a half-mile)	15%	14%	13%	12%	12%	12%	12%	10%
8-16 blocks (half-mile to a mile)	10%	9%	8%	7%	13%	13%	13%	11%
More than 16 blocks (more than a mile)	23%	21%	25%	22%	26%	25%	25%	21%
Don't Know	---	10%	---	12%	---	3%	---	15%
Total	100%	100%	100%	100%	100%	100%	100%	100%

Table 65: Distance from Work to Bus Stop, by Year

About how close is the nearest bus stop to your primary work place?	Percent of Employed Respondents							
	2024		2018		2012		2006	
	Excluding "Don't know"	All	Excluding "Don't know"	All	Excluding "Don't know"	All	Excluding "Don't know"	All
less than 1 block	32%	23%	50%	42%	42%	37%	49%	40%
1-4 blocks (about 330 feet to a quarter-mile)	40%	29%	30%	25%	39%	35%	28%	23%
4-8 blocks (quarter-mile to a half-mile)	13%	9%	10%	9%	4%	4%	9%	7%
8-16 blocks (half-mile to a mile)	3%	2%	3%	3%	6%	5%	5%	4%
More than 16 blocks (more than a mile)	12%	9%	6%	5%	9%	8%	10%	8%
Don't Know	---	9%	---	17%	---	12%	---	18%
Total	100%	100%	100%	100%	100%	100%	100%	100%



Table 66: Question 9a (made available to you)

For each of the following, please indicate which is made available to you, which you have used in the past 6 months and which you would use if made available. Which is made available to you?	Yes	No	Don't know	Total
Flexible hours/ compressed work week	67%	29%	4%	100%
Telecommuting/working from home	53%	46%	1%	100%
Vanpooling and carpooling	10%	84%	6%	100%
Bike parking	72%	22%	6%	100%
Car share	9%	78%	13%	100%
Lockers and shower facilities	27%	69%	4%	100%
Bike share	11%	80%	9%	100%
Guaranteed ride home	9%	82%	9%	100%
Subsidized or free bus pass	25%	67%	8%	100%
Use of company vehicle for personal use during the day	8%	89%	3%	100%
Childcare facilities at or near work	8%	76%	16%	100%
Safe and comfortable walking and biking routes	54%	42%	4%	100%
Employer incentives or recognition for employees who carpool, bus, bike or walk	13%	78%	9%	100%
Information about carpooling, taking the bus, biking and walking (maps, routes, schedules, commuting tips)	29%	64%	7%	100%



Table 67: Question 9b (used in the past 6 months)

For each of the following, please indicate which is made available to you, which you have used in the past 6 months and which you would use if made available. Which you have used in the past 6 months?	Yes	No	Total
Flexible hours/ compressed work week	84%	16%	100%
Telecommuting/working from home	95%	5%	100%
Vanpooling and carpooling	23%	77%	100%
Bike parking	37%	63%	100%
Car share	11%	89%	100%
Lockers and shower facilities	49%	51%	100%
Bike share	15%	85%	100%
Guaranteed ride home	29%	71%	100%
Subsidized or free bus pass	24%	76%	100%
Use of company vehicle for personal use during the day	37%	63%	100%
Childcare facilities at or near work	15%	85%	100%
Safe and comfortable walking and biking routes	66%	34%	100%
Employer incentives or recognition for employees who carpool, bus, bike or walk	21%	79%	100%
Information about carpooling, taking the bus, biking and walking (maps, routes, schedules, commuting tips)	35%	65%	100%

Table 68: Question 9c (would use if made available)

For each of the following, please indicate which is made available to you, which you have used in the past 6 months and which you would use if made available. Which you would use if made available?	Yes	No	Total
Flexible hours/ compressed work week	32%	68%	100%
Telecommuting/working from home	24%	76%	100%
Vanpooling and carpooling	28%	72%	100%
Bike parking	26%	74%	100%
Car share	26%	74%	100%
Lockers and shower facilities	39%	61%	100%
Bike share	18%	82%	100%
Guaranteed ride home	40%	60%	100%
Subsidized or free bus pass	53%	47%	100%
Use of company vehicle for personal use during the day	33%	77%	100%
Childcare facilities at or near work	26%	74%	100%
Safe and comfortable walking and biking routes	48%	52%	100%
Employer incentives or recognition for employees who carpool, bus, bike or walk	68%	32%	100%
Information about carpooling, taking the bus, biking and walking (maps, routes, schedules, commuting tips)	61%	39%	100%



Table 69: Question 10

In the last month, about how frequently have you ridden a bicycle for recreation or for commuting:	Biked for recreation	For commuting (work/school)	Bike for Work OR Recreation
Five or more times a week	6%	12%	12%
2 to 4 times a week	17%	9%	19%
Once a week	7%	3%	9%
Twice a month or less	16%	7%	20%
Never	54%	69%	52%

Table 70: Question 11

In the last month, about how frequently have you walked for recreation or for commuting:	Walked for recreation	For commuting (work/school)	Walk for Work OR Recreation
Five or more times a week	25%	15%	34%
2 to 4 times a week	39%	3%	41%
Once a week	11%	5%	13%
Twice a month or less	6%	8%	12%
Never	19%	69%	14%

Table 71: Question 12

In the last month, about how frequently have you taken the bus for:	Errands and other trips	For commuting (work/school)	Bus for Work OR Other trips
Five or more times a week	5%	10%	8%
2 to 4 times a week	4%	5%	7%
Once a week	2%	3%	4%
Twice a month or less	10%	7%	13%
Never	79%	75%	73%

Table 72: Question 13

In the last month, about how frequently have you used rideshare or bike share services:	Uber or Lyft rideshare	SPIN bike share
Five or more times a week	0%	0%
2 to 4 times a week	0%	<1%
Once a week	1%	<1%
Twice a month or less	11%	2%
Never	88%	97%



Table 73: Question 14a (Under 16)

Please record the number of household members in each of the following age categories.	Percent of respondents
None	80%
One	10%
Two	7%
Three or more	3%
Total	100%

Table 74: Question 14a (16 or older)

Please record the number of household members in each of the following age categories.	Percent of respondents
One	20%
Two	57%
Three	15%
Four or more	8%
Total	100%

Table 75: Question 15a (Age)

For all children (under the age of 16) living in your household, please indicate their age and then check the box that indicates their most frequently used travel mode to school	Percent of respondents with children
Aged 0 to 5	63.7%
Aged 6 to 10	32.4%
Aged 11 to 15	34.3%

Table 76: Question 15b (Mode)

For all children (under the age of 16) living in your household, please indicate their age and then check the box that indicates their most frequently used travel mode to school	Percent of respondents with children
Driven alone	34.7%
Driven with other children	18.9%
School bus	18.6%
Homeschooled	8.8%
Walk	6.7%
Bicycle	5.2%
Mountain Line bus	2.3%
Scooter, moped, skateboard	0.3%
N/A (Too young for school)	36%



Table 77: Question 16

For the people 16 or older living in your household, please check the box that indicates their most frequently used travel mode to work or school.	Percent of adults
Drive alone	66.7%
Walk	26.6%
Telecommute/work from home	18.7%
Bicycle	16.3%
Take Mountain Line bus	6.2%
Drive with adult from household	6.0%
Drive with children from household	4.3%
Drive with adult NOT from household	1.7%
Take school bus	0.9%
Drive with children NOT from household	0.1%

