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Results of the 2020-2021 Campus Travel Survey

June 2021

A Research Report from the National Center
for Sustainable Transportation

Ryan G. Miller, University of California, Davis

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Results of the 2020-2021 Campus Travel Survey

A National Center for Sustainable Transportation Research Report

June 2021

Ryan G. Miller, Institute of Transportation Studies, University of California, Davis



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Results of the 2020-21 Campus Travel Survey

Institute of Transportation Studies
and
Transportation Services
University of California, Davis

Prepared by
Ryan G. Miller
Institute of Transportation Studies

June 2021

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EXECUTIVE SUMMARY

The UC Davis Campus Travel Survey is an annual survey led by Transportation Services (TS) – formerly known as Transportation and Parking Services (TAPS) – and the National Center for Sustainable Transportation, part of the Institute of Transportation Studies at UC Davis. It collects a rich set of data about travel to the UC Davis campus, demographics, and attitudes toward travel.

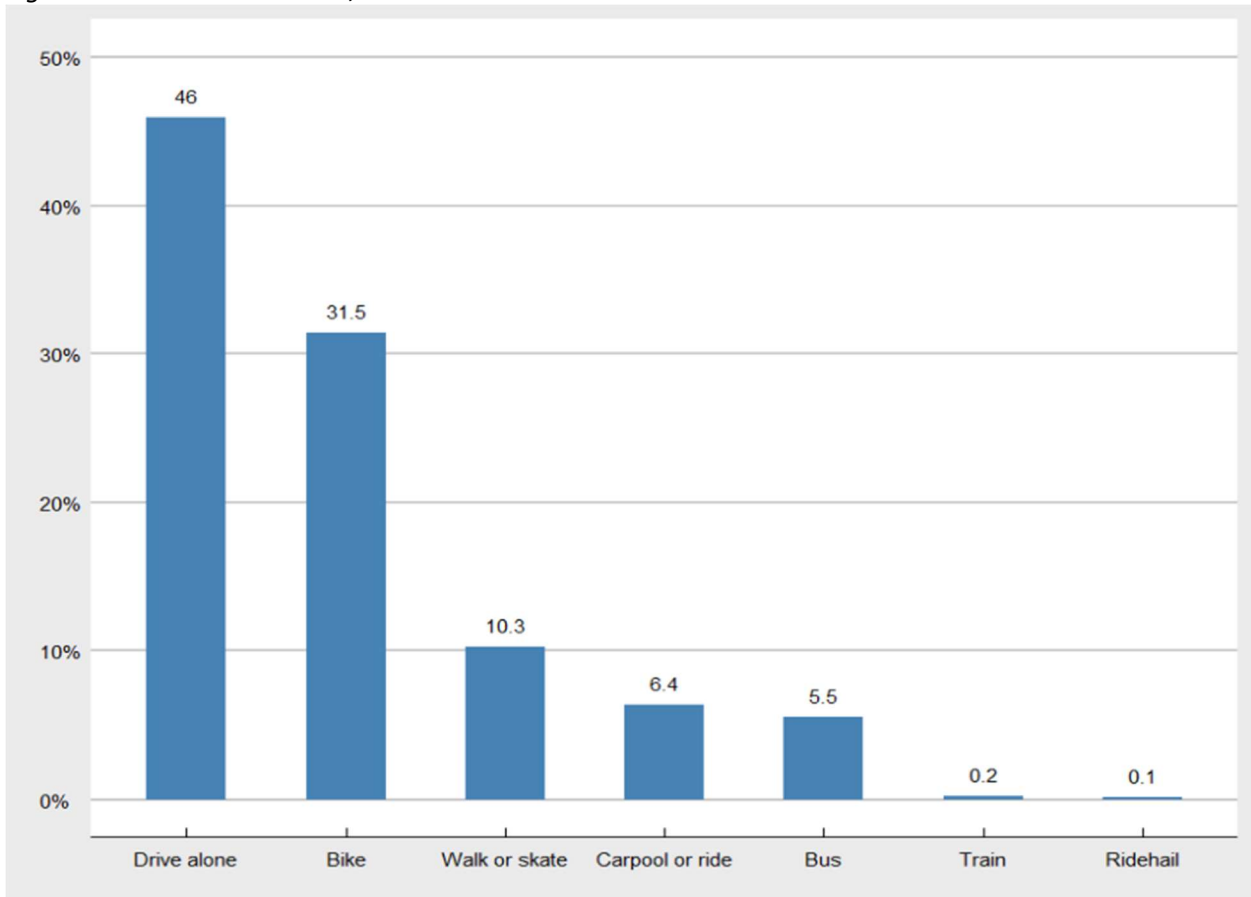
The 2020-2021 survey collected data from 3,291 people affiliated with UC Davis about their travel to campus during a single week in October 2020. It used a stratified random sampling method with the intent to gather a representative sample of the campus population. About 18 percent of those invited responded to this year's survey. For the statistics presented throughout this report, we weight the responses by campus role (freshman, sophomore, junior, senior, Master's, PhD, faculty, and staff) and gender so that the proportion of respondents in each group reflects their representation in the campus population.

Main Findings

Overall Mode Share

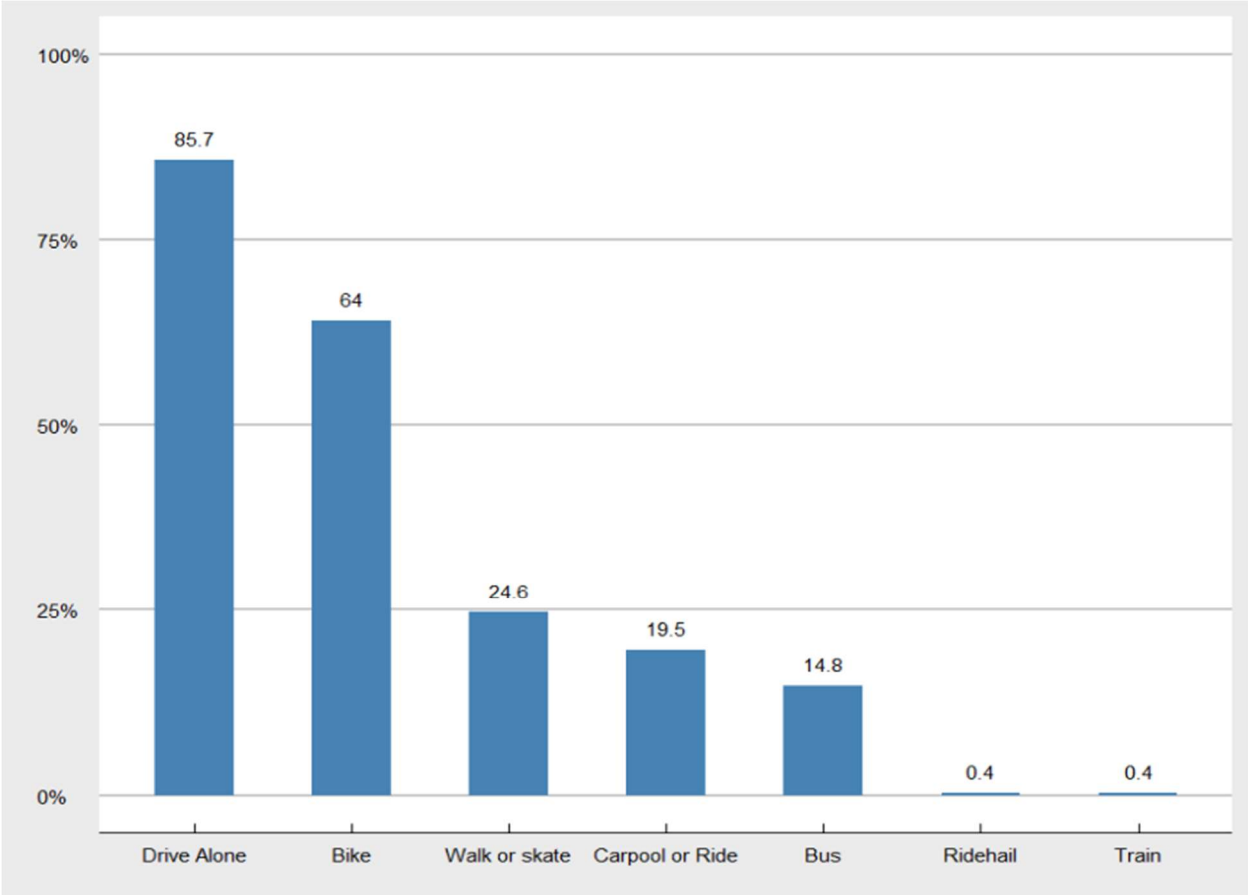
Travel to the UC Davis campus was highly impacted by the COVID-19 pandemic in the 2020-2021 school year. On an average weekday, only about 35 percent of the campus community who reported that they regularly visited campus actually traveled physically to campus. Among these, 46 percent drove alone, 31.5 percent biked, 10.3 percent walked or skated, 6.4 percent carpooled or got a ride, 5.5 percent bussed, and less than one percent took a train or used a ridehailing service (see Figure 1). These figures represent the percent of people using each means of transportation as their primary mode (that is, for the greatest share of their distance) from wherever they live to their campus destination on an average weekday.

Figure 1. Overall Mode Share, 2020-21



Because some people use different travel modes on different days, the total number of people who bicycle or ride transit, for instance, is substantially larger than the number using each mode on any given day. In particular, about 64 percent reported biking as their primary means at least once during the week. Similarly, about 85 percent drove alone, 20 percent rode the bus, 25 percent walked or skated, 19 percent carpoled or got a ride, and less than one percent took Amtrak or used a ride-hailing service. See Figure 2 on the following page.

Figure 2. Used mode at least once during reference week, 2020-21



Change in Mode Share, 2019-20 to 2020-21

One of the main purposes of the Campus Travel Survey is to collect comparable data each year in order to assess trends over time. The questions and calculations used to estimate mode share in this year's survey are identical to those used in the 2019-20 survey. In addition, the results of each year are weighted by role and gender to correct for differences in response rates between subsets of the population over time. Table ES-1 shows the change in mode share between the 2019-20 and 2020-21 surveys.

Table ES- 1. Percentage Point Change in Mode Share on an Average Weekday

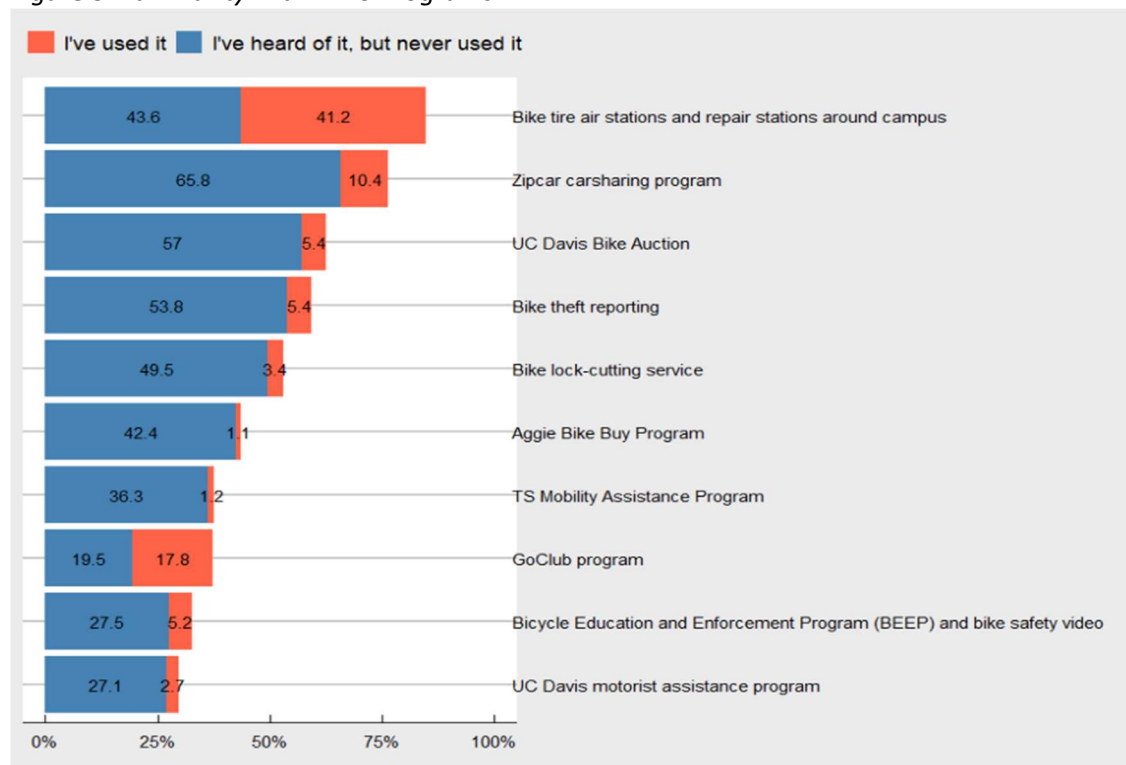
| Survey Years | Physically Travelled | Of those who physically traveled to campus | | | | | | |
|-------------------|----------------------|--|---------------|-------------|-----------------|--------|--------|----------|
| | | Bike | Walk or Skate | Drive Alone | Carpool or Ride | Bus | Train | Ridehail |
| 2019-20, Overall | 85.3% | 34.4% | 9.6% | 31.3% | 5.4% | 17.9% | 0.93% | 0.41% |
| 2020-21, Overall | 33.4% | 31.5% | 10.3% | 46.0% | 6.4% | 5.5% | 0.24% | 0.13% |
| Difference | -51.9% | -2.9% | +0.7% | +14.7% | -1.0% | -12.4% | -0.69% | -0.28% |

Data are weighted for both years by campus role and gender.

Familiarity with TS Programs

Several services that promote bicycling are well-known and highly utilized across the campus population. The bike tire air stations on campus are the best known and most highly used transportation service, with more than 41 percent of respondents having used them (Figure 3).

Figure 3. Familiarity with TAPS Programs



Bicycling Aptitude

We asked all respondents to rate their ability to ride a bike, specifying that we were interested in “whether you know how to ride a bike, regardless of whether it is practical or desirable for you to do so as a means of transportation to campus.” Figure 4 shows responses to this question broken down by men and women; Figure 5 shows results to this question by campus role (undergraduates, graduate students, staff, and faculty).

Figure 4. Bicycling Aptitude of Men and Women

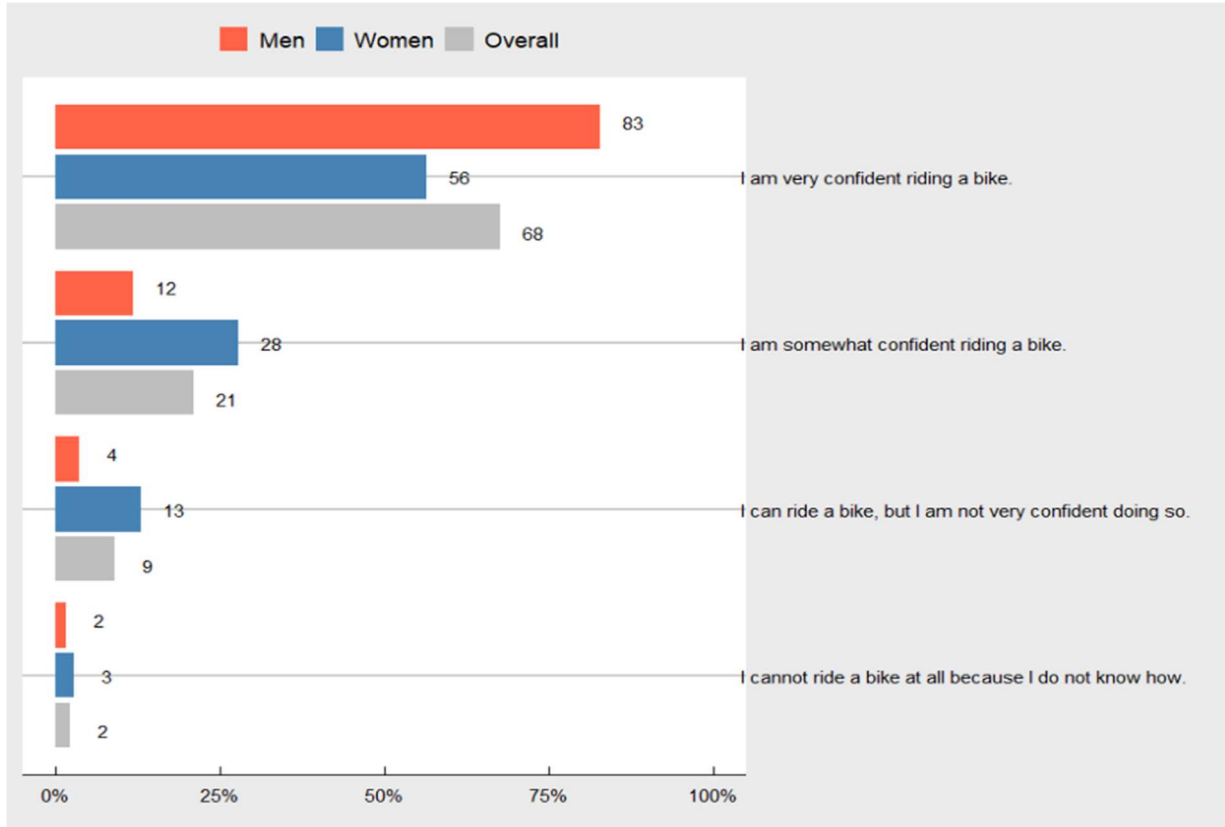
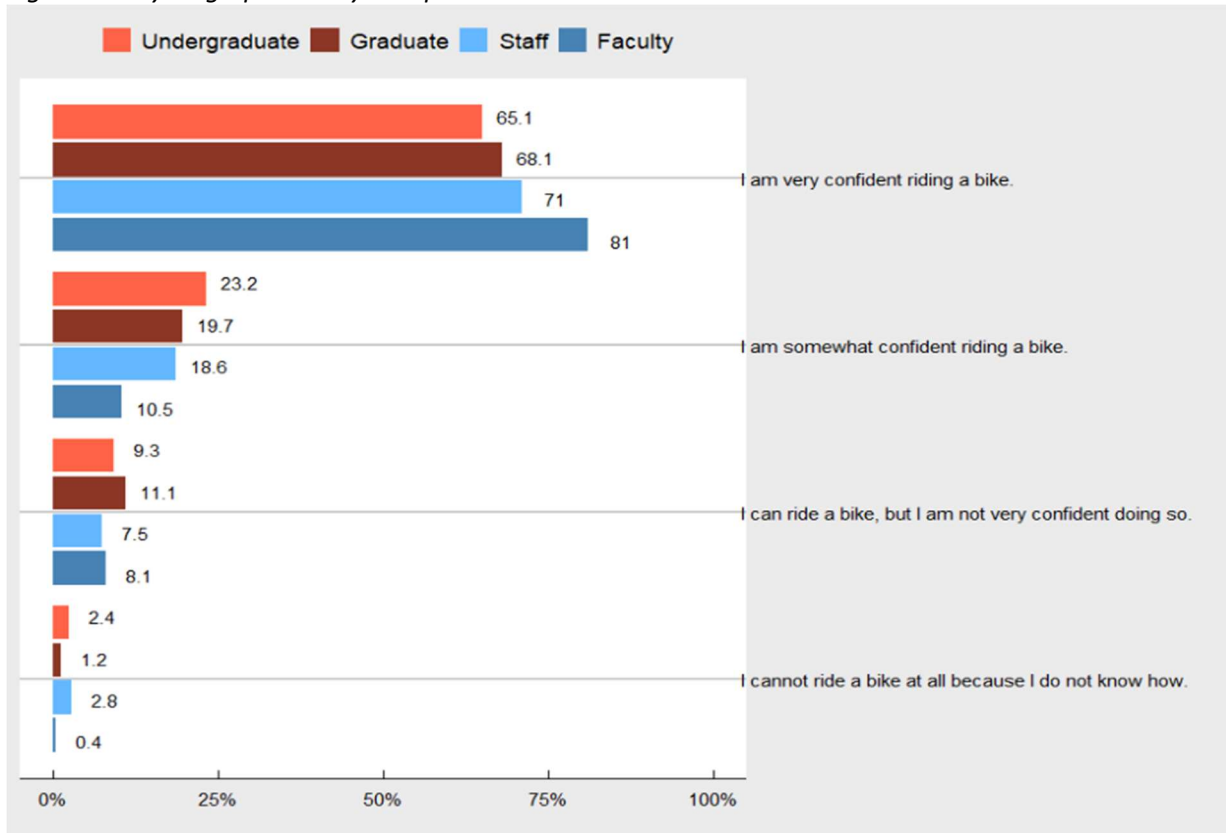


Figure 5. Bicycling Aptitude by Campus Role



BACKGROUND

In 2003 the University of California adopted the *UC Policy on Sustainable Practices*, which charges UC campuses with the task of measuring and promoting sustainable commuting. System-wide targets for assessing the sustainability of transportation systems include annual estimation and reporting of Average Vehicle Ridership (AVR) and carbon dioxide equivalent emissions (CO₂e) for each UC campus. The *UC Policy on Sustainable Practices* also lists mechanisms for reducing commute emissions, including the construction of on-campus housing and expansion of Transportation Demand Management (TDM) programs.