Table 78: Question 17

How many usable passenger cars, vans and light trucks does your household own or normally have use of?	Percent of respondents
One	25.9%
Two	44.3%
Three or more	20.9%
None	8.3%

Table 79: Question 17

How many usable passenger cars, vans and light trucks does your household own or normally have use of?	
Average vehicle availability (per person in household 16 or older)	0.93
Average number of motorized vehicles per household (HH)	1.86
Percent of households with 1 or more vehicles per household member age 16 or older	58%

Table 80: Question 18

How many usable bicycles does your household have?	Percent of respondents
None	31.0%
One	16.3%
Two	16.7%
Three or more	36.0%



Table 81: Question 18

How many usable bicycles does your household have?	
Average bicycle availability (per person in household of any age)	1.00
Average number of bicycles per household	2.19
Percent of households with 1 or more bikes per household member	51%

Table 82: Question 19

About how much was the TOTAL 2023 income before taxes for your household as a whole? In the total, please include income before taxes as well as money from all sources for all persons living in your household.	Percent of respondents
less than \$14,999	4.4%
\$15,000 to \$24,999	5.9%
\$25,000 to \$49,999	14.3%
\$50,000 to \$74,999	14.8%
\$75,000 to \$99,999	8.4%
\$100,000 to \$149,999	21.7%
\$150,000 or more	16.2%

Table 83: Question 20

Please check the one choice below which best describes the kind of residence in which you live.	Percent of respondents
A detached single family home	49.7%
A multi-family unit (e.g., apartments or condominiums)	20.0%
A townhouse	10.5%
Group quarters (dormitory, fraternity/sorority, nursing home)	6.7%
A duplex or triplex	4.8%
A mobile home	4.0%
Other:	4.3%

Table 84: Question 21

Do you rent or own your residence?	Percent of respondents
Own	53.5%
Rent	42.7%



Table 85: Question 22

How many years have you lived in or near Flagstaff?	Percent of respondents
One year or less	15.4%
2 to 5 years	23.6%
6 to 10 years	18.4%
11 to 15 years	8.8%
16 to 20 years	8.0%
21 to 25 years	7.1%
26 to 30 years	5.9%
More than 30 years	13.0%

Table 86: Question 23

Are you a student at the Northern Arizona University?	Percent of respondents
No	87.1%
Yes	12.9%

Table 87: Question 24

Are you a student at the Coconino Community College?	Percent of respondents
No	99.7%
Yes	0.3%

Table 88: Question 25

What is your gender?	Percent of respondents
Female	48.1%
Male	45.0%
Other	1.3%
Prefer not to answer	5.6%

Table 89: Question 26

What is your age?	Percent of respondents
18 to 34	47.7%
35 to 54	23.7%
55+	26.4%



Table 90: Question 27

Which category best describes your ethnicity?	Percent of respondents
Non-Hispanic	78.2%
Hispanic	14.3%
Prefer not to answer	7.4%

Table 91: Question 28

Which category best describes your race?	Percent of respondents
Caucasian/white	66.2%
Asian or Pacific Islander	8.7%
African American/black	8.5%
Native American	7.9%
Other	5.8%
Prefer not to answer	5.6%

Table 92: Question 29

How much education have you completed?	Percent of respondents
Graduate/professional degree	40.4%
Bachelor's degree	32.3%
Some college or associate's degree	18.3%
High school	8.7%
0 to 11 years of school	0.4%



APPENDIX B: 2024 TRAVEL DIARY ADDITIONAL RESULTS

Additional results from the travel day diary, including trip start time and NAU travel, are presented in this appendix. Data are weighted, as they are in the body of the report.

Trip start and end times were recorded by respondents as they kept track of their travel throughout the day. These figures show when travel activity took place in 2024 showing the start times for each trip. The largest percentage of trips started in the afternoon around 2pm. Almost all trips took place between 6am and 8pm. Travel time in 2024 is unique in that the morning peak is lower but fairly constant between 6 a.m. and 2 p.m.

Figure 22: Trip Start Time, 2024

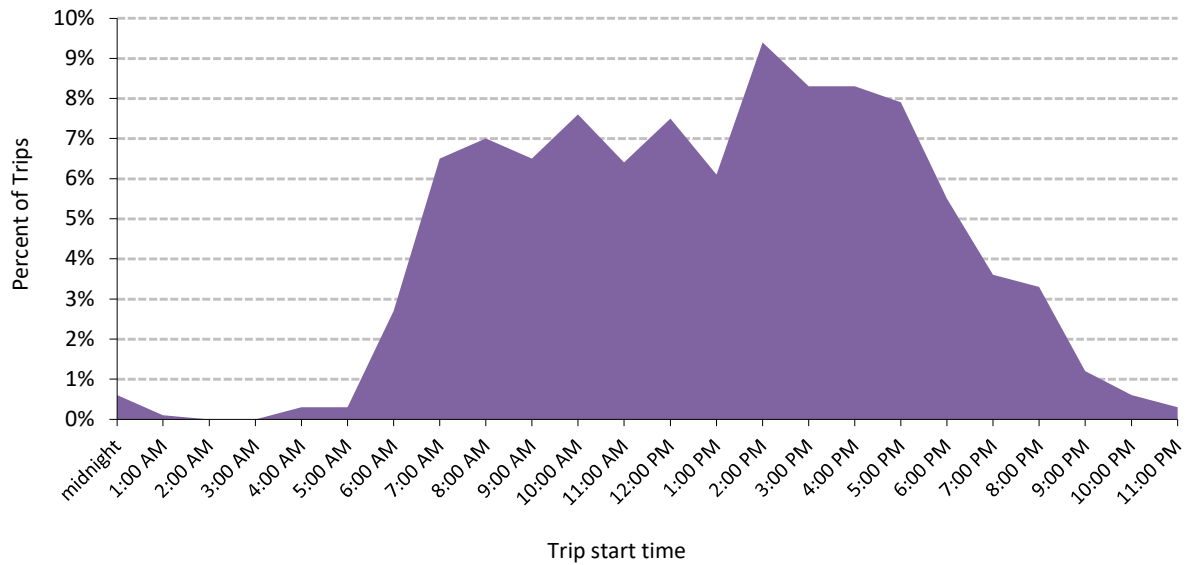


Figure 23: Trip Start Time, 2018

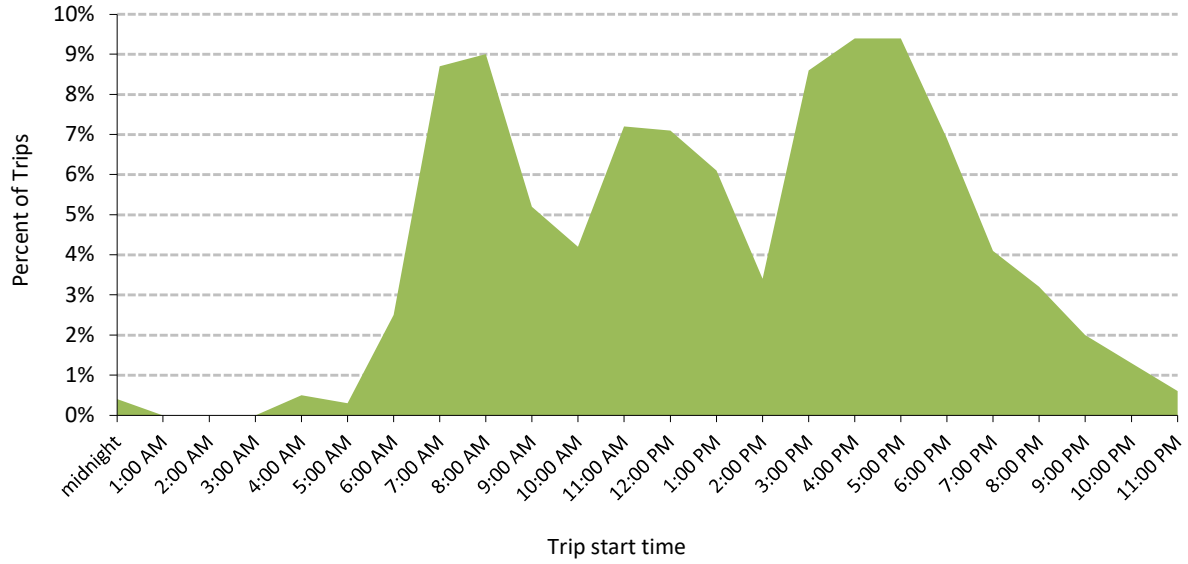


Figure 24: Trip Start Time, 2012

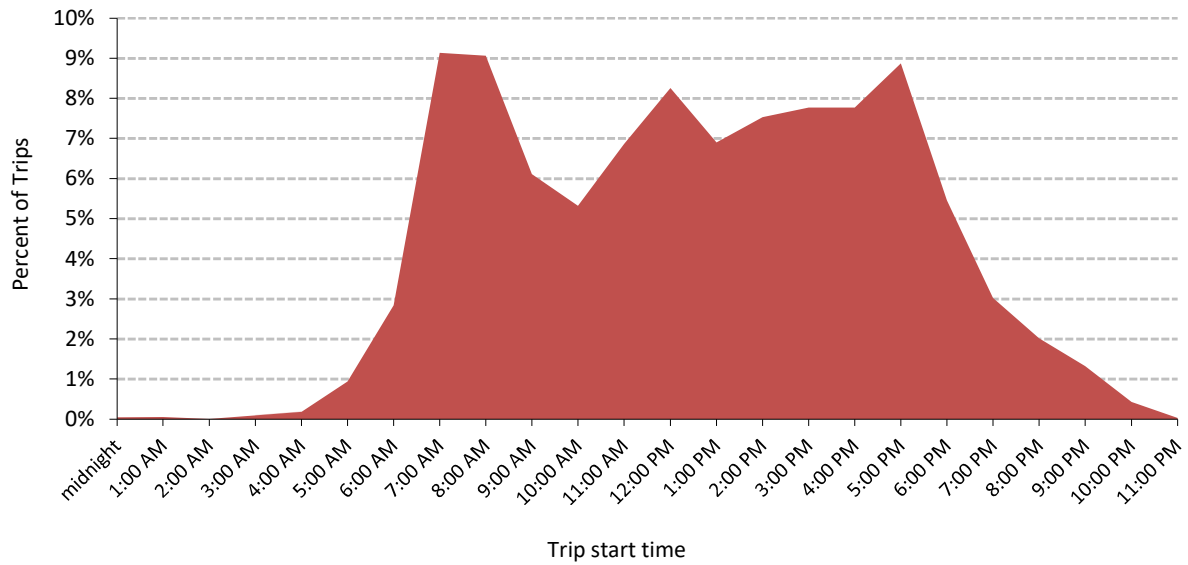
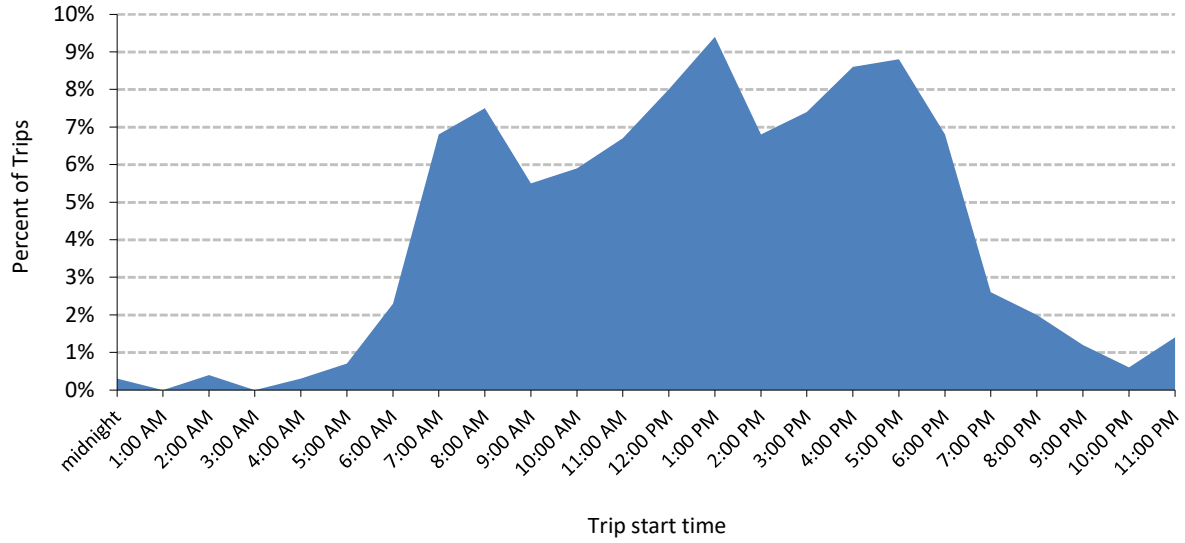


Figure 25: Trip Start Time, 2006



Modal Share of Northern Arizona University Students' Travel

The number of NAU students in the sample is low, just 30 NAU students participated, making up 196 trips. This is a very small sample and many students reported walk trips and on-campus “school bus” trips that are in the transit metrics. While there appears to be differences this year in Figure 26, there is insufficient sample size to draw conclusions about concrete changes in travel behavior. Walk trips were likely under-reported in previous years.