In addition to the sustainable transportation goals of the University of California, many universities and colleges around the world face additional reasons to promote alternatives to driving. Some concerns include high costs of expanding parking facilities, air pollution, and traffic congestion. It is essential that campus planners and travel demand managers have current and accurate information about commuting at their institutions so that they may implement targeted transportation policies, evaluate the effectiveness of current services, share best practices with other institutions, and track commuting behavior over time.

About the Campus Travel Survey

The UC Davis Campus Travel Survey is a joint effort by Transportation Services (TS) on campus and the National Center for Sustainable Transportation, part of the Institute of Transportation Studies at UC Davis. Since 2007 the survey has been administered each fall by a graduate student at the Institute of Transportation Studies. The main purpose of the survey is to collect annual data on how the UC Davis community travels to campus, including mode choice, vehicle occupancy, distances traveled, and carbon emissions.

Over the past ten years, the travel survey results have been used to assess awareness and utilization of campus transportation services and estimate demand for new services designed to promote sustainable commuting at UC Davis. Data from the campus travel survey have also provided researchers with valuable insights about the effects of attitudes and perceptions of mobility options on commute mode choice. This year's survey is the thirteenth administration of the campus travel survey.

Survey Development & Administration

The content of the 2020-2021 survey was based on the previous year's survey, retaining key questions relating to mode choice and residential location, among others. An ongoing attempt to refine question wording has meant that some variables are not directly comparable across years. See "Appendix A: Survey instrument, 2020-21 Campus Travel Survey" for a full copy of the survey instrument. See "Appendix B: Changes from the 2019-20 survey instrument" for a summary of changes from the previous year.

The online survey was prepared and hosted using the Qualtrics Survey website (www.qualtrics.com). Staff at Transportation Services as well as faculty and students affiliated with the Institute of Transportation Studies provided feedback on survey content and assisted with pre-testing of the online survey.

The 2020-21 survey was administered online in October and November 2020, distributed by email to a stratified random sample of 21,290 students, faculty, and staff (out of an estimated total population of 53,886). See Table B-1 for a summary of the random sample stratified by campus role.

Sample & Response

As in previous years, the goal of the sampling procedure was to draw a sufficiently large sample for reliable statistical estimates within the following groups: freshmen, sophomores, juniors, seniors, Master's/professional students, PhD students, faculty, and staff. We used standard statistical techniques to determine the minimum sample size needed for estimates with a +/- 5% margin of error, based on the assumed response rate for each of the groups.

A stratified random sample was drawn from ostensibly complete lists of UC Davis email addresses maintained at two different departments within the university. The sampling of student and employee email addresses was conducted by the Budget and Institutional Analysis (BIA) office. Student email addresses were screened based on students' class level and departmental affiliation, including all academic and professional students except medical students, who are not based on the Davis campus. Employees were screened to exclude those affiliated with the UC Davis Medical Center or field stations, those without salary, faculty at UC Davis Extension, temporary employees, and employees without email addresses. BIA staff compiled a spreadsheet containing only email addresses and role groups of those individuals selected for inclusion in the sample.

Each person in the selected sample received an initial email inviting them to take the survey. Those individuals who had not completed the survey one week later were sent a reminder email. Those individuals who had not completed the survey after the second week were sent an additional reminder email the following week. See "Appendix C: Text of the recruitment emails" for copies of these recruitment emails.

Offering a chance to win a desirable prize is thought to increase overall response to a survey. This year, Transportation Services provided incentives in the form of forty \$50 Visa gift cards and two grand prizes of Amazon Fire tablets to participants of the survey. Entry into this drawing was mentioned in the initial and follow-up recruitment emails, as well as on the welcome page of the online survey. On the final page of the survey, respondents were asked to indicate whether it would be okay to contact them again (1) with questions about their survey or (2) if they win the drawing, or if instead they preferred not to be contacted.

A total of 5,230 respondents started the survey (responding to the question about their role on campus), representing over 24 percent of those invited. Of those who began the survey, 86 percent (3,291 respondents) completed the survey through the set of questions that asked respondents about their campus role and gender identity, and 43 percent (2,261 respondents) reported campus travel (and their mode choice) on each day of the reference week. Table B-1 shows response rates for this year's survey compared to the previous year, broken down by the total number of responses and the portion of responses which reported campus travel during the COVID-19 pandemic.

Table B-2 shows the number of valid responses at three key points in the survey: those who answered questions about campus role and gender identity (used in weighting and expansion), those who reported campus travel (less than half the survey universe this year as a result of the COVID-19 pandemic), and those reporting travel whose residential locations were successfully geocoded in addition to meeting the previous criteria.

Table B- 1. Response Rates for 2020-21 versus 2019-20

| Role | Assumed population | Number invited | Total responses | Responses Reporting Campus Travel* | Target response rate | Response Rate (Total) | Response Rate (Reporting Campus Travel) | 2019-20 Actual Response Rate |
|----------------------|--------------------|----------------|-----------------|------------------------------------|----------------------|-----------------------|---|------------------------------|
| Student | 37,593 | 17,052 | 3,291 | 1,476 | 12.6% | 19.3% | 8.7% | 17.3% |
| Undergraduate | 30,810 | 12,630 | 2,323 | 934 | 11.6% | 18.4% | 7.4% | 16.8% |
| Freshman | 6,567 | 1,650 | 673 | 205 | 22.0% | 40.8% | 12.4% | 27.2% |
| Sophomore | 5,443 | 3,590 | 574 | 243 | 10.0% | 16.0% | 6.8% | 14.8% |
| Junior | 8,388 | 3,680 | 613 | 287 | 10.0% | 16.7% | 7.8% | 15.2% |
| Senior | 10,412 | 3,710 | 463 | 199 | 10.0% | 12.5% | 5.4% | 15.0% |
| Graduate | 6,783 | 4,422 | 968 | 542 | 15.6% | 21.9% | 12.3% | 18.8% |
| Master's | 2,662 | 2,662 | 387 | 162 | 12.6% | 14.5% | 6.1% | 15.8% |
| PhD | 4,121 | 1,760 | 581 | 380 | 20.0% | 33.0% | 21.6% | 24.7% |
| Employee | 16,293 | 4,238 | 1,215 | 785 | 16.5% | 28.7% | 18.5% | 21.5% |
| Faculty | 2,152 | 2,038 | 407 | 267 | 16.0% | 20.0% | 13.1% | 20.7% |
| Staff | 14,141 | 2,200 | 808 | 518 | 17.0% | 36.7% | 23.5% | 22.0% |
| Overall | 53,886 | 21,290 | 4,506 | 2,261 | 2,849 | 21.2% | 10.6% | 18.1% |
| Overall % | 100.0% | 39.5% | 21.2% | 10.6% | 13.4% | 21.2% | 10.6% | 18.1% |

*The survey administration period coincided with the COVID-19 pandemic and remote campus operations during the Fall 2020 academic quarter. Because such a large percentage of the campus community did not report physical travel to campus during this time, this table breaks down response rates between all responses, and those responses reporting campus travel (and therefore included in all subsequent travel and mode related questions).

Table B- 2. Number of Valid Responses by Role

| Role | Population | Invited | Target | Role and Gender | Valid Mode* | Geocoded |
|------------------------|---------------|---------------|----------------------|----------------------------|---------------------------------|-----------------------------------|
| | | | (5% margin of error) | (Provided role and gender) | (weighted for bulk of analysis) | (weighted for CO2 emissions, VMT) |
| Student | 37,593 | 17,052 | 2,149 | 3,572 | 1,476 | 1,430 |
| Undergraduate | 30,810 | 12,630 | 1,461 | 2,419 | 934 | 904 |
| Freshman | 6,567 | 1,650 | 363 | 711 | 205 | 203 |
| Sophomore | 5,443 | 3,590 | 359 | 570 | 243 | 235 |
| Junior | 8,388 | 3,680 | 368 | 650 | 287 | 275 |
| Senior | 10,412 | 3,710 | 371 | 488 | 199 | 191 |
| Graduate | 6,783 | 4,422 | 688 | 1,153 | 542 | 526 |
| Master's | 2,662 | 2,662 | 336 | 523 | 162 | 155 |
| PhD | 4,121 | 1,760 | 352 | 630 | 380 | 371 |
| Employee | 16,293 | 4,238 | 700 | 1,565 | 785 | 749 |
| Faculty | 2,152 | 2,038 | 326 | 558 | 267 | 256 |
| Staff | 14,141 | 2,200 | 374 | 1,007 | 518 | 493 |
| Overall | 53,886 | 21,290 | 2,849 | 5,137 | 2,261 | 2,179 |
| Overall percent | 100.0% | 39.5% | 13.4% | 24.1% | 8.4% | 100.0% |

*Due to the COVID-19 pandemic and associated remote instruction, most survey respondents did not report campus travel during the reference week. If survey respondents did not report any campus travel during the reference week, they took a shorter version of the survey that did not ask questions about travel mode or distances. To allow for comparison to other years' travel surveys, this report focuses largely on responses that did report travel and an associated mode, though this number is much lower than in a typical year.

Weighting Responses by Role and Gender

For the purposes of analysis, we assume that respondents are roughly similar to the rest of the population within their role group (freshmen, sophomores, etc.) with respect to socio-demographics or other attributes that may matter for transportation choices. For this reason, we weight the sample by role group. In particular, as described above, we assign respondents to one of eight role groups based on their responses to questions Q2 through Q8. These eight roles are: freshmen, sophomores, juniors, seniors (includes fifth-years and post-baccalaureate), Master’s students (and professional students such as law, business, and Ed.D.), PhD students, faculty, or staff (including Post-docs).

All results presented in this report are weighted to be representative of the campus population by these role groups. That is, we apply a weight factor to each case in a given role group so that the group’s proportion in the sample is the same as their proportion in the overall projected population. As in previous surveys, the sample is disproportionately comprised of women. In addition to weighting by role in the university, we correct for these differences in response rates among men and women in each role group so that the share of men and women in the weighted sample is equal to the share of men and women in each role group in the population.

Table B-3 and Table B-4 show the differences in gender distribution between the unweighted and weighed results.

Table B- 3. Unweighted Gender Distribution of Respondents Reporting Reported Campus Travel

| Role | Men | Women | Unweighted Sample | Projected Population |
|----------------------|-------|-------|-------------------|----------------------|
| Undergraduate | 26.1% | 73.9% | 934 | 30,810 |
| Graduate | 33.8% | 66.2% | 542 | 6,783 |
| Faculty | 51.7% | 48.3% | 267 | 2,152 |
| Staff | 35.9% | 64.1% | 518 | 14,141 |

Table B- 4. Weighted Gender Distribution of Respondents Reporting Campus Travel

| | Men | Women | Weighted Sample | Projected Population |
|----------------------|-------|-------|-----------------|----------------------|
| Undergraduate | 39.4% | 60.6% | 1,293 | 30,810 |
| Graduate | 45.6% | 54.3% | 285 | 6,783 |
| Faculty | 59.5% | 40.8% | 90 | 2,152 |
| Staff | 45.8% | 54.2% | 593 | 14,141 |

Confidence Intervals

Table B-5 shows the margin of error of findings for each role group, to the extent that the proportions and figures estimated in the report differ by role group. For statistics about the population as a whole, we are 95 percent confident that our estimates are within 1.5 percent of their true value. These expectations are particularly important for mode share estimates, given that some year-to-year changes are significant, while others are not.

For example, when we report later that 34.4 percent of the campus population bikes to campus, our margin of error indicates that – to the extent to which the survey results are unbiased – the true share of persons that bike to campus is between 32.9 and 35.9 percent.

It is important to note that for this 2020 survey year, estimates may be subject to additional error to the extent that survey respondents who reported travel to campus during the reference week might differ from survey respondents who worked or learned entirely remotely during the reference week, but who would otherwise travel to campus if not for the COVID-19 pandemic.

Table B- 5. Margins of Error, by Role Group

| Role | Sample Size (Reporting Campus Travel) | Population Size | Margin of Error |
|----------------------|--|----------------------------|----------------------------|
| Student | 1,476 | 37,593 | 2.50% |
| Undergraduate | 934 | 30,810 | 3.16% |
| Freshman | 205 | 6,567 | 6.74% |
| Sophomore | 243 | 5,443 | 6.14% |
| Junior | 287 | 8,388 | 5.68% |
| Senior | 199 | 10,412 | 6.88% |
| Graduate | 542 | 6,783 | 4.04% |
| Master's | 162 | 2,662 | 7.46% |
| PhD | 380 | 4,121 | 4.79% |
| Employee | 785 | 16,293 | 3.41% |
| Faculty | 267 | 2,152 | 5.61% |
| Staff | 518 | 14,141 | 4.23% |
| Overall | 2,261 | 53,886 | 2.02% |

FINDINGS

This section summarizes key results from the survey. Data presented in this section are weighted by role and gender, as described above. When “unweighted sample” size is reported it reflects the number of actual respondents in this category; “weighted sample” size reflects the number that would be in each category if the distribution of roles and genders in the sample matched the distribution in the population (so the total number in the weighted sample equals the number in the unweighted sample, but numbers within subgroups may change). “Projected population” size is a projection of the weighted proportions to the full campus population, calculated by multiplying each response by an expansion factor based on role and gender.

Many statistics are presented by role group (freshmen, sophomores, juniors, seniors, Master’s students, PhD students, faculty, or staff). Where applicable, some are broken down by students (including freshmen through PhD students), undergraduates (freshmen through senior students), graduate students (Master’s and PhD students), employees (faculty and staff), within Davis (those living on campus or elsewhere in Davis among all role groups), and outside Davis (those living outside of Davis among all role groups).

Physical Travel to Campus

Table 1 shows the share of each role group who traveled to campus on each day of the reference week. For those living on campus, “travel to campus” on a given day means the respondent indicated traveling to a campus destination for school or work. Overall, among those who reported travel to campus during the reference week, only about 35 percent of respondents visited campus on any given weekday. Rates differed substantially across role groups, with undergraduates and master’s students visiting campus at lower rates than PhD students, faculty, and staff. Interestingly, while visitation is lowest on Friday, the extent of this Friday drop-off is far less pronounced than in traditional years.

It is important to remember that this question was only asked to respondents who reported at least some physical travel to campus during the reference week, so the project population numbers are over-estimates of how many people truly visited campus. Table 3 shows the percentage of respondents who did not report any campus travel at all during the reference week.

Table 1. Share Physically Travelling to Campus by Weekday (Among Those Travelling to Campus)

| Role | Share physically traveling to campus by weekday | | | | | Weighted Sample | Projected Population* |
|------------------------------|---|--------------|--------------|--------------|--------------|-----------------|-----------------------|
| | Monday | Tuesday | Wed. | Thursday | Friday | | |
| Student | 29.6% | 30.7% | 31.0% | 33.0% | 30.9% | 1,577 | 37,593 |
| Undergraduate | 28.8% | 29.7% | 30.5% | 32.5% | 29.9% | 1,293 | 30,810 |
| Freshman | 35.0% | 35.7% | 34.1% | 36.5% | 38.2% | 276 | 6,567 |
| Sophomore | 27.7% | 23.8% | 25.9% | 28.1% | 28.0% | 228 | 5,443 |
| Junior | 30.1% | 30.8% | 31.0% | 31.5% | 30.8% | 352 | 8,388 |
| Senior | 24.5% | 28.2% | 30.2% | 33.0% | 25.0% | 437 | 10,412 |
| Graduate | 33.4% | 35.0% | 33.1% | 35.5% | 35.1% | 285 | 6,783 |
| Master's | 21.3% | 25.2% | 21.6% | 28.2% | 27.1% | 112 | 2,662 |
| PhD | 41.2% | 41.3% | 40.6% | 40.2% | 40.2% | 173 | 4,121 |
| Employee | 46.8% | 46.8% | 46.1% | 47.0% | 43.0% | 684 | 16,293 |
| Faculty | 36.7% | 41.0% | 39.0% | 40.7% | 36.9% | 90 | 2,152 |
| Staff | 48.3% | 47.7% | 47.2% | 48.0% | 44.0% | 593 | 14,141 |
| Overall | 34.8% | 35.6% | 35.5% | 37.3% | 34.5% | 2,261 | 53,886 |
| Weighted Sample | 787 | 804 | 804 | 842 | 781 | 2,261 | NA |
| Projected Population* | 18,764 | 19,167 | 19,151 | 20,078 | 18,613 | NA | 53,886 |

* Results are based on responses to questions Q37 and Q38. This question was only displayed to respondents who reported travel during the reference week. Projected population numbers should be interpreted as the number of people who would travel to campus each day if the entire campus community reported travel during the reference week. Data are weighted by role and gender.

In addition to trends by day of the week, there are substantial differences in the frequency of physical travel to campus among those living in different locations (Table 2). Overall, those living on campus and those living outside Davis traveled to campus at higher-than-average rates (34.9 percent and 36.8 percent, respectively). Within the context of the COVID-19 pandemic, it is likely that on-campus residents, particularly undergraduate students, travelled to campus to access dining and other essential services. Travel rates among those living outside of Davis appear to be driven largely by staff, faculty, and PhD students, who may have been involved in essential work or research activities requiring physical presence during the pandemic (Table 3).

Table 2. Physical Travel to Campus by Residential Location

| Role | Overall | On Campus | West Village | Off Campus in Davis | Outside Davis | Weighted Sample | Projected Population* |
|------------------------------|--------------|--------------|--------------|---------------------|---------------|-----------------|-----------------------|
| Student | 29.0% | 34.1% | 32.7% | 28.7% | 16.8% | 1,523 | 37,593 |
| Undergraduate | 28.3% | 35.0% | 33.3% | 27.2% | 10.4% | 1,248 | 30,810 |
| Freshman | 29.4% | 37.5% | 13.3% | 18.3% | 2.6% | 266 | 6,567 |
| Sophomore | 26.0% | 42.9% | 29.0% | 23.9% | 13.7% | 221 | 5,443 |
| Junior | 29.4% | 28.4% | 41.0% | 27.2% | 9.4% | 340 | 8,388 |
| Senior | 27.8% | 20.2% | 28.5% | 29.8% | 15.4% | 422 | 10,412 |
| Graduate | 32.4% | 26.2% | 17.2% | 34.1% | 31.4% | 275 | 6,783 |
| Master's | 20.9% | 16.1% | 13.1% | 20.5% | 25.6% | 108 | 2,662 |
| PhD | 39.9% | 30.0% | 31.2% | 42.3% | 37.0% | 167 | 4,121 |
| Employee | 44.5% | 82.5% | 0.0% | 44.0% | 44.4% | 660 | 16,293 |
| Faculty | 38.5% | 89.3% | 0.0% | 36.0% | 42.0% | 87 | 2,152 |
| Staff | 45.5% | 80.1% | 0.0% | 46.4% | 44.6% | 573 | 14,141 |
| Overall | 33.7% | 34.9% | 32.7% | 32.1% | 36.8% | 2,183 | 53,886 |
| Weighted Sample | 736 | 105 | 53 | 382 | 196 | 2,183 | NA |
| Projected Population* | 18,166 | 2,603 | 1,297 | 9,422 | 4,845 | NA | 53,886 |

*Results are based on responses to questions Q27 (residential location) and Q38 (days traveled to campus). Data are weighted by role and gender.