Figure 26: Modal Share of All Trips Made by NAU Students, by Year

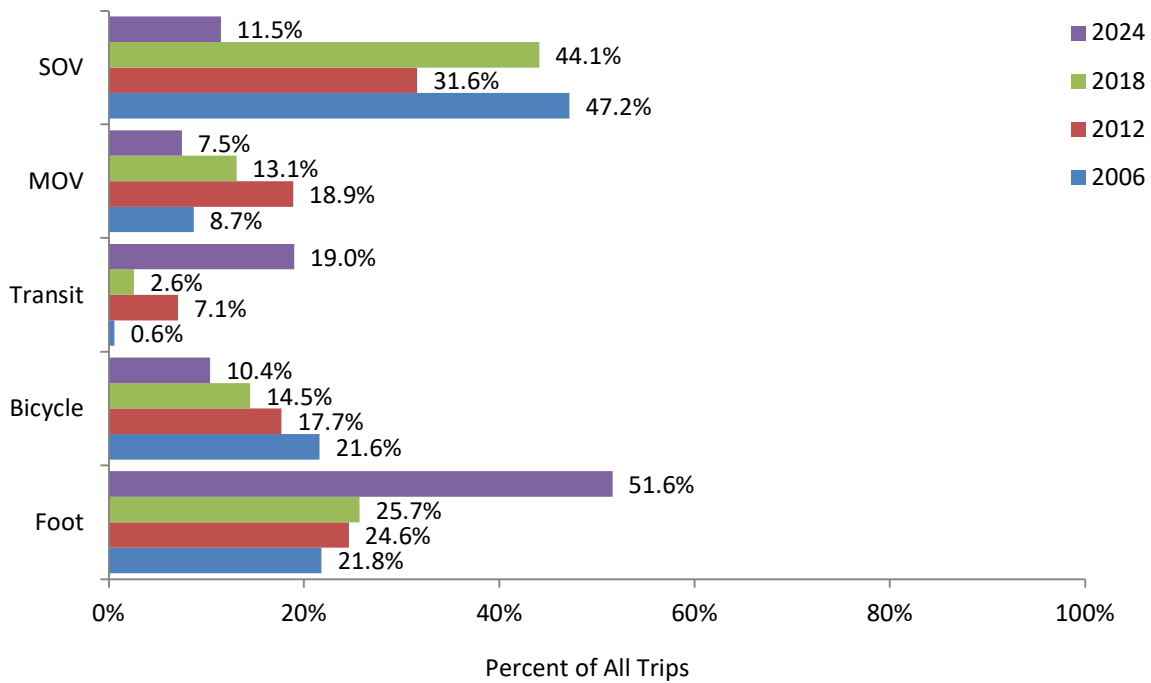
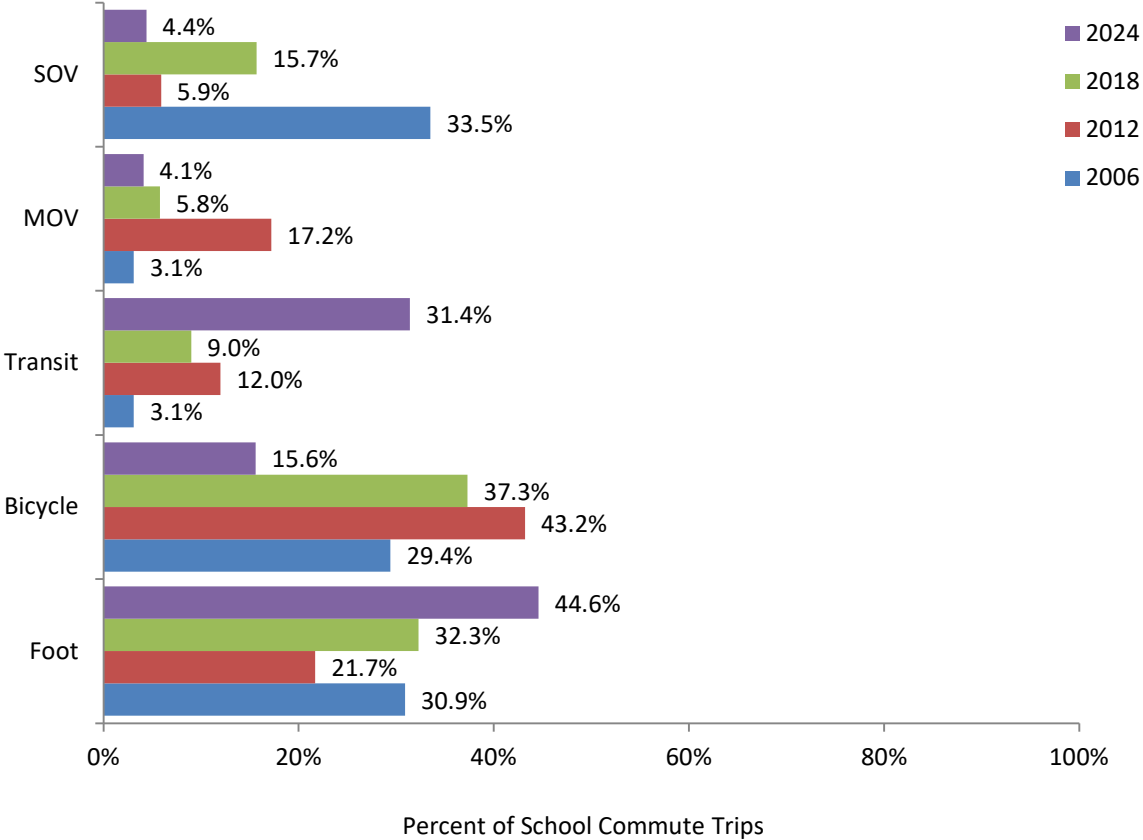


Figure 27: Modal Share of NAU Students' School Commute, by Year



APPENDIX C: 2024 SELECTED STUDY RESULTS COMPARED BY RESPONDENT CHARACTERISTICS

Statistical Comparisons between Subgroups

In this Appendix, the study team analyzed results across various subgroups, including gender, age, NAU students, employment status, ownership versus renting, housing type, income levels, and the presence of children in the household. Subgroup differences were tested for statistical significance at the 95% confidence level. Instances of insufficient sample size are noted as "I/S" where applicable. In the following tables, comparison groups are labeled with an "A," "B," or "C." When a statistically significant difference is found between groups, the corresponding letter next to a value indicates which group(s) it is significantly greater than.



Table 93: Modal Split of All Trips by Respondent Characteristics

	Respondent's Gender		Respondent's Age			Student at NAU?		Are you employed?		
	Female (n=1194)	Male (n=765)	18 to 34 (n=431)	35 to 54 (n=815)	55+ (n=813)	Yes (n=183)	No (n=1876)	No (n=647)	Yes, part-time (n=212)	Yes, full-time (n=1200)
	A	B	A	B	C	A	B	A	B	C
SOV	40.4%	43.6%	30.9%	49.3%A	56.7%AB	11.7%	50.3%	25.8%	39.5%	49.8%
MOV	24.1%	21.4%	20.6%	28.6%AC	19.7%	7.7%	26.9%	15.6%	22.7%	25.9%
Transit	3.2%	9.0%A	11.4%BC	2.0%	0.6%	19.3%	2.7%	12.6%	10.3%	2.7%
Bicycle	6.6%	7.3%	8.8%C	5.9%	3.4%	10.6%	5.7%	6.1%	4.1%	7.8%
Foot	25.7%B	18.6%	28.3%BC	14.2%	19.6%B	50.7%	14.4%	39.9%	23.4%	13.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 94: Modal Split of All Trips by Respondent Characteristics

	Tenure		Household Type		Annual Household Income		Children under 16 in household	
	Own (n=1578)	Rent (n=453)	Detached units (n=1523)	Attached units (n=536)	Under \$50,000 (n=276)	\$50,000+ (n=1562)	No children (n=1461)	Have children (n=598)
	A	B	A	B	A	B	A	B
SOV	51.1%B	32.8%	46.3%B	35.3%	40.7%	46.7%	44.1%	33.1%
MOV	26.9%B	17.0%	29.2%B	14.0%	26.2%	25.7%	16.6%	40.3%
Transit	1.0%	12.1%A	2.0%	12.2%A	17.3%B	2.5%	7.6%	3.4%
Bicycle	6.8%	6.5%	5.7%	8.2%	1.6%	8.9%A	7.5%	4.8%
Foot	14.1%	31.5%A	16.8%	30.3%A	14.1%	16.3%	24.2%	18.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



Table 95: Modal Split of Work Commute Trips by Respondent Characteristics

	Respondent's Gender		Respondent's Age			Student at NAU?		Are you employed?		
	Female (n=139)	Male (n=101)	18 to 34 (n=65)	35 to 54 (n=131)	55+ (n=60)	Yes (n=13)	No (n=243)	No (N/A)	Yes, part-time (n=33)	Yes, full-time (n=220)
	A	B	A	B	C	A	B	A	B	C
SOV	61.2%	61.8%	63.2%	55.7%	71.2%	I/S	66.2%	N/A	42.3%	64.8%
MOV	12.4%	15.5%	9.0%	19.4%	15.8%	I/S	14.7%	N/A	2.6%	14.8%
Transit	7.6%B	1.1%	6.1%	2.9%	0%	I/S	2.3%	N/A	12.0%	3.0%
Bicycle	10.4%	9.6%	10.9%	8.9%	7.8%	I/S	8.7%	N/A	10.1%	9.7%
Foot	8.4%	12.0%	10.7%	13.2%	5.2%	I/S	8.1%	N/A	32.8%	7.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

I/S – Insufficient sample because there are less than 30 cases.

Table 96: Modal Split of Work Commute Trips by Respondent Characteristics

	Tenure		Household Type		Annual Household Income		Children under 16 in household	
	Own (n=205)	Rent (n=49)	Detached units (n=197)	Attached units (n=59)	Under \$50,000 (n=33)	\$50,000+ (n=210)	No children (n=162)	Have children (n=94)
	A	B	A	B	A	B	A	B
SOV	62.3%	63.5%	61.5%	61.6%	81.9%B	57.1%	71.4%	41.0%
MOV	18.7%B	5.8%	15.2%	10.5%	5.4%	17.5%A	6.3%	28.9%
Transit	1.4%	9.7%	2.3%	7.9%	5.2%	3.7%	6.1%	0%
Bicycle	9.4%	11.7%	9.4%	10.6%	4.2%	12.4%	11.7%	5.9%
Foot	8.2%	9.3%	11.7%	9.3%	3.3%	9.3%	4.5%	24.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



Table 97: Quality of Transportation by Respondent Characteristics

	Respondent's Gender		Respondent's Age			Student at NAU?		Are you employed?		
	Female (n=247)	Male (n=164)	18 to 34 (n=87)	35 to 54 (n=157)	55+ (n=190)	Yes (n=30)	No (n=404)	No (n=142)	Yes, part- time (n=45)	Yes, full- time (n=247)
	A	B	A	B	C	A	B	A	B	C
Sidewalks	49	53	54C	48	44	58	49	52	64	46
Intersections	45	45	46	44	43	51	43	48	51	41
Bike lanes and routes	40	43	45	39	37	53	39	46	48	38
Bus stops	56	56	61C	52	50	70B	53	62	71	50
Condition of streets	45	49	49	48	43	49	47	45	61	45
Traffic flow	30	27	32C	27C	19	33	27	24	37	28
Landscaping along major streets	57	52	58C	53	47	61	53	52	60	54
Crosswalks	50	57	55	51	53	59	53	59	63	49
Bike parking	38	47	46C	43	31	51	40	44	51	40
Flagstaff Urban Trails System	76	73	72	80C	71	67	75	69	72	76
Bus routes	54	52	56	51	48	64	51	54	70	50



Table 98: Quality of Transportation by Respondent Characteristics

	Tenure		Household Type		Annual Household Income		Children under 16 in household	
	Own (n=333)	Rent (n=94)	Detached units (n=321)	Attached units (n=113)	Under \$50,000 (n=65)	\$50,000+ (n=323)	No children (n=329)	Have children (n=105)
	A	B	A	B	A	B	A	B
Sidewalks	42	60A	45	57A	52	45	50	50
Intersections	41	48	43	47	45	44	45	44
Bike lanes and routes	36	47A	39	45	52B	35	40	50A
Bus stops	49	64A	54	58	61B	48	56	58
Condition of streets	44	50	43	52A	44	45	47	47
Traffic flow	22	33A	27	28	26	28	28	25
Landscaping along major streets	49	60A	51	58	59	51	53	58
Crosswalks	50	59	52	57	59	50	54	51
Bike parking	35	49A	36	51A	49	37	41	47
Flagstaff Urban Trails System	71	78	72	76	75	73	72	79
Bus routes	49	56	52	55	55	48	52	57



APPENDIX D: 2024 UNWEIGHTED MODAL SHARE COMPARISONS BETWEEN SAMPLE GROUPS

This Appendix shows unweighted modal share data by probability and non-probability sample sources. Table 99 shows the overall similarities and consistencies of foot/pedestrian trips as a share of all trips between sample groups. The number of NAU students who participated in the survey and provided a travel diary from the NAU non-probability sample source is under 30 and would normally not be reported alone, but is shown since they contributed to the overall unweighted modal share of walk trips at 20.1%.

Table 99. Unweighted Modal Share by Sample Group, 2024

Modal Share of Trips	Total (unweighted)	Sampling Sources		
		Probability ABS (unweighted)	Non-Probability NAU Student Sample (unweighted)	Non-Probability WGR and Community Forum Convenience Samples (unweighted)
SOV	45.2%	44.4%	0%	49.2%
MOV	24.1%	26.0%	0%	24.5%
Transit	3.1%	3.0%	26.8%	1.4%
Bicycle	7.6%	9.0%	6.1%	6.6%
Foot	20.1%	17.9%	67.1%	18.3%



APPENDIX E: 2024 SURVEY MATERIALS

This Appendix contains the instruments and materials used for the data collection of the 2024 Trip Diary Study. Included are:

Study Logo and Website

Study FAQ

Study Mailed Invitations & Envelope

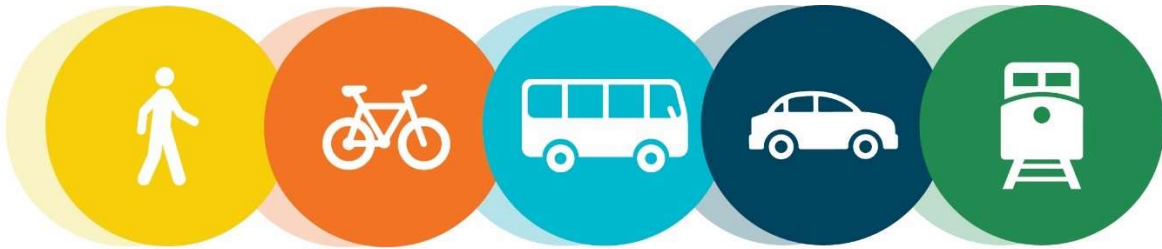
Initial Email with Travel Day Instructions

Sign-up Survey

Travel Diary

SURVEY WEBSITE AND BRANDING

Study Logo



METROPLAN
GREATER  FLAGSTAFF

Website Home Page



Home FAQ

METRO PLAN

FLAGSTAFF TRAVEL SURVEY

What is the Flagstaff Travel Study?

MetroPlan, your Flagstaff Metropolitan Planning Organization, along with the City of Flagstaff and Coconino County, is conducting a comprehensive travel study to better understand the daily travel habits of Flagstaff area residents. Randomly selected Flagstaff area residents will be sent mailed survey invitations to participate in this study via a unique survey access codes in September or early October 2024.

The study will ask residents where they travel, how far and how often they go, and what modes of transportation they use—whether driving, using transit, biking, or walking. This study will help us understand how local roads, highways, public transportation, bike lanes, and sidewalks are used today, and how they can be improved to make travel better in the future.

With advancements in technology and shifts in travel patterns, collecting current travel data is essential for making well-informed decisions and prioritizing future improvements. This survey will deliver valuable, practical insights into residents' travel experiences, preferences, and needs, helping to align transportation planning with the evolving demands of the community.

Thank you for your participation in helping shape the future of transportation in Flagstaff!