Table 3. Share Not Travelling to Campus During Reference Week

| Role | Sample with Valid Roles | Sample Reporting Campus Travel | Share away from campus all week |
|----------------------|-------------------------|--------------------------------|---------------------------------|
| Student | 3,572 | 1,476 | 58.7% |
| Undergraduate | 2,419 | 934 | 61.4% |
| Freshman | 711 | 205 | 71.2% |
| Sophomore | 570 | 243 | 57.4% |
| Junior | 650 | 287 | 55.8% |
| Senior | 488 | 199 | 59.2% |
| Graduate | 1,153 | 542 | 53.0% |
| Master's | 523 | 162 | 69.0% |
| PhD | 630 | 380 | 39.7% |
| Employee | 1,565 | 785 | 49.8% |
| Faculty | 558 | 267 | 52.2% |
| Staff | 1,007 | 518 | 48.6% |
| Overall | 5,137 | 2,261 | 56.0% |

Mode Share for Primary Means of Transportation

For physical trips to campus, mode choice was determined by responses to the statement, “Please select how you got to your first campus destination each day. (If you used more than one means, select whatever you did for most of the distance)” (Q51). Thus, modes identified are those used for most of the trip, and only on the way to campus at the beginning of the day. Throughout this report, we refer to answers to this question as a respondent’s “primary” mode, meaning how they traveled for most of their trip to campus.

For each respondent, we calculate the share of days out of the five-day week that a given mode was used as a primary mode. (For instance, if someone biked one day of five days traveled to campus, their bike share for the week would be 20 percent.) The overall mode share represents the average shares across all respondents, which is equivalent to the share of all people using each mode on an average weekday. For the purpose of validating the method we use to calculate mode share, we also asked respondents about the mode they “usually” use to travel to campus.

We asked respondents to report their residential location as the place from which they usually travel to campus. In some cases, respondents may travel to campus from another location (e.g. a family member’s residence), resulting in seemingly impossible or at least improbable primary mode choices. For example, someone may report living on campus but traveling by train to campus. Since there are very few cases in which these improbable modes appear, results are reported as is, and discretion should be used in interpreting these cases.

Tables 4 through 10 show the overall mode share among those physically traveling to campus on a given weekday. Table 4 shows mode share among the entire sample. While the 2020-21 Campus Travel Survey is bound to be highly idiosyncratic due to the COVID-19 pandemic, mode share data highlights the robustness of the bicycle as a travel mode, even during the public health crisis. While the rate of respondents driving alone predictably increased over prior years, the rate of bicycling did not fall as dramatically as the rate of public transit use. Perhaps as a result of similar pandemic-related behavior changes, the share of respondents walking or skating to their campus destinations actually increased relative to 2019.

Tables 5 through 10 show mode share by residential location, as outlined below. The results suggest that mode splits vary substantially by neighborhood.

- Table 5 shows the mode share among those who live within Davis. This category includes students and employees who live on campus, off campus in Davis, and in the West Village apartments.
- Table 6 shows the mode share among those who live on campus, defined as the area south of Russell Boulevard, west of A St., north of I-80, and east of Highway 113. Bicycling and walking understandably predominate among the students who live on campus (only a few employees reported living on campus).

- Table 7 shows the mode shares among those living in the West Village apartments. While sample sizes in this neighborhood have been very low in recent years, 2020 saw another phase of apartment construction come on-line in West Village. However, the impact of the pandemic still means that sample sizes from the neighborhood are low, so role-specific mode shares should be interpreted with some degree of caution. However, the overall mode share estimates for West Village are consistent with expectations for travel distances greater than “on campus” locations but generally less than “off campus in Davis” locations.

- Table 8 shows the mode share results for those living off-campus in Davis (excluding West Village). Among those living off-campus in Davis, undergraduate students and staff are less likely to bike than graduate students and faculty. Bus ridership fell precipitously as a result of the COVID-19 pandemic, but biking remained the most popular travel option about driving alone.

- Table 9 shows the mode share for students and employees who live outside Davis (an estimated 13,162 people). Driving alone to campus was extremely popular during 2020, with nearly 92 percent of respondents driving and less than one percent travelling via bus or train. In 2019, only about 80 percent of respondents who lived outside of Davis drove alone to campus.

- Table 10 shows the mode share for those living off-campus in Davis (excluding West Village) by their neighborhood in Davis. To determine neighborhood, we asked respondents who lived off-campus in Davis to identify which part of Davis they lived in by using a series of maps as references. See “Figure 6. Neighborhoods in Davis” and “Appendix A: Survey instrument, 2020-21 Campus Travel Survey.”

Table 4. Sharing Using Each Mode on an Average Weekday, by Role Group (Entire Sample)

| Role | Physically Travelled | Of those who physically travelled to campus | | | | | | | Weighted Sample | Projected Population |
|-----------------------------|----------------------|---|---------------|--------------|-----------------|--------------|--------------|--------------|-----------------|----------------------|
| | | Bike | Walk or Skate | Drive Alone | Carpool or Ride | Bus | Train | Ridehail | | |
| Student | 28.6% | 42.6% | 15.9% | 24.7% | 8.3% | 8.5% | 0.00% | 0.09% | 1,577 | 37,593 |
| Undergraduate | 27.9% | 42.5% | 18.2% | 20.5% | 8.7% | 10.1% | 0.00% | 0.06% | 1,293 | 30,810 |
| Freshman | 29.3% | 40.0% | 45.8% | 8.2% | 4.4% | 1.4% | 0.00% | 0.27% | 276 | 6,567 |
| Sophomore | 25.6% | 39.8% | 20.7% | 12.0% | 12.9% | 14.6% | 0.00% | 0.00% | 228 | 5,443 |
| Junior | 29.1% | 46.9% | 8.9% | 18.0% | 9.9% | 16.3% | 0.00% | 0.00% | 352 | 8,388 |
| Senior | 27.1% | 41.6% | 6.3% | 35.2% | 8.5% | 8.3% | 0.00% | 0.00% | 437 | 10,412 |
| Graduate | 32.2% | 43.1% | 6.6% | 41.0% | 6.6% | 2.4% | 0.00% | 0.22% | 285 | 6,783 |
| Master's | 21.6% | 39.4% | 7.2% | 48.8% | 2.7% | 1.8% | 0.00% | 0.00% | 112 | 2,662 |
| PhD | 39.1% | 44.5% | 6.4% | 38.2% | 8.0% | 2.6% | 0.00% | 0.30% | 173 | 4,121 |
| Employee | 44.3% | 14.8% | 1.9% | 77.8% | 3.6% | 1.1% | 0.61% | 0.19% | 684 | 16,293 |
| Faculty | 37.8% | 36.0% | 6.3% | 51.7% | 4.5% | 1.3% | 0.23% | 0.00% | 90 | 2,152 |
| Staff | 45.2% | 12.2% | 1.4% | 81.1% | 3.4% | 1.1% | 0.65% | 0.22% | 593 | 14,141 |
| Overall | 33.4% | 31.5% | 10.3% | 46.0% | 6.4% | 5.5% | 0.24% | 0.13% | 2,261 | 53,886 |
| Weighted sample | 754 | 237 | 78 | 347 | 48 | 42 | 2 | 1 | 2,261 | NA |
| Projected population | 17,977 | 5,657 | 1,848 | 8,262 | 1,148 | 995 | 44 | 24 | NA | 53,886 |

Results are based on responses to question Q38 (whether they traveled to campus each day) and Q51 (travel mode each day). We calculate all mode split percentages as follows: first we calculate the percent of five weekdays that an individual used a particular mode and then take the average over all respondents. Data are weighted by role and gender.

Table 5. Share Using Each Mode on an Average Weekday, respondents living within Davis

| Role | Physically Travelled | Of those who physically travelled to campus | | | | | | | Weighted Sample | Projected Population |
|-----------------------------|----------------------|---|---------------|--------------|-----------------|-------------|--------------|--------------|-----------------|----------------------|
| | | Bike | Walk or Skate | Drive Alone | Carpool or Ride | Bus | Train | Ridehail | | |
| Student | 30.3% | 45.4% | 16.7% | 21.3% | 7.9% | 8.6% | 0.00% | 0.10% | 1,376 | 33,963 |
| Undergraduate | 29.9% | 44.1% | 18.7% | 19.0% | 8.3% | 9.9% | 0.00% | 0.06% | 1,146 | 28,287 |
| Freshman | 32.2% | 40.7% | 46.5% | 6.7% | 4.5% | 1.4% | 0.00% | 0.28% | 241 | 5,954 |
| Sophomore | 27.2% | 41.1% | 21.8% | 9.6% | 11.9% | 15.5% | 0.00% | 0.00% | 201 | 4,954 |
| Junior | 31.1% | 48.8% | 8.7% | 17.1% | 9.6% | 15.8% | 0.00% | 0.00% | 314 | 7,745 |
| Senior | 28.8% | 43.7% | 6.6% | 33.6% | 8.1% | 8.0% | 0.00% | 0.00% | 390 | 9,634 |
| Graduate | 32.7% | 51.5% | 7.8% | 31.7% | 6.2% | 2.5% | 0.00% | 0.27% | 230 | 5,676 |
| Master's | 19.7% | 53.4% | 9.6% | 31.9% | 2.4% | 2.6% | 0.00% | 0.00% | 86 | 2,118 |
| PhD | 40.4% | 50.9% | 7.2% | 31.6% | 7.3% | 2.5% | 0.00% | 0.35% | 144 | 3,558 |
| Employee | 44.7% | 35.8% | 3.8% | 54.1% | 3.4% | 2.4% | 0.00% | 0.48% | 274 | 6,761 |
| Faculty | 37.2% | 46.0% | 8.7% | 38.4% | 5.7% | 1.2% | 0.00% | 0.00% | 63 | 1,555 |
| Staff | 47.0% | 33.4% | 2.6% | 57.8% | 2.9% | 2.7% | 0.00% | 0.59% | 211 | 5,206 |
| Overall | 32.7% | 43.2% | 13.8% | 28.7% | 6.9% | 7.2% | 0.00% | 0.19% | 1,650 | 40,724 |
| Weighted Sample | 540 | 233 | 74 | 155 | 37 | 39 | 0 | 1 | 1,650 | NA |
| Projected Population | 13,322 | 5,758 | 1,835 | 3,826 | 920 | 957 | 0 | 25 | NA | 40,724 |

Results are based on responses to question Q38 (whether they traveled to campus each day), Q51 (travel mode each day), and Q27 (residential location). We calculate all mode split percentages as follows: first we calculate the percent of five weekdays that an individual used a particular mode and then take the average over all respondents. Data are weighted by role and gender.

Table 6. Share Using Each Mode on an Average Weekday, respondents living on-campus

| Role | Physically Travelled | Of those who physically travelled to campus | | | | | | | Weighted Sample | Projected Population |
|-----------------------------|----------------------|---|---------------|--------------|-----------------|-------------|--------------|--------------|-----------------|----------------------|
| | | Bike | Walk or Skate | Drive Alone | Carpool or Ride | Bus | Train | Ridehail | | |
| Student | 34.1% | 41.4% | 48.7% | 4.8% | 3.4% | 1.5% | 0.00% | 0.28% | 297 | 7,320 |
| Undergraduate | 35.0% | 40.1% | 50.7% | 4.4% | 3.2% | 1.3% | 0.00% | 0.23% | 266 | 6,573 |
| Freshman | 37.5% | 38.4% | 52.0% | 3.8% | 3.8% | 1.6% | 0.00% | 0.32% | 181 | 4,458 |
| Sophomore | 42.9% | 30.5% | 65.5% | 1.3% | 1.3% | 1.3% | 0.00% | 0.00% | 28 | 703 |
| Junior | 28.4% | 39.6% | 32.4% | 24.4% | 3.6% | 0.0% | 0.00% | 0.00% | 20 | 491 |
| Senior | 20.2% | 71.7% | 28.3% | 0.0% | 0.0% | 0.0% | 0.00% | 0.00% | 37 | 921 |
| Graduate | 26.2% | 56.8% | 24.6% | 8.4% | 5.9% | 3.4% | 0.00% | 0.89% | 30 | 747 |
| Master's | 16.1% | 47.5% | 43.0% | 0.0% | 9.5% | 0.0% | 0.00% | 0.00% | 8 | 204 |
| PhD | 30.0% | 58.7% | 20.9% | 10.0% | 5.2% | 4.1% | 0.00% | 1.07% | 22 | 543 |
| Employee | 82.5% | 13.7% | 52.9% | 33.4% | 0.0% | 0.0% | 0.00% | 0.00% | 5 | 133 |
| Faculty | 89.3% | 47.7% | 52.3% | 0.0% | 0.0% | 0.0% | 0.00% | 0.00% | 1 | 35 |
| Staff | 80.1% | 0.0% | 53.1% | 46.9% | 0.0% | 0.0% | 0.00% | 0.00% | 4 | 97 |
| Overall | 34.9% | 40.3% | 48.8% | 6.0% | 3.3% | 1.4% | 0.00% | 0.27% | 302 | 7,452 |
| Weighted Sample | 105 | 42 | 51 | 6 | 3 | 2 | 0 | 0 | 302 | NA |
| Projected Population | 2,603 | 1,048 | 1,271 | 155 | 85 | 37 | 0 | 7 | NA | 7,452 |

Results are based on responses to question Q38 (whether they traveled to campus each day), Q51 (travel mode each day), and Q27 (residential location). We calculate all mode split percentages as follows: first we calculate the percent of five weekdays that an individual used a particular mode and then take the average over all respondents. Data are weighted by role and gender.

Table 7. Share Using Each Mode on an Average Weekday, respondents living in West Village

| Role | Physically Travelled | Of those who physically travelled to campus | | | | | | | Weighted Sample | Projected Population |
|-----------------------------|----------------------|---|---------------|--------------|-----------------|--------------|--------------|--------------|-----------------|----------------------|
| | | Bike | Walk or Skate | Drive Alone | Carpool or Ride | Bus | Train | Ridehail | | |
| Student | 32.7% | 63.0% | 6.8% | 11.9% | 6.9% | 11.4% | 0.00% | 0.00% | 161 | 3,966 |
| Undergraduate | 33.3% | 63.0% | 6.4% | 12.1% | 7.0% | 11.5% | 0.00% | 0.00% | 155 | 3,818 |
| Freshman | 13.3% | 49.9% | 21.6% | 14.3% | 14.3% | 0.0% | 0.00% | 0.00% | 23 | 561 |
| Sophomore | 29.0% | 45.0% | 10.4% | 10.4% | 16.0% | 18.2% | 0.00% | 0.00% | 21 | 528 |
| Junior | 41.0% | 66.9% | 1.6% | 11.6% | 6.2% | 13.6% | 0.00% | 0.00% | 86 | 2,121 |
| Senior | 28.5% | 64.7% | 20.1% | 15.2% | 0.0% | 0.0% | 0.00% | 0.00% | 25 | 608 |
| Graduate | 17.2% | 62.1% | 31.0% | 0.0% | 0.0% | 6.9% | 0.00% | 0.00% | 6 | 148 |
| Master's | 13.1% | 47.3% | 52.7% | 0.0% | 0.0% | 0.0% | 0.00% | 0.00% | 5 | 114 |
| PhD | 31.2% | 83.3% | 0.0% | 0.0% | 0.0% | 16.7% | 0.00% | 0.00% | 1 | 34 |
| Employee | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% | 0.00% | 0 | 0 |
| Faculty | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% | 0.00% | 0 | 0 |
| Staff | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% | 0.00% | 0 | 0 |
| Overall | 32.7% | 63.0% | 6.8% | 11.9% | 6.9% | 11.4% | 0.00% | 0.00% | 161 | 3,966 |
| Weighted Sample | 53 | 33 | 4 | 6 | 4 | 6 | 0 | 0 | 161 | NA |
| Projected Population | 1,297 | 817 | 89 | 154 | 89 | 148 | 0 | 0 | NA | 3,966 |

Results are based on responses to question Q38 (whether they traveled to campus each day), Q51 (travel mode each day), and Q27 (residential location). We calculate all mode split percentages as follows: first we calculate the percent of five weekdays that an individual used a particular mode and then take the average over all respondents. Data are weighted by role and gender.

Table 8. Share Using Each Mode on an Average Weekday, respondents living off-campus within Davis

| Role | Physically Travelled | Of those who physically travelled to campus | | | | | | | Weighted Sample | Projected Population |
|-----------------------------|----------------------|---|---------------|--------------|-----------------|--------------|--------------|--------------|-----------------|----------------------|
| | | Bike | Walk or Skate | Drive Alone | Carpool or Ride | Bus | Train | Ridehail | | |
| Student | 28.7% | 43.4% | 6.4% | 29.5% | 9.9% | 10.7% | 0.00% | 0.05% | 919 | 22,678 |
| Undergraduate | 27.2% | 41.0% | 6.8% | 27.6% | 11.1% | 13.5% | 0.00% | 0.00% | 725 | 17,896 |
| Freshman | 18.3% | 59.4% | 3.1% | 31.2% | 6.2% | 0.0% | 0.00% | 0.00% | 38 | 935 |
| Sophomore | 23.9% | 44.1% | 9.0% | 12.3% | 14.7% | 19.9% | 0.00% | 0.00% | 151 | 3,723 |
| Junior | 27.2% | 38.5% | 10.7% | 19.7% | 12.3% | 18.7% | 0.00% | 0.00% | 208 | 5,134 |
| Senior | 29.8% | 40.0% | 4.0% | 37.5% | 9.3% | 9.2% | 0.00% | 0.00% | 328 | 8,104 |
| Graduate | 34.1% | 50.7% | 5.4% | 35.0% | 6.4% | 2.4% | 0.00% | 0.20% | 194 | 4,782 |
| Master's | 20.5% | 54.1% | 4.9% | 36.1% | 1.9% | 3.0% | 0.00% | 0.00% | 73 | 1,800 |
| PhD | 42.3% | 49.7% | 5.5% | 34.7% | 7.7% | 2.2% | 0.00% | 0.26% | 121 | 2,982 |
| Employee | 44.0% | 36.7% | 1.9% | 54.9% | 3.5% | 2.5% | 0.00% | 0.50% | 269 | 6,628 |
| Faculty | 36.0% | 45.9% | 6.2% | 40.6% | 6.0% | 1.3% | 0.00% | 0.00% | 62 | 1,520 |
| Staff | 46.4% | 34.5% | 0.9% | 58.2% | 3.0% | 2.8% | 0.00% | 0.61% | 207 | 5,108 |
| Overall | 32.1% | 41.3% | 5.0% | 37.3% | 7.9% | 8.2% | 0.00% | 0.19% | 1,187 | 29,306 |
| Weighted Sample | 382 | 158 | 19 | 142 | 30 | 31 | 0 | 1 | 1,187 | NA |
| Projected Population | 9,422 | 3,894 | 475 | 3,517 | 746 | 772 | 0 | 18 | NA | 29,306 |

Results are based on responses to question Q38 (whether they traveled to campus each day), Q51 (travel mode each day), and Q27 (residential location). We calculate all mode split percentages as follows: first we calculate the percent of five weekdays that an individual used a particular mode and then take the average over all respondents. Data are weighted by role and gender.