MetroPlan is partnering with WestGroup Research to conduct this study. For more information about this study, please read our [frequently asked questions](#) or [contact us](#).

Enter the Online Survey

Need help? Email us at support@westgroupresearch.com or call us toll-free at 928-220-4090



Website FAQs

Who is sponsoring this study?

This study is sponsored by MetroPlan, your Flagstaff Metropolitan Planning Organization. The MetroPlan website is www.MetroPlanflg.org. Please contact David Wessel, MetroPlan Planning Manager at David.wessel@metroplanflg.org for more information.

How will my contact information be used?

Your contact information will only be used for research purposes. It will be used to send you information and reminders to complete the travel diary for this study and to provide your electronic gift card.

How was I selected to participate?

Households were selected at random from local Flagstaff zip codes of 86001, 86004, 86005, and 86011.

Why should I participate?

Your participation ensures that information about travel in Flagstaff represent households like yours. Your input has a big impact because only a limited number of households are invited to participate in the study.

Which household member participates?

To ensure a diverse and representative sample of the entire Flagstaff area, please have the person in your household who most recently had a birthday and is 16 years or older sign up and complete the travel survey.

How much time does it take to participate in the study?

Signing up for the study online takes about 10 minutes. Once signed up, we will email you instructions for logging your travel and completing the study. Participants will record their travel for one travel day and spend about 5 to 10 minutes completing a travel diary survey after their assigned travel day.

What if I do not travel on my assigned travel day?

It is important to capture information from a diverse and representative group of Flagstaff residents. This includes a wide variety of travel behaviors. Don't forget even shorter recreational trips like walking a dog.

If you did not travel on your travel day, it is still important for us to know that and for you to answer the brief travel diary survey after your assigned travel day.



SURVEY COMMUNICATION

Invitation Letter



1

ADOT
CITY OF FLAGSTAFF
COCONINO COUNTY
MOUNTAIN LINE
NAU

Dear Flagstaff Area Resident,

Help us improve transportation in your community. The City of Flagstaff and Coconino County, in partnership with MetroPlan, your Flagstaff Metropolitan Planning Organization, are dedicated to enhancing your travel experience through transportation improvements informed by comprehensive studies and strategic planning. We invite you to participate in the MetroPlan Travel survey and help us improve travel and transportation in Flagstaff!

By taking part, you'll help us understand how local roads, highways, public transportation, bike lanes, and sidewalks are used today, and how they can be improved to make travel better in the future. We want to hear from you even if you don't travel often. Your input will have a big impact because only a limited number of households have been invited to participate in the survey. To ensure a diverse and representative sample of the entire Flagstaff area, please have the person in your household who most recently had a birthday and is 16 years or older complete the travel survey.

EXECUTIVE BOARD

Chair
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Supervisor District 2
Coconino County

Vice-Chair
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Tony Williams
Mountain Line Board of
Directors

Jamescita Peshlakai
Arizona State
Transportation Board

To sign up for the survey please go to www.FlagstaffTripStudy.com

Enter your **Survey Access Code: 210001**

If you sign up and complete the travel survey, you will receive a \$10 gift card.

MetroPlan is partnering with WestGroup Research to conduct this study. If you have any questions about the project or your participation, please contact WestGroup Research at (928) 220-4090. Thank you in advance for participating and your help in improving transportation in Flagstaff!

Sincerely,

Jeronimo Vasquez
Chair MetroPlan Executive Board, Coconino County Supervisor

Miranda Sweet
Vice-Chair MetroPlan Executive Board, City of Flagstaff Councilmember

3773 N Kaspar Dr. Flagstaff, Arizona 86004
www.metroplanflg.org ~ Phone:(928)266-1293

"Visioning a transportation system that prioritizes the wellbeing of people and the environment."



Initial Email



Email Sender: support@westgroupresearch.com

Date: The day after signup

Subject: Thank you for signing up! Travel Day Instructions Enclosed

Thank you for signing up and participating in this travel study. Please track any trips you make that are longer than a city block even if your trip is for recreation such as taking your dog for a walk or going for a run.

Please track these trips for one day on <TRAVEL DIARY DAY>. We'll refer to this day as your "travel day."

Please note the travel day questions for your travel diary and keep them with you to jot down your trips so you can respond within the online travel diary survey the day after.

Please note:

Report every trip you make that is longer than a city block:

- Whether you are a passenger, driver or pedestrian.
- Whether it is recreational (going for a run) or has a specific destination.

Start the diary after 12:01 am (right after midnight) and continue until 12:00 midnight on your assigned travel day.

Do not change your travel behavior because you are keeping this diary.

What is a trip?

A trip is a one-way journey. Round-trips count as two trips. If you drive to the grocery store and back, record two trips on your diary.

Report every trip you make that is longer than a city block:

- Whether you are a passenger, driver or pedestrian.
- Whether it is recreational (going for a run) or has a specific destination.
- If you make multiple stops. For example, if you walk your child to school, then catch the bus outside the school to the grocery store, and then return home, stopping to pick up a prescription at the drugstore, this would count as four trips with the following destinations: the school, the grocery store, the drugstore and then home.
- If you pick up or drop off a passenger. This should be treated as two trips. The first trip's purpose is "drive passenger."
- If you are on a recreational loop (walk, run or bike ride) then your destination is the half-way point.

Travel Day Questions:

- Destination (address, building or nearest cross streets)
- Trip Start time: Hour: Minutes
- Trip Arrival Time: Hour: Minutes



- Trip Purpose (going home, shopping, school, commuting, eating a meal, drive a passenger, healthcare, recreation, or to change travel modes)
- Travel Method (car, Mountain Line Bus, school bus, motorcycle, taxi, bike, scooter, walk/run, other)
- Estimated Trip Miles (Please round mileage to the closest tenth of a mile).
- Number of people you are traveling with (including yourself)

Quick Tips

For your destination, you may use an address or nearest intersection.

Keep good estimates of the start and end times.

To record mileage, use a vehicle odometer if possible at the beginning and end of each trip to the nearest tenth of a mile.

Special Circumstances

What if you don't make any trips during the day assigned to you? Please still fill out the travel diary survey because this is important information for our research as well.

If you made more than 30 trips in one day, please take the survey to capture the first 30 trips and then give us a call and we can make note of additional trips. You can contact the study team at support@westgroupresearch.com or at (928) 220-4090.

Completing the Travel Day Study Online:

The day after your travel day, please go to the link below to complete the survey and tell us about your travel. If you complete the travel survey, you will receive an online \$10 gift card.

<INSERT LINK>

Thank you for your participation in helping shape the future of transportation in Flagstaff!



Sign-up Survey

INTRO: This survey should take less than ten minutes. Your answers are important to helping MetroPlan and its regional partners better understand travel in Flagstaff. Your answers to this survey will be strictly confidential and only used in group form. Thank you for your time and help!

Q3: Please rate each of the following aspects of transportation in Flagstaff.

- A. Sidewalks
- B. Intersections
- C. Bike lanes and routes
- D. Bus stops
- E. Condition of streets
- F. Traffic flow
- G. Landscaping along major streets
- H. Crosswalks
- I. Bike parking
- J. Flagstaff Urban Trails System
- K. Bus routes
 - 1. Excellent
 - 2. Good
 - 3. Fair
 - 4. Poor
 - 5. Don't know

Q4: The transportation system in our region consists of roads, buses, sidewalks, Flagstaff Urban Trails System (FUTS) trails, and bike facilities. How well do you feel the transportation system meets your travel needs?

- 1. Very well
- 2. Somewhat well
- 3. Not too well
- 4. Not at all

NEW_Q5. As of today, what is your employment status? Please select all that apply.

- 1. Employed full-time (35 or more hours per week, paid)
- 2. Employed part-time (less than 35 hours per week, paid)
- 3. Employed, but not currently working (e.g., on leave, furloughed 100%)
- 4. Self-employed
- 5. Unpaid volunteer or intern
- 6. Unemployed and looking for work
- 7. Full-time student
- 8. Part-time student
- 9. Not employed and not looking for work (e.g., retired, stay-at-home parent)

[ASK IF NEW_Q5=7,8]

Q8_SCHOOL: How long is your typical school commute?

A: Miles [NUMBER OF MILES]

B: My classes are fully remote (CHECK BOX WITH A CODE OF 1)

[ASK IF NEW_Q5=7,8]



Q35. How many days a week do you take classes?

1. 6-7 days a week
2. 5 days a week
3. 4 days a week
4. 3 days a week
5. 2 days a week
6. 1 day a week

[ASK IF NEW_Q5=7,8 AND NOT Q8_School=FULLY REMOTE]

Q36. How many days a week do you attend classes in person?

1. 6-7 days a week
2. 5 days a week
3. 4 days a week
4. 3 days a week
5. 2 days a week
6. 1 day a week
7. 1-3 days a month
8. Take all classes virtually

[ASK IF NEW_Q5=1,2,3,4,5]

For the next few questions please think about your primary work place.

Q6: Please write in the address, building and/or nearest cross streets of your primary work place.

A. Work Address: [OPEN END]

B. City: [OPEN END]

99. Work from home only.

Q7: About how close is the nearest bus stop to your home [SHOW IF NEW_Q5=1,2,3,4,5: and to your primary work place]?

(Check one box for home and check one box for work)

A. Home:

[ASK IF NEW_Q5=1,2,3,4,5 AND NOT Q6=99 (Work from home only)] B. Work:

1. Less than 1 block
2. 1-4 blocks (about 330 feet to a quarter-mile)
3. 4-8 blocks (quarter-mile to a half-mile)
4. 8-16 blocks (half-mile to a mile)
5. More than 16 blocks (more than a mile)
6. Don't know

[ASK IF NEW_Q5=1,2,3,4,5 AND NOT Q6=99 (Work from home only)]

Q8: How long is your typical work commute?

A: Miles [NUMBER OF MILES]

B: I only work from home (CHECK BOX WITH A CODE OF 1)

[ASK IF NEW_Q5=1,2,3,4,5]

Q30. How many days do you typically work each week?

1. 6-7 days a week



- 2. 5 days a week
- 3. 4 days a week
- 4. 3 days a week
- 5. 2 days a week
- 6. 1 day a week

[ASK IF NEW_Q5=1,2,3,4,5 AND NOT Q6=99 (Work from home only)]

Q31. How often do you typically travel to work?

- 1. 6-7 days a week
- 2. 5 days a week
- 3. 4 days a week
- 4. 3 days a week
- 5. 2 days a week
- 6. 1 day a week
- 7. 1-3 days a month
- 8. Less than monthly
- 9. Work from home only

[ASK IF NEW_Q5=1,2,3,4,5]

Q9: For each of the following, please indicate which is made available to you, which you have used in the past 6 months and which you would use if made available.

	Employer provides or is available 1-Yes, 2-No, 3-Don't know	SKIP IF Q9A-M2=No Used in last 6 months 1-Yes, 2-No	SKIP IF Q9A-M2=YES Would use if available 1-Yes, 2-No
A. Flexible hours/ compressed work week	Q9A1	Q9A2	Q9A3
B. Telecommuting/working from home	Q9B1	Q9B2	Q9B3
C. Vanpooling and carpooling	Q9C1	Q9C2	Q9C3
D. Bike parking	Q9D1	Q9D2	Q9C3
E. Car share	Q9E1	Q9E2	Q9E3
F. Lockers and shower facilities	Q9F1	Q9F2	Q9F3
G. Bike share	Q9G1	Q9G2	Q9G3
H. Guaranteed ride home	Q9H1	Q9H2	Q9H3
I. Subsidized or free bus pass	Q9I1	Q9I2	Q9I3
J. Use of company vehicle for personal use during the day	Q9J1	Q9J2	Q9J3
K. Childcare facilities at or near work	Q9K1	Q9K2	Q9K3
L. Safe and comfortable walking and biking routes	Q9L1	Q9L2	Q9L3
M. Employer incentives or recognition for employees who carpool, bus, bike or walk	Q9M1	Q9M2	Q9M3
N. Information about carpooling, taking the bus, biking and walking (maps, routes, schedules, commuting tips)	Q9N1	Q9M2	Q9M3



Q10: In the last month, about how frequently have you ridden a bicycle/e-bicycle for recreation or for commuting:

- | | |
|--|---|
| <p><u>A. Biked for recreation or exercise</u></p> <ol style="list-style-type: none"> 1. Five or more times a week 2. 2 to 4 times a week 3. Once a week 4. Twice a month or less 5. Never | <p>[ASK IF NEW_Q5=1,2,3,4,5,7,8]</p> <p><u>B. For commuting to work/school</u></p> <ol style="list-style-type: none"> 1. Five or more times a week 2. 2 to 4 times a week 3. Once a week 4. Twice a month or less 5. Never |
|--|---|

Q11: In the last month, about how frequently have you walked, jogged, or ran for recreation or for commuting:

- | | |
|---|---|
| <p><u>A. Walked/ran for recreation or exercise</u></p> <ol style="list-style-type: none"> 1. Five or more times a week 2. 2 to 4 times a week 3. Once a week 4. Twice a month or less 5. Never | <p>[ASK IF NEW_Q5=1,2,3,4,5,7,8]</p> <p><u>B. For commuting to work/school</u></p> <ol style="list-style-type: none"> 1. Five or more times a week 2. 2 to 4 times a week 3. Once a week 4. Twice a month or less 5. Never |
|---|---|

Q12: In the last month, about how frequently have you taken the bus for:

- | | |
|---|---|
| <p><u>A. Errands and other trips</u></p> <ol style="list-style-type: none"> 1. Five or more times a week 2. 2 to 4 times a week 3. Once a week 4. Twice a month or less 5. Never | <p>[ASK IF NEW_Q5=1,2,3,4,5,7,8]</p> <p><u>B. For commuting to work/school</u></p> <ol style="list-style-type: none"> 1. Five or more times a week 2. 2 to 4 times a week 3. Once a week 4. Twice a month or less 5. Never |
|---|---|

Q13: In the last month, about how frequently have you used rideshare or bike share services:

- | | |
|--|--|
| <p><u>A. Uber or Lyft rideshare</u></p> <ol style="list-style-type: none"> 1. Five or more times a week 2. 2 to 4 times a week 3. Once a week 4. Twice a month or less 5. Never | <p><u>B. Bike share/NAU yellow bike</u></p> <ol style="list-style-type: none"> 1. Five or more times a week 2. 2 to 4 times a week 3. Once a week 4. Twice a month or less 5. Never |
|--|--|

Q14: Please record the number of household members in each of the following age categories.

(Please remember to include yourself.)