Table 9. Share Using Each Mode on an Average Weekday, respondents living outside Davis

| Role | Physically Travelled | Of those who physically travelled to campus | | | | | | | Weighted Sample | Projected Population |
|-----------------------------|----------------------|---|---------------|--------------|-----------------|-------------|--------------|--------------|-----------------|----------------------|
| | | Bike | Walk or Skate | Drive Alone | Carpool or Ride | Bus | Train | Ridehail | | |
| Student | 16.8% | 2.1% | 0.7% | 80.7% | 15.5% | 1.1% | 0.00% | 0.00% | 147 | 3,630 |
| Undergraduate | 10.4% | 4.8% | 1.5% | 70.2% | 23.5% | 0.0% | 0.00% | 0.00% | 102 | 2,523 |
| Freshman | 2.6% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.00% | 0.00% | 25 | 613 |
| Sophomore | 13.7% | 19.0% | 6.0% | 35.8% | 39.3% | 0.0% | 0.00% | 0.00% | 20 | 489 |
| Junior | 9.4% | 0.0% | 0.0% | 83.4% | 16.6% | 0.0% | 0.00% | 0.00% | 26 | 643 |
| Senior | 15.4% | 0.0% | 0.0% | 78.7% | 21.3% | 0.0% | 0.00% | 0.00% | 32 | 778 |
| Graduate | 31.4% | 0.0% | 0.0% | 88.7% | 9.4% | 1.9% | 0.00% | 0.00% | 45 | 1,107 |
| Master's | 25.6% | 0.0% | 0.0% | 95.5% | 4.5% | 0.0% | 0.00% | 0.00% | 22 | 544 |
| PhD | 37.0% | 0.0% | 0.0% | 84.2% | 12.8% | 3.1% | 0.00% | 0.00% | 23 | 563 |
| Employee | 44.4% | 0.8% | 0.7% | 93.3% | 3.9% | 0.3% | 1.08% | 0.00% | 386 | 9,532 |
| Faculty | 42.0% | 13.1% | 0.7% | 82.6% | 1.3% | 1.5% | 0.75% | 0.00% | 24 | 597 |
| Staff | 44.6% | 0.0% | 0.7% | 93.9% | 4.0% | 0.2% | 1.10% | 0.00% | 362 | 8,935 |
| Overall | 36.8% | 0.9% | 0.7% | 91.7% | 5.3% | 0.4% | 0.95% | 0.00% | 533 | 13,162 |
| Weighted Sample | 196 | 2 | 1 | 180 | 10 | 1 | 2 | 0 | 533 | NA |
| Projected Population | 4,845 | 46 | 35 | 4,442 | 259 | 18 | 46 | 0 | NA | 13,162 |

Results are based on responses to question Q38 (whether they traveled to campus each day), Q51 (travel mode each day), and Q27 (residential location). We calculate all mode split percentages as follows: first we calculate the percent of five weekdays that an individual used a particular mode and then take the average over all respondents. Data are weighted by role and gender.

Figure 6. Neighborhoods in Davis

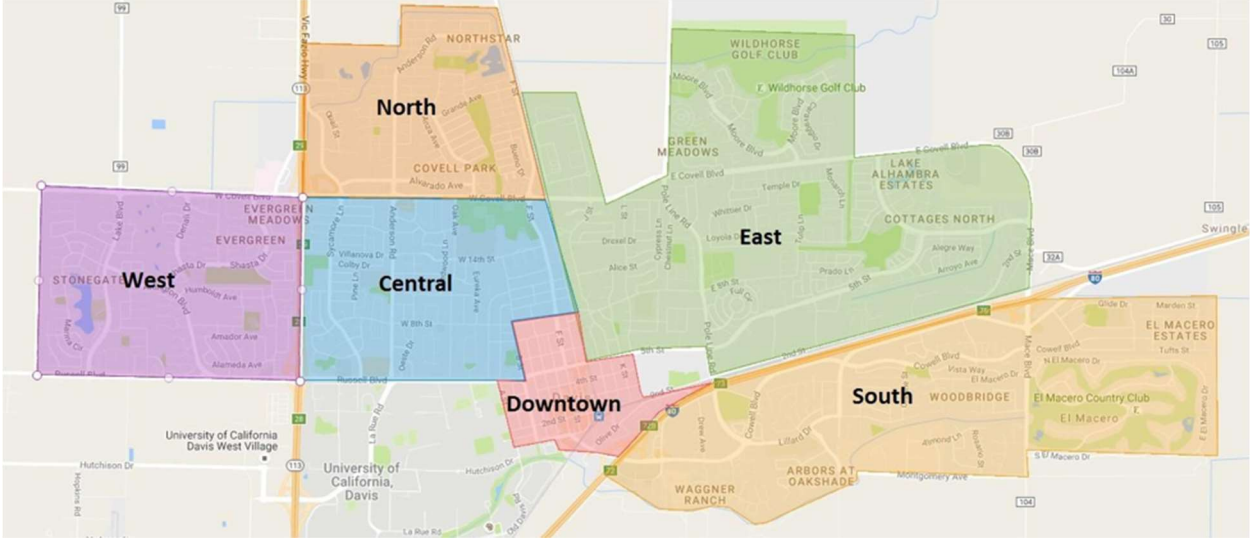


Table 10. Share Using Each Mode on an Average Weekday, by Neighborhood in Davis

| Neighborhood | Physically Travelled | Of those who physically travelled to campus | | | | | | | Weighted Sample | Projected Population |
|-----------------------------|----------------------|---|---------------|--------------|-----------------|-------------|--------------|--------------|-----------------|----------------------|
| | | Bike | Walk or Skate | Drive Alone | Carpool or Ride | Bus | Train | Ridehail | | |
| North | 27.7% | 36.5% | 2.1% | 39.6% | 9.3% | 12.4% | 0.00% | 0.00% | 233 | 5,744 |
| South | 29.3% | 23.5% | 2.7% | 51.0% | 8.1% | 14.7% | 0.00% | 0.00% | 149 | 3,686 |
| East | 36.9% | 44.5% | 1.0% | 40.7% | 7.7% | 5.1% | 0.00% | 0.96% | 204 | 5,032 |
| West | 33.0% | 37.8% | 1.8% | 44.5% | 7.5% | 8.4% | 0.00% | 0.00% | 227 | 5,595 |
| Central | 29.6% | 52.3% | 11.0% | 19.1% | 9.5% | 8.1% | 0.00% | 0.00% | 239 | 5,907 |
| Downtown | 40.3% | 49.6% | 13.3% | 31.6% | 5.1% | 0.4% | 0.00% | 0.00% | 97 | 2,400 |
| Overall | 32.1% | 41.3% | 5.0% | 37.3% | 7.9% | 8.2% | 0.00% | 0.19% | 1,187 | 29,306 |
| Weighted sample | 382 | 158 | 19 | 142 | 30 | 31 | 0 | 1 | 1,187 | NA |
| Projected population | 9,422 | 3,894 | 475 | 3,517 | 746 | 772 | 0 | 18 | NA | 29,306 |

Results are based on responses to question Q38 (whether they traveled to campus each day), Q51 (travel mode each day), and Q27 (residential location). We calculate all mode split percentages as follows: first we calculate the percent of five weekdays that an individual used a particular mode and then take the average over all respondents. Data are weighted by role and gender.

Comparison of 2020-21 Mode Share with 2019-20

One of the main purposes of the Campus Travel Survey is to collect comparable data each year in order to assess trends over time. The questions and calculations used to estimate mode share in this year's survey are nearly identical to those used in previous year's survey. In addition, the results of each year shown in this analysis are weighted by role and gender to correct for differences in response rates between subsets of the population over time.

Table 11 shows mode share estimates for 2019-20 and 2020-21. Data for both years are weighted by role and gender. This year experienced a markedly different mode share relative to the 2019-2020 survey year; largely as a result of the ongoing COVID-19 pandemic and associated campus closures.

Table 11. Comparison of Mode Shares, 2019-20 to 2018-19, Entire Sample

| Role | Physically Travelled | Of those who physically traveled to campus | | | | | | | Weighted Sample | Projected Population |
|----------------------|----------------------|--|---------------|--------------|-----------------|--------------|--------------|--------------|-----------------|----------------------|
| | | Bike | Walk or Skate | Drive Alone | Carpool or Ride | Bus | Train | Ridehail | | |
| 2020-21 | | | | | | | | | | |
| Student | 28.6% | 42.6% | 15.9% | 24.7% | 8.3% | 8.5% | 0.00% | 0.09% | 1,577 | 37,593 |
| Undergraduate | 27.9% | 42.5% | 18.2% | 20.5% | 8.7% | 10.1% | 0.00% | 0.06% | 1,293 | 30,810 |
| Graduate | 32.2% | 43.1% | 6.6% | 41.0% | 6.6% | 2.4% | 0.00% | 0.22% | 285 | 6,783 |
| Employee | 44.3% | 14.8% | 1.9% | 77.8% | 3.6% | 1.1% | 0.61% | 0.19% | 684 | 16,293 |
| Outside Davis | 36.8% | 0.9% | 0.7% | 91.7% | 5.3% | 0.4% | 0.95% | 0.00% | 533 | 13,162 |
| Within Davis | 32.7% | 43.2% | 13.8% | 28.7% | 6.9% | 7.2% | 0.00% | 0.19% | 1,650 | 40,724 |
| Overall | 33.4% | 31.5% | 10.3% | 46.0% | 6.4% | 5.5% | 0.24% | 0.13% | 2,261 | 53,886 |
| 2019-20 | | | | | | | | | | |
| Student | 87.4% | 40.6% | 12.5% | 18.1% | 4.4% | 23.5% | 0.41% | 0.52% | 2,164 | 38,071 |
| Undergraduate | 87.8% | 38.7% | 13.6% | 16.3% | 3.7% | 27.0% | 0.15% | 0.53% | 1,767 | 31,085 |
| Graduate | 85.7% | 49.6% | 7.1% | 26.6% | 7.2% | 7.5% | 1.60% | 0.47% | 397 | 6,986 |
| Employee | 80.3% | 18.7% | 2.4% | 64.6% | 8.1% | 3.8% | 2.25% | 0.13% | 934 | 16,426 |
| Outside Davis | 79.9% | 1.2% | 2.0% | 79.3% | 8.6% | 5.0% | 3.65% | 0.21% | 773 | 14,069 |
| Within Davis | 87.9% | 45.3% | 12.0% | 15.5% | 4.5% | 22.1% | 0.07% | 0.48% | 2,223 | 40,428 |
| Overall | 85.3% | 34.4% | 9.6% | 31.3% | 5.4% | 17.9% | 0.93% | 0.41% | 3,098 | 54,497 |

Results are based on responses to question Q38 (whether they traveled to campus each day) and Q51 (travel mode each day). Data are weighted by role and gender.

Mode Access

We asked all respondents whether they have a driver’s license (Q15), as well as what modes they have available to them for commuting to campus (Q18). Table 12 shows the share of respondents who have a driver’s license, can drive alone, or can bicycle to campus for their commute.

Table 12. Driver’s License, Car, and Bicycle Access

| | Driver's License | Access to a Car | Access to a Bike | Weighted Sample | Projected Population |
|-----------------------------|------------------|-----------------|------------------|-----------------|----------------------|
| Student | 82.4% | 57.8% | 78.4% | 1,523 | 37,593 |
| Undergraduate | 81.2% | 54.3% | 78.7% | 1,248 | 30,810 |
| Freshman | 67.9% | 36.2% | 80.5% | 266 | 6,567 |
| Sophomore | 72.0% | 41.2% | 84.0% | 221 | 5,443 |
| Junior | 88.5% | 61.5% | 79.3% | 340 | 8,388 |
| Senior | 88.5% | 66.8% | 74.3% | 422 | 10,412 |
| Graduate | 87.9% | 73.6% | 77.2% | 275 | 6,783 |
| Master's | 87.9% | 71.4% | 76.8% | 108 | 2,662 |
| PhD | 87.9% | 75.0% | 77.5% | 167 | 4,121 |
| Employee | 97.3% | 93.8% | 47.7% | 660 | 16,293 |
| Faculty | 99.1% | 93.8% | 76.0% | 87 | 2,152 |
| Staff | 97.0% | 93.8% | 43.4% | 573 | 14,141 |
| Outside Davis | 97.7% | 95.7% | 27.5% | 533 | 13,162 |
| Within Davis | 83.4% | 59.9% | 82.6% | 1,650 | 40,724 |
| Overall | 86.9% | 68.7% | 69.1% | 2,183 | 53,886 |
| Weighted sample | 1,897 | 1,499 | 1,509 | 2,183 | NA |
| Projected population | 46,821 | 37,003 | 37,246 | NA | 53,886 |

Results are based on responses to question Q15 (driver’s licensure) and Q18 (available modes to get to campus). Car access reflects those respondents who indicated that they have the option to drive alone to campus. Data are weighted by role and gender.

Potential for Bicycling

We include a question to assess the potential mode share of biking. In Q18, we asked respondents to “select all options that are available to you for getting to campus, whether or not you use them on a regular basis.” Answers to this question might be used as a proxy for the highest potential share of each mode, since those who do not consider a particular mode as viable will be very unlikely to choose it.

Table 13 shows the differences between the share of respondents who consider biking to campus an option and the share that actually bikes to campus on an average weekday. About 85 percent of respondents living within 1 mile from the center of campus consider bicycling an option, compared to about 67 percent of respondents who live 3 to 5 miles from the center of campus (i.e. living in off-campus Davis), with a steep drop in the perceived availability, and corresponding mode share, of bicycling for respondents living beyond 5 miles.

Table 13. Potential for Bicycling

| Residence | Share Biking on an Average Weekday* | Share Who Consider Biking an Option |
|------------------|-------------------------------------|-------------------------------------|
| Within 1 mile | 27.0% | 84.1% |
| 1 to 2.9 miles | 25.8% | 84.1% |
| 3 to 4.9 miles | 13.9% | 81.1% |
| 5 to 9.9 miles | 1.1% | 35.6% |
| 10 to 19.9 miles | 0.6% | 25.7% |
| 20 miles or more | 0.5% | 21.9% |
| Overall | 18.7% | 68.7% |

Results are based on responses to question Q18 (available modes to get to campus) and Q51 (daily travel). Data are weighted by role and gender for the 2,183 responses that were successfully geocoded and had mode choice data in Q51 (daily travel). Note that the COVID-19 pandemic lead to lower shares of commuters on all weekdays.

Carpoolers, Ridesharers, and Drivers

We ask those who indicate carpooling (multiple people in a vehicle arriving on campus together) or getting a ride to campus (rideshare, where the driver continues on to another destination after drop-off) how many other people were in the vehicle. These data enable us to accurately account for carpooling and ridesharing in our estimation of vehicle-miles traveled from person-miles traveled. The average vehicle occupancies for carpools and rides are shown in Table 14.

Among those who carpooled at any point during the reference week, the average number of passengers was 3, including the driver. Most people dropped off on campus were the sole passenger with an average of 1.1 passengers dropped off per ride to campus, excluding the driver.

Table 14. Average Carpool Size

| Role | Average Occupancy for those who carpooled or got a ride at least once | | Weighted Sample | | Projected Population | |
|----------------------|---|------|---------------------|-----------------|----------------------|------------------|
| | Carpool | Ride | Weighted Carpoolers | Weighted Riders | Projected Carpoolers | Projected Riders |
| Undergraduate | 3.12 | 1.14 | 98 | 86 | 2,424 | 2,116 |
| Graduate | 2.85 | 1.11 | 20 | 9 | 493 | 226 |
| Faculty | 3.00 | 1.21 | 2 | 3 | 52 | 68 |
| Staff | 3.15 | 1.00 | 20 | 14 | 487 | 353 |
| Outside Davis | 3.10 | 0.00 | 24 | 17 | 582 | 424 |
| Within Davis | 3.08 | 1.15 | 116 | 95 | 2,873 | 2,338 |
| Overall | 3.08 | 1.12 | 140 | 112 | 3,455 | 2,762 |

Vehicle occupancy is based on responses to Q60 (number of people in your carpool) and Q54 (number of people dropped off). Data are weighted by role and gender.

Number of Vehicles on Campus

Estimates of the number of people driving alone, carpooling, and getting a ride can be combined with average vehicle occupancy findings to estimate the total number of vehicles arriving on campus. We estimate the total number of vehicles as the number of people driving alone, plus fractional vehicles counted in proportion to vehicle occupancy. That is, if a respondent reports arriving in a four-person carpool, we count this as 0.25 vehicles arriving on campus on behalf of that respondent. We weight and expand the sample to project the total number of vehicles for the entire campus population, using the expansion factors shown in Table 15.

Table 15. Projected Vehicles Arriving on an Average Weekday, by Occupancy & Role

| Role | Projected number of vehicles on an average weekday | | | | Projected Population |
|----------------------|--|------------|------------|--------------|----------------------|
| | Drive Alone | Carpool | Ride | Total | |
| Student | 2,683 | 169 | 390 | 3,243 | 37,593 |
| Undergraduate | 1,787 | 138 | 332 | 2,257 | 30,810 |
| Freshman | 144 | 17 | 27 | 188 | 6,567 |
| Sophomore | 153 | 33 | 83 | 270 | 5,443 |
| Junior | 461 | 51 | 84 | 596 | 8,388 |
| Senior | 1,028 | 38 | 138 | 1,204 | 10,412 |
| Graduate | 896 | 32 | 58 | 986 | 6,783 |
| Master's | 266 | 2 | 9 | 278 | 2,662 |
| PhD | 630 | 30 | 49 | 709 | 4,121 |
| Employee | 5,585 | 58 | 86 | 5,729 | 16,293 |
| Faculty | 430 | 6 | 18 | 454 | 2,152 |
| Staff | 5,156 | 52 | 68 | 5,276 | 14,141 |
| Outside Davis | 4,442 | 59 | 77 | 4,578 | 13,162 |
| Within Davis | 3,826 | 169 | 400 | 4,395 | 40,724 |
| Overall | 8,268 | 228 | 477 | 8,972 | 53,886 |

Vehicle occupancy is based on responses to Q60 (number of people in your carpool) and Q54 (number of people dropped off). Data are weighted by role and gender.

Average Vehicle Ridership

Average vehicle ridership (AVR) is a statistic calculated at each UC campus that represents the ratio of the number of people arriving on campus to the number of personal vehicles brought to campus. We use a formula developed by the South Coast Air Quality Management District, intended to count weekday arrivals of employees from off-campus (only) and make adjustments for employees who telecommute, who adopt a compressed work week schedule, or who use a zero-emission vehicle to commute to campus (see “Appendix D: Calculation of Average Vehicle Ridership (AVR)” for details on the calculation of AVR). If everyone drove alone to campus, the campus AVR would be equal to one. Values greater than one indicate more carpooling, bus, or train use, or the use of active modes of transportation.

Among those traveling from off-campus, AVR is estimated to be 1.85 campus-wide, and 1.31 among non-student employees (Table 17). This means that for every car coming to campus, there are an estimated 1.85 off-campus people coming to campus. While this ratio was already trending downward before the pandemic, this year’s numbers reflect sharp increases in driving alone.

Table 16 and Table 17 shows the AVR estimates over the last ten years. Because the method for estimating campus population, used in calculating weights, was modified for the 2015-16 and subsequent analyses, comparisons with earlier years may not be valid.