A. How many are under 16? [NUMERIC OPEN END]

B. How many are 16 or older? [NUMERIC OPEN END]

[ASK IF Q14A>0]

Q15: For all children (under the age of 16) living in your household, please indicate **their age and** then check the box that indicates their **most frequently used travel mode to school**. (If no children live in your household, or none that attend school, please go to question #0)



	Child 1	Child 2	Child 3	Child 4	Child 5	Child 6	Child 7	Child 8
Q15A: Age of child	Q15A1	Q15A2	Q15A3	Q15A4	Q15A5	Q15A6	Q15A7	Q15A8
Q15B: Most frequent travel mode to school	Q15B1	Q15B2	Q15B3	Q15B4	Q15B5	Q15B6	Q15B7	Q15B8
1. Walk								
2. Bicycle / e-bicycle								
3. School bus								
4. Mountain Line bus								
8. Scooter, moped, skateboard								
5. Driven alone								
6. Driven with other children								
7. Homeschooled								
8. N/A (Too young for school)								

[ASK IF Q14A>0]

Q34. If your student or school aged children have received a Mountain Line Bus pass, are they using it to get to other destinations besides school?

1. No
2. Yes, please describe: [OPEN END]
3. N/A, did not receive a Mountain Line Bus pass

Q16: For the people 16 or older living in your household, please check the box that indicates their **most frequently used travel mode to work or school**.

Most frequent travel mode to work/school	You (1) Q16A	Person 2 Q16B	Person 3 Q16C	Person 4 Q16D	Person 5 Q16E	Person 6 Q16F	Person 7 Q16G	Person 8 Q16H
1. Telecommute/work from home								
2. Walk								
3. Bicycle / e-bicycle								
4. Take school bus								
5. Take Mountain Line bus								
12. Scooter, moped, skateboard								
6. Drive alone								
7. Drive with adult from household								



8. Drive with adult NOT from household								
9. Drive with children from household								
10. Drive with children NOT from household								
11. Not applicable (Does not work / go to school)								

Q17: How many usable passenger cars, vans and light trucks does your household own or normally have use of? _____ vehicles
[SKIP IF Q17=0]

Q17B: How many of those usable vehicles are hybrid or electric? _____ vehicles

Q18: How many usable bicycles/e-bicycles does your household have?
_____ Total bicycles (including e-bicycles)
_____ e-bicycles

Q32. What challenges does your household have regarding transportation?

Q19: About how much was the TOTAL 2023 income before taxes for your household as a whole? In the total, please include income before taxes as well as money from all sources for all persons living in your household.

1. Less than \$14,999
2. \$15,000 to \$24,999
3. \$25,000 to \$34,999
9. \$35,000 to \$49,999
4. \$50,000 to \$74,999
5. \$75,000 to \$99,999
6. \$100,000 to \$149,999
7. \$150,000 to \$199,999
8. \$200,000 or more
9. Prefer not to answer

Q20: Which best describes the building where you live?

1. A detached single family home
2. A duplex or triplex
3. A multi-family unit (e.g., apartments or condominiums)
4. A townhouse
5. A mobile home
6. Group quarters (dormitory, fraternity/sorority, nursing home)
8. Rent a room
9. Secondary unit on primary property (e.g., tiny home, accessory dwelling unit)
7. Other: [OPEN END]

Q21: Do you rent or own your residence?

1. Rent



2. Own
3. Other

Q22: How many years have you lived in or near Flagstaff? _____ *years*
(Please mark "0" if less than 6 months.)

[ASK IF NEW_Q5=7,8 AND NOT STUDENT SAMPLE (NOT SAMPLE=2)]

Q23: Are you a student at Northern Arizona University?

1. No
2. Yes

[ASK IF NEW_Q5=7,8]

Q24: Are you a student at Coconino Community College?

1. No
2. Yes

Q25: What is your gender?

1. Male
2. Female
3. Non-binary/other
4. Prefer not to answer

Q26: What is your age? _____ *years*

Q27: Which category best describes your ethnicity?

1. Hispanic
2. Non-Hispanic
3. Prefer not to answer

Q28: Which category best describes your race? [ALLOW MULTIPLE RESPONSE]

- A. African American/black
- B. Caucasian/white
- C. Asian or Pacific Islander
- D. Native American
- E. Other
- F. Prefer not to answer

Q29: How much education have you completed?

1. 0 to 11 years of school
2. High school
3. Some college or associate's degree
4. Bachelor's degree
5. Graduate/professional degree

Q37. Which of these conditions, if any, create difficulties for getting you where you want to go? (Select all that apply)

1. Seeing
2. Hearing



3. Moving
4. Handling items
5. Memory or processing
6. Other
7. None apply to me

TRAVEL DAY: [ASSIGN TRAVEL DIARY DAY MONDAY-FRIDAY]

The last step in this research study is for you to complete a one-day travel diary for the trips that you make on [ASSIGNED TRAVEL DAY]. Please tell us about your travel on this day regardless of the weather or the number of trips or types of activities you have planned for that day. We will send you an email with detailed information to keep track of your travel on this day and instructions to finish completing the study. Upon completion of the study, we will send you a \$10 gift card as a thank you for your time and help with this study.

Note, your contact information will only be used for research purposes, to send information and reminders to complete the travel diary for this study, and to provide your electronic gift card.

Email: What is the best email address to reach you? [EMAIL]

Phone: In case we have any questions, what is the best phone number to reach you? [PHONE]



Trip Diary Survey

Q1: On the day you completed the travel diary, did you have any goods or services delivered to your work or home, such as a meal (pizza, etc.), groceries, online orders, or other goods and services?

How many deliveries?

Note, if one delivery contained items in multiple categories, please add it to the category that fits best.

1. None
2. Goods [NUMBER]
3. Services [NUMBER]
4. Food/Meals[NUMBER]
5. Groceries [NUMBER]

Q2: How many trips did the delivery or deliveries substitute for a travel trip you might have made to seek the good or service?

[NUMBER OF TRIPS, 0-20]

Destination (address, building or nearest cross streets)

BEGHR/BEGMIN: Trip Start time: Hour: Minutes

BEGTIME: Trip Start time: AM/PM

ENDHR/ENDMIN: Trip Arrival Time: Hour: Minutes

ENDTIME: Trip Arrival Time: AM/PM

PURP: Trip Purpose

1. Go home
2. Personal business
3. Shopping
4. School
5. Work commute
6. Other work/business
7. Social / Recreation
8. Eat a meal
9. Drive a passenger
10. Change travel mode (drive to a bus or transit stop)
12. Healthcare
11. Other, specify [OPEN END]

MODE: Travel Method

1. Car, SUV, or light truck (driver)
2. Car, SUV, or light truck (passenger)
- 3-6. Mountain Line Bus
- 3-7. Mountain Line Paratransit
4. School bus
5. Large commercial truck
6. Motorcycle
7. Taxi/Uber/Lyft (passenger)
8. Bicycle / e-bicycle



11. Scooter, moped, skateboard
9. Walk
10. Other, specify [OPEN END]

[IF BUS]

BUSROUTE: Which Mountain Line Bus route did you take?

[OPEN END], Don't know

MILES: Estimated Trip Miles (Please round mileage to the closest tenth of a mile).

Number of people in vehicle (including yourself)

PPLEBHH: [NUMBER OF ADULTS FROM HH]

PPLEBOUT: [NUMBER OF OTHER ADULTS]

PPLEAHH: [NUMBER OF CHILDREN FROM HH]

PPLEAOUT: [NUMBER OF OTHER CHILDREN]

DESTINATION_O: Where did you go to next?

1. [DESTINATION]
2. I ended my day here