Table 16. Average Vehicle Ridership (AVR) 2010-11 through 2020-21, Off-Campus Only

| Role | Only Off-Campus Residents | | | | | | | | | | |
|--|---------------------------|-------------|------------|-------------|-------------|-------------|-------------|------------|-------------|-------------|----------|
| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16* | 2016-17* | 2017-18* | 2018-19* | 2019-20* | 2020-21* |
| Student | 4.49 | 5.29 | 6.05 | 5.59 | 5.66 | 5.16 | 3.99 | 4.08 | 3.71 | 4.12 | 2.85 |
| Undergraduate | 5.38 | 6.42 | 7.23 | 6.44 | 6.33 | 5.9 | 4.31 | 4.46 | 4.13 | 4.37 | 3.16 |
| Freshman | 3.26 | 3.66 | 5.06 | 2.31 | 4.24 | 2.73 | 2.52 | 2.09 | 1.88 | 2.08 | 3.41 |
| Sophomore | 8.37 | 15.93 | 17.51 | 10.93 | 10.64 | 11.14 | 6.97 | 9.7 | 7.09 | 8.00 | 4.52 |
| Junior | 5.59 | 6.24 | 7.85 | 6.59 | 6.64 | 6.23 | 4.02 | 4.06 | 4.25 | 4.62 | 4.40 |
| Senior | 4.57 | 5.26 | 5.62 | 5.85 | 5.31 | 4.75 | 3.92 | 3.85 | 3.44 | 3.52 | 2.30 |
| Graduate | 2.79 | 3.14 | 3.55 | 3.57 | 3.99 | 3.44 | 3.11 | 3.11 | 2.75 | 3.43 | 2.16 |
| Master's | 2.73 | 3.34 | 3.15 | 2.76 | 3.04 | 3.11 | 3.07 | 2.81 | 2.49 | 3.30 | 1.92 |
| PhD | 2.82 | 3.03 | 3.84 | 4.32 | 4.78 | 3.77 | 3.13 | 3.43 | 2.95 | 3.53 | 2.27 |
| Employee | 1.75 | 1.78 | 1.7 | 1.75 | 1.61 | 1.83 | 1.55 | 1.6 | 1.63 | 1.59 | 1.31 |
| Faculty | 2.24 | 2.76 | 3.06 | 3.24 | 2.81 | 2.77 | 2.27 | 2.76 | 2.80 | 2.60 | 1.95 |
| Staff | 1.66 | 1.65 | 1.52 | 1.54 | 1.49 | 1.74 | 1.48 | 1.49 | 1.53 | 1.49 | 1.25 |
| Non-Student and Student Employees | NA | 2.45 | 2.51 | 2.58 | 2.57 | 2.61 | 2.25 | 2.32 | 2.16 | 2.21 | 1.63 |
| Outside Davis | 1.34 | 1.39 | 1.34 | 1.3 | 1.27 | 1.25 | 1.25 | 1.26 | 1.26 | 1.31 | 1.10 |
| Within Davis | 4.99 | 5.98 | 6.24 | 6.53 | 7.25 | 5.85 | 4.79 | 4.93 | 4.29 | 4.66 | 2.66 |
| Overall | 3 | 3.26 | 3.34 | 3.3 | 3.23 | 3.27 | 2.7 | 2.76 | 2.52 | 2.66 | 1.85 |

Bold indicates the official AVR statistic reported by UC campuses. *Based on new method for estimating campus population. See "Appendix D: Calculation of Average Vehicle Ridership" for details on AVR calculations.

Table 17. Average Vehicle Ridership (AVR) 2009-10 through 2020-21, On- and Off-Campus

| Role | All (On- and Off-Campus Residents) | | | | | | | | | | |
|--|------------------------------------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|
| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16* | 2016-17* | 2017-18* | 2018-19* | 2019-20* | 2020-21* |
| Student | 5.53 | 6.41 | 7.25 | 6.74 | 6.93 | 6.46 | 5.08 | 5.34 | 4.38 | 5.05 | 3.49 |
| Undergraduate | 6.72 | 8.01 | 8.77 | 7.96 | 7.92 | 7.61 | 5.71 | 6.09 | 4.98 | 5.55 | 4.01 |
| Freshman | 32.75 | 34.61 | 33.67 | 15.45 | 31.58 | 33.12 | 27.93 | 21.35 | 14.89 | 21.10 | 11.12 |
| Sophomore | 9.11 | 16.54 | 18.88 | 11.86 | 11.94 | 11.83 | 7.37 | 10.81 | 7.33 | 8.83 | 5.57 |
| Junior | 6.23 | 6.88 | 8.3 | 7.41 | 7.2 | 6.66 | 4.42 | 4.87 | 4.56 | 5.06 | 4.34 |
| Senior | 4.79 | 5.68 | 5.96 | 6.14 | 5.67 | 5.04 | 4.11 | 4.21 | 3.51 | 3.63 | 2.46 |
| Graduate | 3.18 | 3.45 | 4.03 | 3.88 | 4.4 | 3.77 | 3.29 | 3.42 | 2.96 | 3.66 | 2.31 |
| Master's | 2.94 | 3.57 | 3.43 | 2.92 | 3.35 | 3.34 | 3.2 | 3.1 | 2.68 | 3.46 | 2.01 |
| PhD | 3.33 | 3.39 | 4.47 | 4.75 | 5.28 | 4.18 | 3.36 | 3.77 | 3.17 | 3.81 | 2.44 |
| Employee | 1.75 | 1.8 | 1.7 | 1.75 | 1.61 | 1.83 | 1.55 | 1.61 | 1.62 | 1.59 | 1.32 |
| Faculty | 2.24 | 2.78 | 3.06 | 3.24 | 2.81 | 2.78 | 2.28 | 2.76 | 2.79 | 2.63 | 2.02 |
| Staff | 1.67 | 1.67 | 1.52 | 1.55 | 1.49 | 1.74 | 1.48 | 1.51 | 1.53 | 1.50 | 1.26 |
| Non-Student and Student Employees | NA | 2.59 | 2.64 | 2.69 | 2.7 | 2.72 | 2.35 | 2.49 | 2.22 | 2.29 | 1.68 |
| Outside Davis | 1.34 | 1.39 | 1.34 | 1.3 | 1.27 | 1.25 | 1.25 | 1.26 | 1.26 | 1.31 | 1.10 |
| Within Davis | 6.04 | 7.14 | 7.36 | 7.74 | 8.75 | 7.12 | 6.01 | 4.93 | 4.29 | 4.66 | 3.14 |
| Overall | 3.51 | 3.78 | 3.82 | 3.8 | 3.77 | 3.86 | 3.22 | 3.39 | 2.82 | 3.08 | 2.10 |

*Based on new method for estimating campus population. See "Appendix D: Calculation of Average Vehicle Ridership" for details on AVR calculations.

Vehicle Types

If respondents commuted to campus by vehicle during the reference week, we asked them what kind of vehicle they used. The sampled and projected vehicles by role and fuel type (internal combustion, hybrid, all-electric, et cetera) are shown in Table 18.

Table 18. Type of Vehicle Used During Reference Week

| Role | All-Electric | Biofuel | Compressed Natural Gas (CNG) | Conventional Hybrid | Gas or Diesel | Hydrogen Fuel Cell | Plug-in Hybrid Electric | Total |
|-----------------------------|--------------|-----------|------------------------------|---------------------|---------------|--------------------|-------------------------|---------------|
| Student | 5 | 0 | 3 | 40 | 423 | 3 | 9 | 483 |
| Undergraduate | 4 | 0 | 3 | 25 | 327 | 3 | 7 | 369 |
| Freshman | 1 | 0 | 0 | 2 | 53 | 0 | 1 | 58 |
| Sophomore | 1 | 0 | 0 | 4 | 47 | 3 | 1 | 56 |
| Junior | 2 | 0 | 1 | 9 | 90 | 0 | 4 | 105 |
| Senior | 0 | 0 | 2 | 10 | 137 | 0 | 2 | 151 |
| Graduate | 1 | 0 | 1 | 15 | 96 | 0 | 2 | 114 |
| Master's | 0 | 0 | 0 | 3 | 34 | 0 | 1 | 38 |
| PhD | 1 | 0 | 1 | 11 | 62 | 0 | 1 | 76 |
| Employee | 13 | 1 | 0 | 30 | 349 | 0 | 17 | 409 |
| Faculty | 3 | 0 | 0 | 5 | 30 | 0 | 4 | 42 |
| Staff | 10 | 1 | 0 | 25 | 318 | 0 | 13 | 368 |
| Overall | 30 | 3 | 1 | 160 | 1,401 | 0 | 27 | 1,622 |
| Weighted sample | 417 | 23 | 81 | 1,678 | 18,385 | 61 | 623 | 21,268 |
| Projected population | 5 | 0 | 3 | 40 | 423 | 3 | 9 | 483 |

Results are based on responses to Q55 (type of vehicle used last week). Data are weighted by role and gender.

Parking Permits

Whether or not they reported having a car, we asked all respondents whether they currently have a UC Davis parking permit, and if so, which type (Q25).

13 percent of respondents reported having an annual parking permit and 6.6 percent reported having a monthly or quarterly permit (Table 19). We also asked respondents whether they use daily parking permits (either purchased or received through the GoClub program) or an in-vehicle EasyPark Personal Parking Meter (now replaced by ParkMobile). About 56.6 percent of the population, or a projected 19,829 people, used a daily permit.

Table 19. Share of People with a Parking Permit

| Role | Either Annual or Monthly/Quarterly Permit | | Annual or Multi-Year Permit | | Monthly or Quarterly Permit | | Daily or GoClub Daily Permit | | EasyPark Meter | | Projected population |
|----------------------|---|----------------------|-----------------------------|----------------------|-----------------------------|----------------------|------------------------------|----------------------|-----------------|----------------------|----------------------|
| | Share of Sample | Projected Population | Share of Sample | Projected Population | Share of Sample | Projected Population | Share of Sample | Projected Population | Share of Sample | Projected Population | |
| Student | 8.1% | 2,940 | 1.8% | 661 | 6.3% | 2,279 | 60.6% | 22,054 | 1.3% | 488 | 36,374 |
| Undergraduate | 6.7% | 1,991 | 1.5% | 456 | 5.2% | 1,535 | 60.1% | 17,914 | 1.4% | 428 | 29,794 |
| Freshman | 7.3% | 474 | 0.4% | 26 | 6.9% | 448 | 47.6% | 3,086 | 0.0% | 0 | 6,488 |
| Sophomore | 3.4% | 177 | 0.0% | 0 | 3.4% | 177 | 59.0% | 3,101 | 0.0% | 0 | 5,256 |
| Junior | 8.4% | 673 | 2.3% | 180 | 6.1% | 492 | 63.2% | 5,066 | 1.2% | 97 | 8,010 |
| Senior | 6.7% | 668 | 2.5% | 250 | 4.2% | 418 | 66.3% | 6,661 | 3.3% | 331 | 10,041 |
| Graduate | 14.4% | 949 | 3.1% | 204 | 11.3% | 744 | 62.9% | 4,139 | 0.9% | 60 | 6,580 |
| Master's | 11.1% | 284 | 1.9% | 49 | 9.2% | 235 | 64.8% | 1,651 | 0.7% | 19 | 2,550 |
| PhD | 16.5% | 665 | 3.9% | 156 | 12.6% | 509 | 61.7% | 2,488 | 1.0% | 41 | 4,030 |
| Employee | 46.3% | 7,201 | 39.0% | 6,069 | 7.3% | 1,132 | 47.2% | 7,338 | 0.7% | 104 | 15,558 |
| Faculty | 38.8% | 814 | 35.0% | 734 | 3.8% | 80 | 51.8% | 1,088 | 2.7% | 57 | 2,100 |
| Staff | 47.5% | 6,387 | 39.6% | 5,335 | 7.8% | 1,052 | 46.4% | 6,250 | 0.3% | 46 | 13,458 |
| Outside Davis | 46.6% | 5,872 | 37.0% | 4,658 | 9.6% | 1,214 | 49.4% | 6,219 | 0.7% | 94 | 12,596 |
| Within Davis | 10.9% | 4,269 | 5.3% | 2,072 | 5.6% | 2,197 | 58.9% | 23,172 | 1.3% | 498 | 39,335 |
| Overall | 19.5% | 10,141 | 13.0% | 6,730 | 6.6% | 3,411 | 56.6% | 29,391 | 1.1% | 592 | 51,931 |

Results are based on responses to Q25 (UC Davis parking permit). Data are weighted by role and gender.

Transit Ridership

If respondents indicated that they rode transit at any point on their way to campus any day during the prior week, we asked them to indicate which transit service(s) they used (“Check all that apply”). Table 20 shows the share of bus users who used each service at least once during the reference week.

Of the 112 respondents who indicated riding the bus in the past week, the overwhelming majority reported using Unitrans at least once, followed distantly by Yolobus, SacRT and the Berkeley-Davis Shuttle. As noted elsewhere in this report, transit ridership was down regionally due to the COVID-19 pandemic.

Three respondents reported that they used the train to access campus during the reference week; all three respondents used Amtrak’s Capitol Corridor train.

Table 20. Share Using Specific Bus Services at least once during the Reference Week

| Role | Of those riding the bus to campus at least once | | | | | Weighted Sample | Projected Population |
|----------------------|---|-------------|-------------------|-----------------------------|-------------------------|-----------------|----------------------|
| | Unitrans | Yolobus | UCD/UCDMC Shuttle | Sacramento Regional Transit | UCD/UC Berkeley Shuttle | | |
| Undergraduate | 94.1% | 5.0% | 0.0% | 0.0% | 0.8% | 98 | 2,347 |
| Graduate | 91.9% | 0.0% | 0.0% | 8.1% | 0.0% | 6 | 149 |
| Faculty | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 1 | 25 |
| Staff | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 6 | 139 |
| Overall | 94.3% | 4.6% | 0.0% | 0.4% | 0.7% | 112 | 2,660 |

Results are based on responses to Q61 (bus or shuttle used last week). Data are weighted by role and gender.

Origins & Destinations

Residential Location

Travel behavior varies substantially by residential location so each year we ask respondents about their residential location, defined as the place of residence from which they regularly travel to campus. The four broad categories included are: the on campus area, the West Village apartments, off-campus elsewhere in Davis, and outside of Davis (Q27).

The results suggest that, of those who reported travel to campus during the reference week, 13.6 percent live on campus, 7.1 percent live in West Village, 54.3 percent live off-campus in Davis, and above 25 percent live outside of Davis (Table 21). Individuals who indicated that they live outside of Davis are most likely to live in the nearby cities of Sacramento, Woodland, Vacaville, West Sacramento, Dixon, Elk Grove, and Winters, as well as in the Bay Area (Berkeley, Oakland, San Francisco). An additional number of respondents had relocated due to the COVID-19 pandemic as of the survey period.

Table 21. Residential Location by Role Group (for Respondents who Traveled to Campus)

| | On Campus | West Village | Off-Campus in Davis | Outside Davis | Weighted Sample | Projected Population |
|-----------------------------|--------------|--------------|---------------------|---------------|-----------------|----------------------|
| Student | 19.1% | 10.1% | 60.7% | 10.1% | 1,577 | 37,593 |
| Undergraduate | 20.9% | 11.9% | 58.5% | 8.7% | 1,293 | 30,810 |
| Freshman | 67.1% | 8.4% | 14.9% | 9.6% | 276 | 6,567 |
| Sophomore | 12.5% | 9.4% | 69.5% | 8.7% | 228 | 5,443 |
| Junior | 5.6% | 24.0% | 62.5% | 7.9% | 352 | 8,388 |
| Senior | 8.6% | 5.6% | 77.0% | 8.8% | 437 | 10,412 |
| Graduate | 10.7% | 2.1% | 70.7% | 16.4% | 285 | 6,783 |
| Master's | 7.3% | 4.1% | 67.9% | 20.6% | 112 | 2,662 |
| PhD | 12.9% | 0.8% | 72.6% | 13.7% | 173 | 4,121 |
| Employee | 0.8% | 0.0% | 39.7% | 59.5% | 684 | 16,293 |
| Faculty | 1.6% | 0.0% | 70.8% | 27.6% | 90 | 2,152 |
| Staff | 0.7% | 0.0% | 35.0% | 64.4% | 593 | 14,141 |
| Overall | 13.6% | 7.1% | 54.3% | 25.1% | 2,261 | 53,886 |
| Weighted Sample | 306 | 160 | 1,228 | 566 | 2,261 | NA |
| Projected Population | 7,303 | 3,809 | 29,274 | 13,500 | NA | 53,886 |

Results are based on responses to Q27 (where do you live now?). Data are weighted by role and gender.

Distance to Campus

For the purpose of estimating vehicle miles traveled and carbon dioxide emissions from travel to campus, respondents were asked more detailed information about where they live, including the set of cross-streets nearest where they live (Q29) and their city or unincorporated county, if outside of Davis (Q30). This information was geocoded using the Google API, enabling a variety of spatial analyses (see “Appendix E: Geocoding and network distances” for details on the methodology).

We used the geocoded addresses to estimate the distance that respondents travel (along a shortest-time route) to get to campus (in particular, to the Silo) on a daily basis. Table 22 summarizes distances traveled by role group, showing that employees tend to live farther from campus than students. The median distance traveled among students is 1.65 miles, versus 2.82 miles among faculty and nearly 12 miles among staff (Table 22).

Table 22. Average Distance from Residence to Campus, by Role Group

| | <i>Of those geocoded, distance from campus (miles)</i> | | | | | Weighted Sample | Projected Population |
|------------------------|--|--------------|-------------|-------------|---------------|-----------------|----------------------|
| | Geocoded | Mean | Median | Minimum | Maximum | | |
| Student | 96.9% | 6.04 | 1.79 | 0.50 | 451.25 | 1,523 | 37,593 |
| Undergraduate | 96.8% | 5.94 | 1.57 | 0.50 | 447.84 | 1,248 | 30,810 |
| Freshman | 99.0% | 8.40 | 0.77 | 0.55 | 447.84 | 266 | 6,567 |
| Sophomore | 96.7% | 8.63 | 1.87 | 0.67 | 444.05 | 221 | 5,443 |
| Junior | 95.8% | 3.93 | 1.79 | 0.50 | 110.77 | 340 | 8,388 |
| Senior | 96.0% | 4.61 | 1.90 | 0.54 | 99.79 | 422 | 10,412 |
| Graduate | 97.0% | 6.47 | 2.02 | 0.63 | 451.25 | 275 | 6,783 |
| Master's | 95.7% | 7.13 | 1.90 | 0.72 | 78.77 | 108 | 2,662 |
| PhD | 97.6% | 6.05 | 2.13 | 0.63 | 451.25 | 167 | 4,121 |
| Employee | 95.9% | 14.09 | 8.94 | 0.52 | 156.47 | 660 | 16,293 |
| Faculty | 97.4% | 8.70 | 2.85 | 0.52 | 108.37 | 87 | 2,152 |
| Staff | 95.2% | 14.91 | 10.95 | 0.77 | 156.47 | 573 | 14,141 |
| Outside Davis | 94.3% | 28.80 | 18.03 | 1.14 | 451.25 | 533 | 13,162 |
| Within Davis | 97.3% | 1.90 | 1.79 | 0.50 | 108.37 | 1,650 | 40,724 |
| Overall | 96.6% | 8.47 | 2.21 | 0.50 | 451.25 | 2,183 | 53,886 |
| Weighted Sample | 2,108 | NA | NA | NA | NA | NA | NA |

Distances are calculated as the shortest time network distance between respondents' geocoded cross streets given in Q29 (intersection nearest to your residence) and a point on campus near the Silo. Data are weighted by role and gender for the 2,996 cases that were successfully geocoded and had mode choice data in Q51 (daily travel).

Destination on Campus

We asked employees and graduate students the location of their office, lab, or department. This was in part to screen out those whose offices or labs were outside of Davis, who are excluded from the sample for this study. The summary of these results are in Table 23.

Table 23. Destinations on Campus, by Role Group

| Role | Main Campus | West Campus (west of SR 113) | South Campus (south of I-80) | Off-Campus but in Davis | Weighted Sample | Projected Population |
|-----------------------------|--------------|------------------------------|------------------------------|-------------------------|-----------------|----------------------|
| Graduate | 84.5% | 6.4% | 3.8% | 5.3% | 281 | 6,783 |
| Master's | 82.4% | 4.0% | 4.0% | 9.6% | 111 | 2,662 |
| PhD | 85.9% | 8.0% | 3.7% | 2.4% | 170 | 4,121 |
| Employee | 80.4% | 7.8% | 4.3% | 7.5% | 684 | 16,293 |
| Faculty | 78.5% | 8.5% | 4.7% | 8.3% | 593 | 14,141 |
| Staff | 93.2% | 3.0% | 1.9% | 1.9% | 90 | 2,152 |
| Overall | 81.6% | 7.4% | 4.2% | 6.9% | 1,929 | 22,982 |
| Weighted Sample | 1,574 | 142 | 80 | 132 | 1,929 | NA |
| Projected Population | 18,754 | 957 | 1,696 | 1,575 | NA | 22,982 |

Vehicle Miles Traveled & Greenhouse Gas Emissions

For estimates of the number of miles traveled to and from campus, we rely on the calculated distances between respondents' geocoded home locations and a centroid on campus, located at the Silo. We assume respondents take the fastest path to and from campus on the days they report having traveled to campus. This method likely underestimates the true number of miles traveled to and from campus because it does not take into account side trips that respondents might make on the way to or from campus (e.g. stopping at the store, picking up children, or visiting friends), diversions from the shortest time path for a more pleasant or less congested route, or trips away from campus during the middle of the day (e.g. going to lunch or to an off-site meeting).

Vehicle Miles Traveled

We estimate the number of miles traveled to and from campus each day as the doubled network distance between respondents' geocoded home locations and the Silo on campus (as described in "Appendix E: Geocoding and network distances"), multiplied by the percent of weekdays a respondent traveled to campus. Thus, if a person lives 10 miles from campus and traveled to campus all five days, her average daily miles traveled would be 20 miles; by contrast, if she traveled to campus only one day, her average daily miles traveled would be 4 miles. We then attribute miles traveled to each mode based on the share of weekdays a respondent used each mode. Thus, if a respondent biked one day and drove four, we count 20 percent of her miles as bike miles and 80 percent as driving miles. Summed across all respondents, this figure represents the number of miles traveled by each mode on an average weekday.

Annual VMT & Campus Closure due to COVID-19

We calculate the annual VMT estimate with the assumption that the UC Davis campus was open for the entire academic year (summer and three 10-week quarters: fall, winter, and spring). This was not the case during the 2020-21 academic year; because of the COVID-19 pandemic and fluctuating levels of campus closure, travel likely varied throughout the school year. This caveat should be kept in mind when interpreting annual VMT estimates.

Annual VMT & PMT

To estimate the number of miles traveled annually, we first assume that respondents travel the same number of days per week and using the same modes as in the reference week for the entire 36 weeks of a normal three-quarter academic year. To estimate summer travel, we rely on responses to questions Q64 and Q65 about the number of weeks and average number of days per week traveled to campus during the summer, assuming respondents used the same modes as during the survey reference week throughout the summer. For example, annual miles biked = (distance from campus × 2) × (share of days biked during reference week) × [(36 weeks × 5 days/week) + (weeks traveled to campus during the summer × days/week traveled during summer)]. In order to estimate the daily miles traveled by each person on an average day we calculate a weighted average of summer and academic-year travel.

VMT is the miles traveled for each vehicle. Since different vehicles traveling to campus have varying occupancy (i.e. car vs bus vs train), person-miles traveled (PMT) accounts for both vehicles used and occupancy per mile. To estimate PMT for any travel in a personal vehicle or public transit vehicle (including driving alone, carpooling, getting a ride, riding a bus, and riding a train), we assume that each vehicle-mile traveled contributes a fractional person-mile equivalent of one divided by vehicle occupancy. We assume that travel by walking, biking, or skating contributes no PMT. Vehicle occupancy for carpooling and getting a ride varies for each respondent, as reported in questions Q60 and Q54 for those carpooling/vanpooling or getting a ride, respectively. If a respondent lives 10 miles from campus and traveled in a 3-person carpool all five weekdays, her average daily PMT would be $(10 \text{ miles} \times 2) / 3 = 6.67$ miles. Vehicle occupancy for those driving alone and for those who got a ride and were the only person dropped off on campus by the person giving them a ride is assumed to be one.

In addition to PMT for personal vehicles, we estimate PMT for buses and trains for the purpose of calculating the carbon dioxide equivalent emissions generated from commuting to campus (see next section). For bus and train occupancy, we assume average occupancy for all trips on those modes. We estimated average bus occupancy based on annual ridership data from Unitrans, since 91% of all bus riders use Unitrans. According to Unitrans' figures from FY 2018-19, Unitrans had an average of about 10 passengers per mile.¹ Thus, for someone who lives 10 miles from campus and traveled by bus all five weekdays, average bus PMT per day is $(10 \text{ miles} \times 2) / 10 \approx 2$ person-miles.

We estimate train occupancy based on annual ridership data from Amtrak's Capitol Corridor, since they provide nearly all of train rides to campus. According to figures in the Capitol Corridor Annual Business Plan, the Capitol Corridor had an average of 102 passengers per train mile in FY 2018-19.² If a respondent lives 100 miles from campus and traveled by train all five days, her average train PMT per day is estimated to be $(100 \text{ miles} \times 2) / 102 = 1.96$ person-miles.

Our estimates for person-miles traveled, by mode and role, are shown in Table 24 and Table 25.

¹ Unitrans General Manager's Report, Fiscal Year 2018-19.

² Capitol Corridor Joint Powers Authority. Capitol Corridor Intercity Passenger Rail Service Business Plan Update FY 2020-21 – FY 2021-22, Appendix C.

Table 24. Person-Miles-Traveled (PMT) Daily and Annually, by Mode

| Mode | Daily | | Annually | | Share of Total PMT | Share of Population | Projected Population |
|-----------------------------------|----------------|----------------|-------------------|----------------|--------------------|---------------------|----------------------|
| | Total PMT | PMT per Person | Total PMT | PMT per Person | | | |
| No travel | 0 | 0.0 | 0 | 0.0 | 0.0% | 66.3% | 35,720 |
| No vehicle (bike, walk, or skate) | 0 | 0.0 | 0 | 0.0 | 0.0% | 14.2% | 7,674 |
| Personal vehicles | 222,709 | 23.6 | 50,167,355 | 5,310.5 | 99.8% | 17.5% | 9,447 |
| Drive alone | 217,232 | 26.3 | 49,058,942 | 5,933.5 | 97.3% | 15.4% | 8,268 |
| Carpool or ride | 5,477 | 4.6 | 1,108,413 | 940.3 | 2.5% | 2.2% | 1,179 |
| Bus | 483 | 0.5 | 95,874 | 98.4 | 0.2% | 1.8% | 975 |
| Train | 33 | 0.7 | 7,964 | 173.9 | 0.0% | 0.1% | 46 |
| Total | 223,225 | 4.1 | 50,271,194 | 933.3 | 100.0% | 100.0% | 53,861 |

PMT are calculated as described in the text and annual estimates assume that campus operated for the entire academic year. Due to the COVID-19 pandemic, the campus operated remotely for the entirety of spring quarter. Mode groups are estimated using each means of transportation on a typical weekday, based on responses to questions Q38 (days traveled to campus) and Q51 (daily travel by mode). Data are weighted by role and gender for the 2,996 cases that were successfully geocoded and had mode choice data in Q51 (daily travel).

Table 25. Person-Miles-Traveled (PMT), Daily and Annually, by Role Group

| Role | Daily | | Annually | | Share of total PMT | Share of Population | Projected Population |
|----------------|------------|-------------------|------------|----------------|--------------------|---------------------|----------------------|
| | Total PMT | PMT per person | Total PMT | PMT per person | | | |
| 39,899 | 1.1 | 8,068,518 | 215 | 17.9% | 69.8% | 37,593 | 39,899 |
| 24,080 | 0.8 | 4,691,484 | 152 | 10.8% | 57.2% | 30,810 | 24,080 |
| 1,258 | 0.2 | 229,083 | 35 | 0.6% | 12.2% | 6,567 | 1,258 |
| 6,481 | 1.2 | 1,225,344 | 225 | 2.9% | 10.1% | 5,443 | 6,481 |
| 4,693 | 0.6 | 951,472 | 113 | 2.1% | 15.6% | 8,388 | 4,693 |
| 11,648 | 1.1 | 2,285,585 | 220 | 5.2% | 19.3% | 10,412 | 11,648 |
| 15,819 | 2.3 | 3,377,033 | 498 | 7.1% | 12.6% | 6,783 | 15,819 |
| 7,365 | 2.8 | 1,542,508 | 579 | 3.3% | 4.9% | 2,662 | 7,365 |
| 8,454 | 2.1 | 1,834,525 | 445 | 3.8% | 7.6% | 4,121 | 8,454 |
| 183,432 | 11.3 | 42,226,919 | 2,592 | 82.1% | 30.2% | 16,293 | 183,432 |
| 8,788 | 4.1 | 1,920,001 | 892 | 3.9% | 4.0% | 2,152 | 8,788 |
| 174,644 | 12.4 | 40,306,918 | 2,850 | 78.2% | 26.2% | 14,141 | 174,644 |
| 199,166 | 15.1 | 44,981,938 | 3,417 | 89.2% | 24.4% | 13,162 | 199,166 |
| 24,164 | 0.6 | 5,313,499 | 130 | 10.8% | 75.6% | 40,724 | 24,164 |
| 334 | 0.0 | 68,533 | 9 | 0.1% | 13.8% | 7,452 | 334 |
| 512 | 0.1 | 95,856 | 24 | 0.2% | 7.4% | 3,966 | 512 |
| 23,319 | 0.8 | 5,149,110 | 176 | 10.4% | 54.4% | 29,306 | 23,319 |
| 223,331 | 4.1 | 50,295,437 | 933 | 100.0% | 100.0% | 53,886 | 223,331 |

PMT are calculated as described in the text and annual estimates assume that campus operated for the entire academic year. Due to the COVID-19 pandemic, the campus operated remotely for the entirety of spring quarter. Data are weighted by role and gender for the 2,996 cases that were successfully geocoded and had mode choice data in Q51 (daily travel by mode).

Greenhouse Gas Emissions

We estimate the amount of greenhouse gases produced by campus travelers by assuming that each travel mode generates a certain quantity of carbon dioxide-equivalent (CO₂e) emissions per person-mile traveled, and multiplying this quantity by our estimate of miles traveled by each mode on an average weekday. In particular, we assume driving alone generates 1.1 pounds-equivalent of CO₂e per vehicle-mile (regardless of vehicle type), and that carpooling (getting a ride, riding a bus, and riding a train) produce some fractional amount of the emissions produced for the entire vehicle, adjusted for the total number of passengers in the vehicle.

For carpooling and getting rides, we adjust vehicle occupancies based on those reported by the respondents themselves. For transit, we assume average occupancies apply for all respondents. For Unitrans (about 92% of bus use for the entire campus), we use emissions estimates specific to the Unitrans fuel mix and passenger occupancy. For other bus services and Amtrak we estimate emissions based on national travel fuel use and emissions averages. See Appendix I for the calculation of average weekday pounds of greenhouse gas emissions by mode.

Using these assumptions, we estimate the greenhouse gas emissions generated by travel to campus. These estimates are summarized in Table 26 through Table 29.

Table 26. Daily Pounds of CO₂e Emitted, by Mode and Role

| Role | Pounds-equivalent of CO ₂ e generated on an average weekday | | | | | | | Average lbs per Person | Share of Total CO ₂ e | Share of Population | Projected Population |
|----------------------|--|------------|--------------|--------------|--------------|------------|----------------|------------------------|----------------------------------|---------------------|----------------------|
| | Drive Alone | Carpool | Ride | Bus | Train | Ridehail | Total | | | | |
| Student | 35,412 | 374 | 3,483 | 1,875 | 0 | 32 | 41,177 | 1.10 | 18.3% | 69.8% | 37,593 |
| Undergraduate | 20,373 | 241 | 2,991 | 1,614 | 0 | 8 | 25,227 | 0.82 | 11.2% | 57.2% | 30,810 |
| Freshman | 1,184 | 21 | 34 | 21 | 0 | 8 | 1,268 | 0.19 | 0.6% | 12.2% | 6,567 |
| Sophomore | 4,452 | 83 | 1,829 | 401 | 0 | 0 | 6,764 | 1.24 | 3.0% | 10.1% | 5,443 |
| Junior | 4,113 | 78 | 327 | 704 | 0 | 0 | 5,223 | 0.62 | 2.3% | 15.6% | 8,388 |
| Senior | 10,624 | 59 | 802 | 487 | 0 | 0 | 11,972 | 1.15 | 5.3% | 19.3% | 10,412 |
| Graduate | 15,039 | 133 | 492 | 261 | 0 | 24 | 15,950 | 2.35 | 7.1% | 12.6% | 6,783 |
| Master's | 7,059 | 13 | 248 | 31 | 0 | 0 | 7,351 | 2.76 | 3.3% | 4.9% | 2,662 |
| PhD | 7,981 | 120 | 244 | 230 | 0 | 24 | 8,599 | 2.09 | 3.8% | 7.6% | 4,121 |
| Employee | 180,689 | 592 | 999 | 508 | 1,216 | 72 | 184,077 | 11.30 | 81.7% | 30.2% | 16,293 |
| Faculty | 8,652 | 7 | 59 | 133 | 102 | 0 | 8,953 | 4.16 | 4.0% | 4.0% | 2,152 |
| Staff | 172,037 | 584 | 940 | 376 | 1,114 | 72 | 175,124 | 12.38 | 77.7% | 26.2% | 14,141 |
| Outside Davis | 194,198 | 712 | 3,118 | 432 | 1,216 | 0 | 199,677 | 15.17 | 88.6% | 24.4% | 13,162 |
| Within Davis | 21,904 | 254 | 1,364 | 1,951 | 0 | 105 | 25,577 | 0.63 | 11.4% | 75.6% | 40,724 |
| On Campus | 238 | 18 | 59 | 28 | 0 | 11 | 354 | 0.05 | 0.2% | 13.8% | 7,452 |
| West Village | 407 | 22 | 40 | 195 | 0 | 0 | 665 | 0.17 | 0.3% | 7.4% | 3,966 |
| Off Campus | 21,258 | 214 | 1,265 | 1,728 | 0 | 94 | 24,559 | 0.84 | 10.9% | 54.4% | 29,306 |
| Overall | 216,101 | 966 | 4,483 | 2,383 | 1,216 | 105 | 225,254 | 4.18 | 100.0% | 100.0% | 53,886 |

Data are weighted by role and gender for the 2,996 responses that were successfully geocoded.

Table 27. Annual Tons of CO₂e Emitted, by Mode and Role

| Role | Annual Tons of CO ₂ e Emissions | | | | | | | Average Tons per Person | Share of Total CO ₂ e | Share of Population | Projected Population |
|----------------------|--|------------|------------|------------|------------|-----------|---------------|-------------------------|----------------------------------|---------------------|----------------------|
| | Drive Alone | Carpool | Ride | Bus | Train | Ridehail | Total | | | | |
| Student | 4,016 | 42 | 395 | 213 | 0 | 4 | 4,669 | 0.12 | 18.3% | 69.8% | 37,593 |
| Undergraduate | 2,310 | 27 | 339 | 183 | 0 | 1 | 2,861 | 0.09 | 11.2% | 57.2% | 30,810 |
| Freshman | 134 | 2 | 4 | 2 | 0 | 1 | 144 | 0.02 | 0.6% | 12.2% | 6,567 |
| Sophomore | 505 | 9 | 207 | 46 | 0 | 0 | 767 | 0.14 | 3.0% | 10.1% | 5,443 |
| Junior | 466 | 9 | 37 | 80 | 0 | 0 | 592 | 0.07 | 2.3% | 15.6% | 8,388 |
| Senior | 1,205 | 7 | 91 | 55 | 0 | 0 | 1,358 | 0.13 | 5.3% | 19.3% | 10,412 |
| Graduate | 1,705 | 15 | 56 | 30 | 0 | 3 | 1,809 | 0.27 | 7.1% | 12.6% | 6,783 |
| Master's | 800 | 2 | 28 | 4 | 0 | 0 | 834 | 0.31 | 3.3% | 4.9% | 2,662 |
| PhD | 905 | 14 | 28 | 26 | 0 | 3 | 975 | 0.24 | 3.8% | 7.6% | 4,121 |
| Employee | 20,490 | 67 | 113 | 58 | 138 | 8 | 20,874 | 1.28 | 81.7% | 30.2% | 16,293 |
| Faculty | 981 | 1 | 7 | 15 | 12 | 0 | 1,015 | 0.47 | 4.0% | 4.0% | 2,152 |
| Staff | 19,509 | 66 | 107 | 43 | 126 | 8 | 19,859 | 1.40 | 77.7% | 26.2% | 14,141 |
| Outside Davis | 22,022 | 81 | 354 | 49 | 138 | 0 | 22,643 | 1.72 | 88.6% | 24.4% | 13,162 |
| Within Davis | 2,484 | 29 | 155 | 221 | 0 | 12 | 2,900 | 0.07 | 11.4% | 75.6% | 40,724 |
| On Campus | 27 | 2 | 7 | 3 | 0 | 1 | 40 | 0.01 | 0.2% | 13.8% | 7,452 |
| West Village | 46 | 2 | 5 | 22 | 0 | 0 | 75 | 0.02 | 0.3% | 7.4% | 3,966 |
| Off Campus | 2,411 | 24 | 143 | 196 | 0 | 11 | 2,785 | 0.10 | 10.9% | 54.4% | 29,306 |
| Overall | 24,506 | 110 | 508 | 270 | 138 | 12 | 25,543 | 0.47 | 100.0% | 100.0% | 53,886 |

Data are weighted by role and gender for the 2,996 responses that were successfully geocoded. Annual estimates assume that campus operated for the entire academic year. Due to the COVID-19 pandemic, the campus operated remotely for the entirety of spring quarter.

Table 28. Daily Pounds of CO₂e Emitted, by Mode and Role (not including Unitrans)

| Role | Pound-equivalent of CO ₂ e emissions generated on an average weekday | | | | | | | Average lbs per person | Share of total CO ₂ e | Share of Population | Projected Population |
|----------------------|---|------------|--------------|------------|--------------|------------|----------------|------------------------|----------------------------------|---------------------|----------------------|
| | Drive Alone | Carpool | Ride | Bus | Train | Ridehail | Total | | | | |
| Student | 35,412 | 374 | 3,483 | 325 | 0 | 32 | 39,627 | 1.05 | 17.7% | 69.8% | 37,593 |
| Undergraduate | 20,373 | 241 | 2,991 | 171 | 0 | 8 | 23,784 | 0.77 | 10.6% | 57.2% | 30,810 |
| Freshman | 1,184 | 21 | 34 | 6 | 0 | 8 | 1,253 | 0.19 | 0.6% | 12.2% | 6,567 |
| Sophomore | 4,452 | 83 | 1,829 | 51 | 0 | 0 | 6,414 | 1.18 | 2.9% | 10.1% | 5,443 |
| Junior | 4,113 | 78 | 327 | 56 | 0 | 0 | 4,574 | 0.55 | 2.0% | 15.6% | 8,388 |
| Senior | 10,624 | 59 | 802 | 58 | 0 | 0 | 11,543 | 1.11 | 5.2% | 19.3% | 10,412 |
| Graduate | 15,039 | 133 | 492 | 154 | 0 | 24 | 15,843 | 2.34 | 7.1% | 12.6% | 6,783 |
| Master's | 7,059 | 13 | 248 | 0 | 0 | 0 | 7,320 | 2.75 | 3.3% | 4.9% | 2,662 |
| PhD | 7,981 | 120 | 244 | 154 | 0 | 24 | 8,523 | 2.07 | 3.8% | 7.6% | 4,121 |
| Employee | 180,689 | 592 | 999 | 317 | 1,216 | 72 | 183,885 | 11.29 | 82.3% | 30.2% | 16,293 |
| Faculty | 8,652 | 7 | 59 | 129 | 102 | 0 | 8,949 | 4.16 | 4.0% | 4.0% | 2,152 |
| Staff | 172,037 | 584 | 940 | 188 | 1,114 | 72 | 174,936 | 12.37 | 78.3% | 26.2% | 14,141 |
| Outside Davis | 194,198 | 712 | 3,118 | 432 | 1,216 | 0 | 199,677 | 15.17 | 89.3% | 24.4% | 13,162 |
| Within Davis | 21,904 | 254 | 1,364 | 209 | 0 | 105 | 23,836 | 0.59 | 10.7% | 75.6% | 40,724 |
| On Campus | 238 | 18 | 59 | 6 | 0 | 11 | 332 | 0.04 | 0.1% | 13.8% | 7,452 |
| West Village | 407 | 22 | 40 | 43 | 0 | 0 | 513 | 0.13 | 0.2% | 7.4% | 3,966 |
| Off Campus | 21,258 | 214 | 1,265 | 161 | 0 | 94 | 22,991 | 0.78 | 10.3% | 54.4% | 29,306 |
| Overall | 216,101 | 966 | 4,483 | 642 | 1,216 | 105 | 223,513 | 4.15 | 100.0% | 100.0% | 53,886 |

Data are weighted by role and gender for the 2,996 responses that were successfully geocoded.

Table 29. Annual Tons of CO₂e Emitted, by Mode and Role (not Including Unitrans)

| Role | Annual Tons of CO ₂ e Emissions | | | | | | | Average Tons per Person | Share of Total CO ₂ e | Share of Population | Projected Population |
|----------------------|--|------------|------------|-----------|------------|-----------|---------------|-------------------------|----------------------------------|---------------------|----------------------|
| | Drive Alone | Carpool | Ride | Bus | Train | Ridehail | Total | | | | |
| Student | 4,016 | 42 | 395 | 37 | 0 | 4 | 4,494 | 0.12 | 17.7% | 69.8% | 37,593 |
| Undergraduate | 2,310 | 27 | 339 | 19 | 0 | 1 | 2,697 | 0.09 | 10.6% | 57.2% | 30,810 |
| Freshman | 134 | 2 | 4 | 1 | 0 | 1 | 142 | 0.02 | 0.6% | 12.2% | 6,567 |
| Sophomore | 505 | 9 | 207 | 6 | 0 | 0 | 727 | 0.13 | 2.9% | 10.1% | 5,443 |
| Junior | 466 | 9 | 37 | 6 | 0 | 0 | 519 | 0.06 | 2.0% | 15.6% | 8,388 |
| Senior | 1,205 | 7 | 91 | 7 | 0 | 0 | 1,309 | 0.13 | 5.2% | 19.3% | 10,412 |
| Graduate | 1,705 | 15 | 56 | 17 | 0 | 3 | 1,797 | 0.26 | 7.1% | 12.6% | 6,783 |
| Master's | 800 | 2 | 28 | 0 | 0 | 0 | 830 | 0.31 | 3.3% | 4.9% | 2,662 |
| PhD | 905 | 14 | 28 | 17 | 0 | 3 | 967 | 0.23 | 3.8% | 7.6% | 4,121 |
| Employee | 20,490 | 67 | 113 | 36 | 138 | 8 | 20,852 | 1.28 | 82.3% | 30.2% | 16,293 |
| Faculty | 981 | 1 | 7 | 15 | 12 | 0 | 1,015 | 0.47 | 4.0% | 4.0% | 2,152 |
| Staff | 19,509 | 66 | 107 | 21 | 126 | 8 | 19,837 | 1.40 | 78.3% | 26.2% | 14,141 |
| Outside Davis | 22,022 | 81 | 354 | 49 | 138 | 0 | 22,643 | 1.72 | 89.3% | 24.4% | 13,162 |
| Within Davis | 2,484 | 29 | 155 | 24 | 0 | 12 | 2,703 | 0.07 | 10.7% | 75.6% | 40,724 |
| On Campus | 27 | 2 | 7 | 1 | 0 | 1 | 38 | 0.01 | 0.1% | 13.8% | 7,452 |
| West Village | 46 | 2 | 5 | 5 | 0 | 0 | 58 | 0.01 | 0.2% | 7.4% | 3,966 |
| Off Campus | 2,411 | 24 | 143 | 18 | 0 | 11 | 2,607 | 0.09 | 10.3% | 54.4% | 29,306 |
| Overall | 24,506 | 110 | 508 | 73 | 138 | 12 | 25,346 | 0.47 | 100.0% | 100.0% | 53,886 |

Data are weighted by role and gender for the 2,996 responses that were successfully geocoded. Annual estimates assume that campus operated for the entire academic year. Due to the COVID-19 pandemic, the campus operated remotely for the entirety of spring quarter.

Awareness of TS Programs

We presented respondents with a list of campus transportation services and asked them to indicate their familiarity with them. Table 30 summarizes the responses for each service, and Table 31 compares responses for the past six years for those services that appeared on each of the surveys.

Table 30. Awareness of Transportation Programs & Services

| Program | I've used it | I've heard of it, but never used it | I've never heard of it |
|---|--------------|-------------------------------------|------------------------|
| GoClub program | 17.8% | 19.5% | 62.7% |
| Aggie Bike Buy Program | 1.1% | 42.4% | 56.4% |
| Bike tire air stations and repair stations around campus | 41.2% | 43.6% | 15.2% |
| Bicycle Education and Enforcement Program (BEEP) and bike safety video | 5.2% | 27.5% | 67.3% |
| Zipcar carsharing program | 10.4% | 65.8% | 23.7% |
| UC Davis motorist assistance program | 2.7% | 27.1% | 70.2% |
| Bike lock-cutting service | 3.4% | 49.5% | 47.1% |
| Bike theft reporting | 5.4% | 53.8% | 40.8% |
| UC Davis Bike Auction | 5.4% | 57.0% | 37.6% |
| TS Mobility Assistance Program | 1.2% | 36.3% | 62.5% |
| TS bicycle licensing program | 23.5% | 33.7% | 42.8% |

Results are based on responses to Q66 (familiarity with TAPS programs). Data are weighted by role and gender.

Table 31. Awareness of Transportation Programs & Services, 2015 through 2020-21

| Program | Change 2019-20 to 2020-21 | Percent who have heard of it or used it | | | | |
|---|---------------------------|---|---------|---------|---------|---------|
| | | 2019-20 | 2018-19 | 2017-18 | 2016-17 | 2015-16 |
| TS motorist assistance program | 11.1% | 37.5% | 26.4% | 25.0% | 32.0% | 32.0% |
| Zipcar carsharing program | 0.0% | 76.3% | 76.2% | 73.0% | 74.0% | 77.0% |
| Bike lock-cutting service | -13.8% | 52.9% | 66.7% | 65.0% | 65.0% | 69.0% |
| GoClub program | 7.9% | 37.3% | 29.4% | 29.0% | 34.0% | 37.0% |
| UC Davis Bike Auction | -4.2% | 62.4% | 66.6% | 65.0% | 68.0% | 76.0% |
| Bicycle Education and Enforcement Program (BEEP) and bike safety video | 3.3% | 32.7% | 29.4% | 31.0% | 32.0% | 35.0% |
| UC Davis Mobility Assistance Program | -14.9% | 37.5% | 52.4% | 51.0% | 52.0% | 56.0% |
| Aggie Bike Buy Program | 3.4% | 43.6% | 40.2% | 39.0% | 43.0% | 44.0% |
| Bike tire air stations and repair stations around campus | -0.8% | 84.8% | 85.6% | 83.0% | 87.0% | 88.0% |
| TS bicycle licensing program | -13.7% | 57.2% | 70.9% | 71.0% | 74.0% | 76.0% |

Results are based on responses to Q66 (familiarity with TS programs). See previous CTS reports for previous years' data. Data are weighted by role and gender.

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APPENDICES

Appendix A: Survey Instrument, 2020-21 Campus Travel Survey

Below is the full text of the survey instrument, shown without the formatting that appeared for online survey-takers. Notes about the conditional display of questions based on respondents' prior answers are shown in gray and blue (e.g. "Skip to Q12 if..." and "Display This Question if..."). Responses that allow for only a single selection are shown as circles; responses that allow for multiple selections are shown as squares. No questions required responses for respondents to proceed. As in past surveys, we updated the dates of the reference week after one and two weeks.

2020-21 UC Davis Campus Travel Survey

Start of Block: Welcome Page

Q1 Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is affiliated with UC Davis, including those who regularly travel to campus as well as those who are working or studying remotely. The results of this survey provide campus planners with valuable information about how people get to campus and their experiences with various transportation programs. UC Davis graduate students also use the data from this survey in their research. Your response is important to us! Participating in this research survey takes about 10-15 minutes to complete. Doing so is voluntary and we assure you that all responses are confidential and the results will only be published in the aggregate, without connection to any individual. You must be at least 18 years old to complete this survey. We're going to ask you questions in the following areas:

Your role at UC Davis Your travel to and from campus Your experience working or studying remotely
Your housing and experience with housing affordability Your experience with campus transportation programs and infrastructure Some background information about you

To reward you for your time and input, you will be entered into a drawing for forty \$50 Amazon gift cards and grand prizes of two Amazon Fire tablets. If you are unable to complete the survey but would like to be included in the drawing, please email us at travelsurvey@ucdavis.edu to be entered.

Thanks for participating! **Ryan G. Miller**, PhD Student, Geography Graduate Group (rgmiller@ucdavis.edu) **Susan Handy**, Professor, Institute of Transportation Studies (slhandy@ucdavis.edu)

End of Block: Welcome Page

Start of Block: Section 1 - Role

Q2 What is your primary role at UC Davis? If you are a student who is also employed by the university, please select your student role.

- Undergraduate student (including Post-baccalaureate) (1)
- Graduate student (2)
- Faculty (3)
- Staff (4)
- Visiting scholar (5)
- Post doc (6)
- Faculty emeritus (9)
- I'm no longer affiliated with UC Davis (8)
- Other: (10) _____

Skip To: Q12 If What is your primary role at UC Davis? = I'm no longer affiliated with UC Davis

Display This Question:

If What is your primary role at UC Davis? = Faculty

Q3 What is your current faculty status?

- Ladder rank (senate) (1)
 - Non-ladder rank (federation) (2)
 - Unsure (3)
-

Display This Question:

If What is your current faculty status? = Ladder rank (senate)

Q243 Do you have tenure?

- Yes (1)
 - No (4)
-

Display This Question:

If What is your primary role at UC Davis? = Undergraduate student (including Post-baccalaureate)

Q4 What year are you?

- Freshman (1)
- Sophomore (2)
- Junior (3)
- Senior (4)
- Fifth-year senior (5)
- Post-baccalaureate (6)
- Visiting / exchange student (7)
- Other: (8) _____

Display This Question:

If What year are you? = Sophomore

Or What year are you? = Junior

Or What year are you? = Senior

Or What year are you? = Fifth-year senior

Or What year are you? = Post-baccalaureate

Q5 Did you transfer to UC Davis from a college, university, or community college?

- Yes (1)
- No (2)

Display This Question:

If What is your primary role at UC Davis? = Graduate student

Q6 What type of graduate program are you in?

- Master's (1)
 - PhD (2)
 - Law (3)
 - MBA (4)
 - Veterinary (5)
 - Ed.D. or CANDEL (6)
 - Other: (7) _____
-

Display This Question:

If What is your primary role at UC Davis? = Visiting scholar

Q7 What is your campus role?

- Freshman (1)
 - Sophomore (2)
 - Junior (3)
 - Senior (4)
 - Master's student (5)
 - PhD student (6)
 - Post doc (7)
 - Faculty (8)
 - Other: (9) _____
-

Display This Question:

If What is your primary role at UC Davis? = Undergraduate student (including Post-baccalaureate)

Or What is your primary role at UC Davis? = Graduate student

Q8 As a student, are you also a paid employee of UC Davis?

Yes (1)

No (2)

Display This Question:

If What is your primary role at UC Davis? = Graduate student

Or What is your primary role at UC Davis? = Faculty

Or What is your primary role at UC Davis? = Staff

Or What is your primary role at UC Davis? = Visiting scholar

Or What is your primary role at UC Davis? = Post doc

Or What is your primary role at UC Davis? = Faculty emeritus

Or What is your primary role at UC Davis? = Faculty emeritus

Or What is your primary role at UC Davis? = Other:

Or Or What is your primary role at UC Davis? Other: Is Not Empty

Q9 Where is your office, lab, or department? (That is, wherever you usually spend your time, or would spend your time when COVID-19 is no longer a threat, when you travel to work or school at UC Davis)

Main Campus area (this is most people) (1)

On the Davis campus, in the West Campus area (west of SR 113) (2)

On the Davis campus, in the South Campus area (south of I-80) (3)

Technically off-campus, but within the City of Davis (4)

Outside of Davis (5)

Display This Question:

If Where is your office, lab, or department? (That is, wherever you usually spend your time, or woul... = Outside of Davis

Q10 Where outside of Davis is your office, lab, or department?

Skip To: Q11 If If Where outside of Davis is y... Is Displayed, Then Skip To Thank you for taking this shortened v...

Display This Question:

If Where is your office, lab, or department? (That is, wherever you usually spend your time, or woul... = Outside of Davis

Q11 Thank you for taking this shortened version of the Campus Travel Survey. Since your office or department is outside of UC Davis, we do not need any further information from you at this time.

Skip To: End of Survey If Thank you for taking this shortened version of the Campus Travel Survey. Since your office or dep... Is Displayed

Display This Question:

If What is your primary role at UC Davis? = I'm no longer affiliated with UC Davis

Q12 Thank you for taking this shortened version of the Campus Travel Survey. Since you are no longer affiliated with UC Davis, we do not need any further information from you at this time.

Skip To: End of Survey If Thank you for taking this shortened version of the Campus Travel Survey. Since you are no longer... Is Displayed

Display This Question:

If What year are you? != Freshman

Q244 Were you enrolled or working at UC Davis during the 2019–2020 academic year?

Yes (1)

No (4)

Page Break

Q245 Have you been traveling to campus since the beginning of Fall Quarter 2020?

- Not at all (1)
- Yes, occasionally (less than once per week) (2)
- Yes, regularly (at least once per week) (3)

End of Block: Section 1 - Role

Start of Block: Section 2a - General Background Information

Q13 Before we ask you more about your travel to campus, we have a few questions about you.

Q15 Do you currently have a driver's license?

- Yes, a California driver's license (1)
 - Yes, a non-California (but from the United States) driver's license (2)
 - Yes, a driver's license issued by another country (3)
 - No (4)
-

Page Break

Q16 Do you have any physical or other personal conditions that prevent or limit you from...

| | Yes (1) | No (2) |
|--------------------------|-----------------------|-----------------------|
| Walking (1) | <input type="radio"/> | <input type="radio"/> |
| Bicycling (2) | <input type="radio"/> | <input type="radio"/> |
| Driving (3) | <input type="radio"/> | <input type="radio"/> |
| Using public transit (4) | <input type="radio"/> | <input type="radio"/> |

Page Break

Q17 With which gender do you most identify?

- Woman (2)
- Man (7)
- Non-binary (6)
- Not listed: (3) _____
- Prefer not to say (8)

Page Break

Display This Question:

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week)

Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

Q18

We are interested in your available means of transportation.

Select all options that are available to you for getting to campus, whether or not you use them on a regular basis. Include options you would only use for part of the way.

- Walk (or wheelchair) (1)
- Bike (3)
- Electric-assist bike (e-bike) (23)
- Skate, skateboard, or scooter (2)
- Electric-assist scooter or skateboard (e-scooter or e-skateboard) (24)
- Drive alone in a car (or other vehicle) (6)
- Carpool and/or vanpool with others going to campus (7)
- Get dropped off by a friend or family (the driver continues on elsewhere) (8)
- Lyft, Uber, or other ride-hailing service (14)
- Motorcycle or Vespa-like scooter (5)
- Bus and/or shuttle (9)
- Train and/or light rail (10)
- Other: (22) _____

Page Break

Display This Question:

If We are interested in your available means of transportation. Select all options that are availabl... = Bike

Or We are interested in your available means of transportation. Select all options that are availabl... = Electric-assist bike (e-bike)

Q319 You indicated that you have access to a bike and/or an e-bike. Have you purchased a new bike following the start of the COVID-19 pandemic?

Yes (1)

No (4)

Display This Question:

If We are interested in your available means of transportation. Select all options that are availabl... = Skate, skateboard, or scooter

Q21 What kind of skates, skateboard, or scooter is available to you? Select all that apply.

Rollers skates or rollerblades (1)

Skateboard (2)

Scooter (4)

Display This Question:

If We are interested in your available means of transportation. Select all options that are availabl... = Carpool and/or vanpool with others going to campus

Q22 Do you have access to a carpool, vanpool, or both?

Carpool (1)

Vanpool (2)

Display This Question:

If We are interested in your available means of transportation. Select all options that are availabl... = Bus and/or shuttle

Q23 Which bus or shuttle is available to you? Select all that apply.

- Unitrans (1)
- Yolobus (2)
- Sacramento Regional Transit (4)
- UCD/UCDMC Intercampus Shuttle (Causeway Connection) (3)
- UC Berkeley/Davis Shuttle (5)
- Other: (6) _____

Display This Question:

If We are interested in your available means of transportation. Select all options that are availabl... = Train and/or light rail

Q24 Which train or light rail is available to you? Select all that apply.

- Amtrak/Capitol Corridor (1)
- BART (2)
- Sacramento Regional Transit (3)

Page Break

Display This Question:

If We are interested in your available means of transportation. Select all options that are availabl... = Drive alone in a car (or other vehicle)

Or We are interested in your available means of transportation. Select all options that are availabl... = Carpool and/or vanpool with others going to campus

Or We are interested in your available means of transportation. Select all options that are availabl... = Motorcycle or Vespa-like scooter

Q25 Do you currently have a UC Davis parking permit?

- No - I don't have one (1)
- Yes - Annual (or multi-year) permit (2)
- Yes - Monthly or quarterly permit (3)
- Yes - Complimentary GoClub parking permit (5)
- Yes - EasyPark Personal in-vehicle parking meter (6)

Page Break

Display This Question:

If We are interested in your available means of transportation. Select all options that are availabl... = Bus and/or shuttle

Or We are interested in your available means of transportation. Select all options that are availabl... = Train and/or light rail

Q26 Do you currently have a multi-ride transit pass?

Display This Choice:

If What is your primary role at UC Davis? = Undergraduate student (including Post-baccalaureate)

- Yes - with my student ID card (4)
- Yes - Monthly ticket (1)
- Yes - Multi-ride ticket (e.g. 10-rides) (2)
- Yes - Other: (5) _____
- No (3)

End of Block: Section 2a - General Background Information

Start of Block: Section 2b – Background Information about Residence

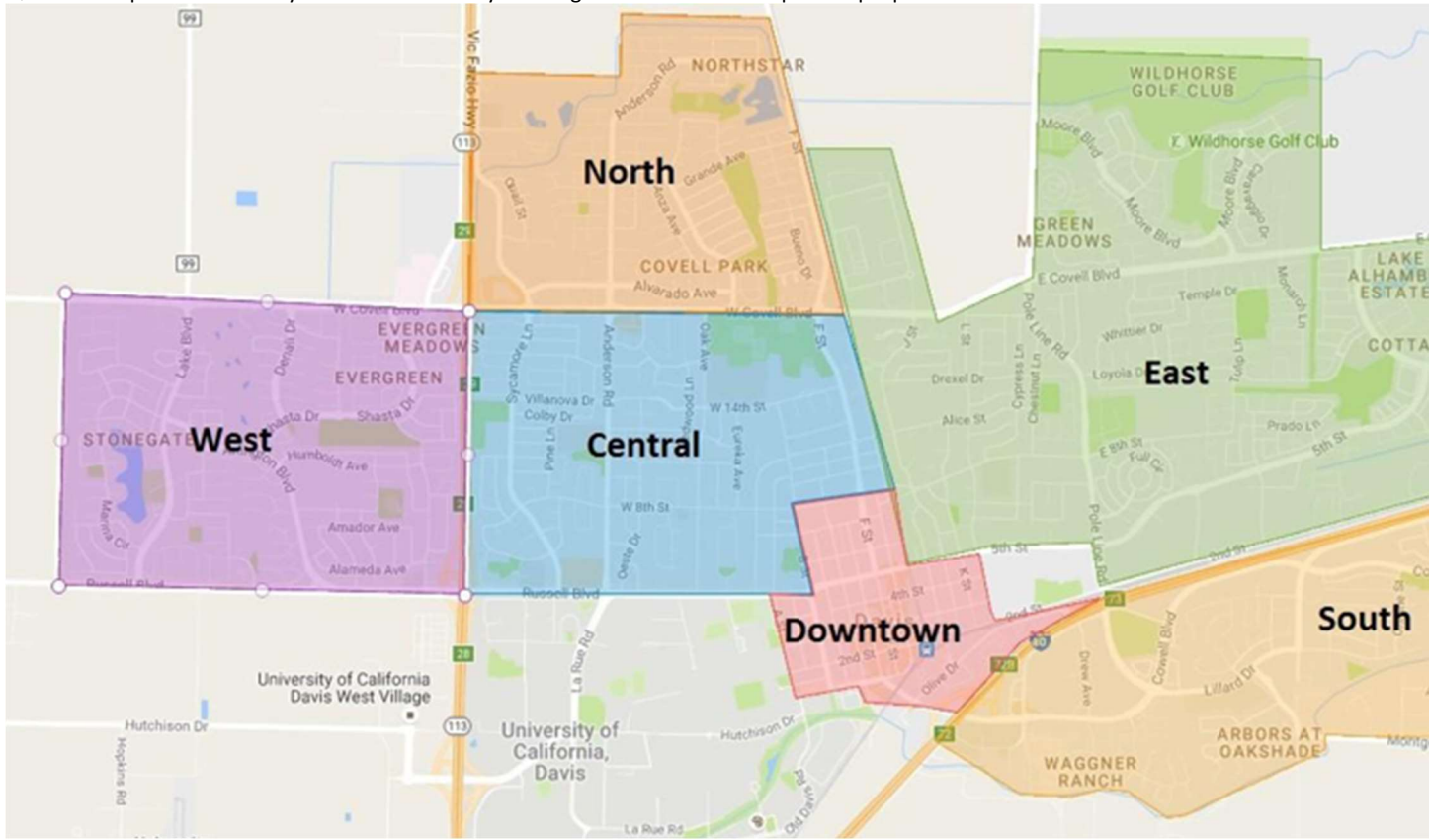
Q27 Where do you live now?

- On the UC Davis main campus** (includes Cuarto and the area east of SR 113, south of Russell Blvd, west of A St, and north of I-80) (1)
- On-campus** in the West Village apartments (2)
- City of Davis** (off-campus) (3)
- Outside of Davis** (4)

Display This Question:

If Where do you live now? = City of Davis (off-campus)

Q236 Which part of Davis do you live in? Click on your neighborhood on the map to drop a point.



Page Break

Display This Question:

If Where do you live now? = **Outside of Davis**

Q309 Where outside of Davis are you living?

- Elsewhere in California (1)
- In another state (outside of California) (2)
- Outside the United States (3)

Display This Question:

If Where outside of Davis are you living? = Elsewhere in California

Or Where outside of Davis are you living? = In another state (outside of California)



Q30 What is the ZIP code where you currently live (outside of Davis)?

Display This Question:

If Where outside of Davis are you living? = Outside the United States

Q322 Where are you living outside the US?

- City: (4) _____
- Country: (5) _____

Display This Question:

If Where do you live now? = **City of Davis** (off-campus)

Or Where outside of Davis are you living? = Elsewhere in California

And If

Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week)

Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

Q29

What intersection is nearest to your residence?

(Please answer for where you live when you are traveling to campus on a regular basis. This information will only be used to

calculate the approximate distance you travel to campus and to help plan facility needs around campus. It will be kept confidential and will not be used in any other way.)

Street #1: (1) _____

Street #2: (2) _____



Display This Question:

If Were you enrolled or working at UC Davis during the 2019–2020 academic year? = Yes

Q246 Are you now living somewhere different than you were before the campus closed because of COVID-19? (I.e. Are you living somewhere different than you were in March of this year?)

Yes (1)

No (2)

Page Break

Display This Question:

If Are you now living somewhere different than you were before the campus closed because of COVID-19... = Yes



Q247 What was the ZIP code of the residence you lived in **before** the campus closed because of COVID-19?

Display This Question:

If What is your primary role at UC Davis? = Undergraduate student (including Post-baccalaureate)

Or What is your primary role at UC Davis? = Graduate student

Or What is your primary role at UC Davis? = Faculty

Or What is your primary role at UC Davis? = Visiting scholar

Or What is your primary role at UC Davis? = Faculty emeritus

And If

Are you now living somewhere different than you were before the campus closed because of COVID-19... = Yes

Q248 Was your move related to the shift to remote work/instruction due to COVID-19?

Yes, entirely (1)

Yes, partially (2)

Not at all (3)

Display This Question:

If What is your primary role at UC Davis? = Staff

Or What is your primary role at UC Davis? = Post doc

Or What is your primary role at UC Davis? = Other:

Or Or What is your primary role at UC Davis? Other: Is Not Empty

And If

Are you now living somewhere different than you were before the campus closed because of COVID-19... = Yes

Q249 Was your move related to the shift to remote campus operations due to COVID-19?

Yes, entirely (1)

Yes, partially (2)

Not at all (3)

Start of Block: Section 3 - Travel to campus - Days traveled last week

Display This Question:

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week)

Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

Q36 Consider your activities during the last week, from Monday (November 9) through Sunday (November 15).

If you use a day planner or Google Calendar, it might be useful to look at the last week's activities as you complete this section. Your best guess is also okay!

Display This Question:

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week)

Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

Q37

Did you go somewhere on campus any day last week (November 9 - 15) for school or work?

If you live on campus, but went to other campus locations for school or work, please count those trips. If you went to a UC Davis office or lab that is technically off-campus, but within the City of Davis, please count that as well.

Yes, I traveled to campus destinations for school or work last week (1)

No, I did not travel to campus destinations for school or work last week (2)

Display This Question:

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week)

Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

And If

Did you go somewhere on campus any day last week (November 9 - 15) for school or work? If you I... = Yes, I traveled to campus destinations for school or work last week

Q38 On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count that as well.

- Monday (1)
- Tuesday (2)
- Wednesday (3)
- Thursday (4)
- Friday (5)
- Saturday (6)
- Sunday (7)

Display This Question:

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week)

And Did you go somewhere on campus any day last week (November 9 - 15) for school or work? If you l... = No, I did not travel to campus destinations for school or work last week

Q251 How frequently have you traveled to campus since the beginning of fall quarter?

- 1 time (1)
- 2 times (2)
- 3 times (3)
- 4 times (4)
- 5 or more (5)

Display This Question:

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

And Did you go somewhere on campus any day last week (November 9 - 15) for school or work? If you l... = No, I did not travel to campus destinations for school or work last week

Q252 On which days do you typically travel to campus (check all that apply)?

Monday (1)

Tuesday (2)

Wednesday (3)

Thursday (4)

Friday (5)

Saturday (6)

Sunday (7)

Page Break

Display This Question:

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week)

Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

Q253 What have been the main purposes of your travel to campus? Select all that apply.

- Work-related activity (1)
- School-related activity (2)
- Social activity (e.g. visiting friends) (3)
- Medical-related activity (e.g. appointment at Student Health) (4)
- Exercise or recreation (e.g. walk, jog.) (5)
- Accessing the internet (6)
- Errands on campus (7)
- Dropping off, picking up, or accompanying a person (8)
- Other (9) _____

Page Break

Display This Question:

If What have been the main purposes of your travel to campus? Select all that apply. = Work-related activity

Q254 Which of the following best describes why you have traveled to campus for work?

- I have been required to come to campus because of my job duties (1)
- I have felt a need to come to campus because of conditions at home (2)
- I have chosen to come to campus even though I haven't needed to (3)

Page Break

Display This Question:

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week)

Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Not at all

Q255 Have you been working or learning remotely (e.g. working, studying, "attending" remote lectures or meetings) while away from campus?

- Yes, I have been working/learning remotely (1)
- No, I have been on personal or professional leave (e.g. sickness, sabbatical, travel) (2)
- Other (3) _____

End of Block: Section 3 - Travel to campus - Days traveled last week

Start of Block: Section 4 - Travel to Campus - Days not traveled last week

Display This Question:

If Did you go somewhere on campus any day last week (November 9 - 15) for school or work? If you I... = No, I did not travel to campus destinations for school or work last week

And Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

Q39 What was the main reason you did not go to campus destinations last week for school or work?

- Study abroad or sabbatical (1)
 - Vacation, sickness, or personal leave (2)
 - Work or school-related travel (e.g. meeting, conference, field work) (3)
 - Telecommuting (working from home or another remote location) (4)
 - Temporary appointment elsewhere (internship, visiting scholar, teaching appointment, exchange program, etc.) (5)
 - Other: (6) _____
-

Display This Question:

If What is your primary role at UC Davis? = Faculty

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Or If

What is your primary role at UC Davis? = Staff

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Or If

What is your primary role at UC Davis? = Visiting scholar

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Or If

What is your primary role at UC Davis? = Post doc

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Or If

What is your primary role at UC Davis? = Graduate student

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Or If

What is your primary role at UC Davis? = Faculty emeritus

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

And If

Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

Q40

You mentioned that you **did not travel** to campus on the following days last week.

What was the main reason you did not travel to campus? Please answer for each day individually.

Display This Choice:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed

Display This Answer:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed

Display This Answer:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed

Display This Answer:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed

Display This Answer:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed

Display This Answer:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed

Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... != Monday

Display This Choice:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed

Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... != Tuesday

Display This Choice:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed

Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... != Wednesday

Display This Choice:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed

Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... != Thursday

Display This Choice:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed

Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... != Friday

Display This Choice:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed

| | | | | | | |
|--|--|---|---|--|--|------------------------------|
| <p>Display This Answer:</p> <p>If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed</p> <p>Monday (1)</p> | <p>Telecom muting (working from home or another remote location) (6)</p> | <p>Work or school-related travel (e.g. meeting, conference, field work) (7)</p> | <p>Regularly scheduled day off (8)</p> <p>Wednesday (3)</p> | <p>Vacation, sickness, or personal leave (9)</p> <p>Thursday (4)</p> | <p>Day off as part of a compressed work week (e.g. 9/80 schedule) (10)</p> <p>Friday (5)</p> | <p>Other (11)</p> |
| <p>Display This Choice:</p> <p>If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed</p> <p>Telecom muting (working from home or another remote location) (1)</p> | <p><input type="radio"/></p> | <p><input type="radio"/></p> | <p><input type="radio"/></p> | <p><input checked="" type="radio"/></p> | <p><input type="radio"/></p> | <p><input type="radio"/></p> |

Display
This
Choice:

If On
which days
last week
(November
9 - 15) did
you go
somewher
e on
campus? If
you went
to a UC
Dav... !=
Monday

Monday
(7)

Display
This
Choice:

If
Welcome
to the
2020-21
Campus
Travel
Survey! T
his annual
survey is
intended
for
everyone
who is... Is
Displayed

Work or
school-
related
travel
(e.g.
meeting,
conferenc
e, field
work) (2)

Display
This
Choice:

If On
which days
last week
(November
9 - 15) did
you go
somewher
e on
campus? If
you went
to a UC
Dav... !=
Tuesday

Tuesday
(8)

Display
This
Choice:

If
Welcome
to the
2020-21
Campus
Travel
Survey! T
his annual
survey is
intended
for
everyone
who is... Is
Displayed

Regularly
schedule
d day off
(3)

Display
This
Choice:

If On
which days
last week
(November
9 - 15) did
you go
somewhere
on
campus? If
you went
to a UC
Davis... !=
Wednesday

Wednesday (9)

Display
This
Choice:

If
Welcome
to the
2020-21
Campus
Travel
Survey! This
annual
survey is
intended
for
everyone
who is... Is
Displayed

Vacation,
sickness,
or
personal
leave (4)

Display
This
Choice:

If On
which days
last week
(November
9 - 15) did
you go
somewher
e on
campus? If
you went
to a UC
Dav... !=
Thursday

Thursday
(10)

Display
This
Choice:

If
Welcome
to the
2020-21
Campus
Travel
Survey! T
his annual
survey is
intended
for
everyone
who is... Is
Displayed

Day off as
part of a
compress
ed work
ed work
week (i.e.
4/40,
9/80, or
3/36
schedule)
(5)

Display
This
Choice:

If On
which days
last week
(November
9 - 15) did
you go
somewher
e on
campus? If
you went
to a UC
Dav... !=
Friday

Friday
(11)

Display
This
Choice:

If
Welcome
to the
2020-21
Campus
Travel
Survey! T
his annual
survey is
intended
for
everyone
who is... Is
Displayed

Other (6)

End of Block: Section 4 - Travel to Campus - Days not traveled last week

Start of Block: Section 5 - Travel to Campus - Usual travel to campus

Page Break

Display This Question:

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week)

Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

Carry Forward All Choices - Entered Text from "We are interested in your available means of transportation. Select all options that are available to you for getting to campus, whether or not you use them on a regular basis. Include options you would only use for part of the way."



Q44 What means of transportation do you **usually use to get to campus?** (If you usually use more than one mode of transportation, please select the one you usually use for **most of the distance**).

- Walk (or wheelchair) (1)
- Bike (2)
- Electric-assist bike (e-bike) (3)
- Skate, skateboard, or scooter (4)
- Electric-assist scooter or skateboard (e-scooter or e-skateboard) (5)
- Drive alone in a car (or other vehicle) (6)
- Carpool and/or vanpool with others going to campus (7)
- Get dropped off by a friend or family (the driver continues on elsewhere) (8)
- Lyft, Uber, or other ride-hailing service (9)
- Motorcycle or Vespa-like scooter (10)
- Bus and/or shuttle (11)
- Train and/or light rail (12)
- Other: (13)

Display This Question:

If If What means of transportation do you usually use to get to campus? (If you usually use more than o... Bus and/or shuttle Is Selected

Carry Forward Selected Choices - Entered Text from "Which bus or shuttle is available to you? Select all that apply."



Q45 Which bus do you **usually use to get to campus?**

- Unitrans (1)
- Yolobus (2)
- Sacramento Regional Transit (3)
- UCD/UCDMC Intercampus Shuttle (Causeway Connection) (4)
- UC Berkeley/Davis Shuttle (5)
- Other: (6)

Page Break

Display This Question:

If What is your primary role at UC Davis? = Staff

And Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week)

Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

Q48 When do you typically arrive on campus?

▼ Before 7:00 am (2) ... Noon or later (13)

Display This Question:

If Were you enrolled or working at UC Davis during the 2019–2020 academic year? = Yes

Carry Forward All Choices - Displayed & Hidden from "What means of transportation do you usually use to get to campus? (If you usually use more than one mode of transportation, please select the one you usually use for most of the distance)."



Q256 You indicated that you were affiliated with campus during the 2019–2020 school year.

What means of transportation did you usually use to get to campus before it closed due to COVID-19? (If you usually used more than one mode of transportation, please select the one you usually used for most of the distance).

- Walk (or wheelchair) (1)
- Bike (2)
- Electric-assist bike (e-bike) (3)
- Skate, skateboard, or scooter (4)
- Electric-assist scooter or skateboard (e-scooter or e-skateboard) (5)
- Drive alone in a car (or other vehicle) (6)
- Carpool and/or vanpool with others going to campus (7)
- Get dropped off by a friend or family (the driver continues on elsewhere) (8)
- Lyft, Uber, or other ride-hailing service (9)
- Motorcycle or Vespa-like scooter (10)
- Bus and/or shuttle (11)
- Train and/or light rail (12)
- Other: (13)

Page Break

Carry Forward All Choices - Displayed & Hidden from "You indicated that you were affiliated with campus during the 2019–2020 school year. What means of transportation did you usually use to get to campus before it closed due to COVID-19? (If you usually used more than one mode of transportation, please select the one you usually used for most of the distance). "



Q257 What means of transportation do you anticipate using to get to campus after COVID-19 is no longer a threat? (If you anticipate using more than one mode of transportation, please select the one you would use for most of the distance).

- Walk (or wheelchair) (1)
- Bike (2)
- Electric-assist bike (e-bike) (3)
- Skate, skateboard, or scooter (4)
- Electric-assist scooter or skateboard (e-scooter or e-skateboard) (5)
- Drive alone in a car (or other vehicle) (6)
- Carpool and/or vanpool with others going to campus (7)
- Get dropped off by a friend or family (the driver continues on elsewhere) (8)
- Lyft, Uber, or other ride-hailing service (9)
- Motorcycle or Vespa-like scooter (10)
- Bus and/or shuttle (11)
- Train and/or light rail (12)
- Other: (13)

Page Break

Display This Question:

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Not at all

Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week)

And If

What is your primary role at UC Davis? = Faculty

Or What is your primary role at UC Davis? = Staff

Or What is your primary role at UC Davis? = Visiting scholar

Or What is your primary role at UC Davis? = Post doc

Or What is your primary role at UC Davis? = Faculty emeritus

Or What is your primary role at UC Davis? = Other:

Q318 How much money do you estimate you are saving per week by not traveling to campus regularly? Please respond in dollars.

\$ (4) _____

End of Block: Section 5 - Travel to Campus - Usual travel to campus

Start of Block: Section 6 - Travel to Campus - Modes used last week

Display This Question:

If If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

Q49 Consider how you traveled to campus **last week**.

Display This Question:

If If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

Carry Forward Displayed Choices from "We are interested in your available means of transportation. Select all options that are available to you for getting to campus, whether or not you use them on a regular basis. Include options you would only use for part of the way."



Q50 **First think back to the entire week (Monday, November 2 - Sunday, November 8).** Please tell us **all** the different means of transportation you used at some point on your way to school or work, from the moment you left home to when you arrived

at your first destination on campus – even if it was just for part of the way – on any day that week. Select **all** that apply.

- Walk (or wheelchair) (1)
- Bike (2)
- Electric-assist bike (e-bike) (3)
- Skate, skateboard, or scooter (4)
- Electric-assist scooter or skateboard (e-scooter or e-skateboard) (5)
- Drive alone in a car (or other vehicle) (6)
- Carpool and/or vanpool with others going to campus (7)
- Get dropped off by a friend or family (the driver continues on elsewhere) (8)
- Lyft, Uber, or other ride-hailing service (9)
- Motorcycle or Vespa-like scooter (10)
- Bus and/or shuttle (11)
- Train and/or light rail (12)
- Other: (13) _____

Display This Question:

If If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

Carry Forward Selected Choices - Entered Text from "First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us all the different means of transportation you used at some point on your way to school or work, from the moment you left home to when you arrived at your first destination on campus – even if it was just for part of the way – on any day that week. Select all that apply. "



Q51 Next, consider each day specifically. Please select how you got to your first campus destination each day. (If you used more than one mode of transportation, select whatever you did for **most of the distance.**)

Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... = Monday

Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... = Tuesday

Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... = Wednesday

Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... = Thursday

Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... = Friday

Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... = Saturday

Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... = Sunday

| | | | | | | | | | | | | |
|-------------------------------------|-------------|--|--|---|--|---|--|---|---|--------------------------------------|--|----------------|
| Walk (or wheel- chair) (1) | Bike (2) | Electric- assist bike (e- bike) (3) | Skate, skateboard, or scooter (4) | Electric- assist scooter or skateboard (e- scooter or e- skateboard) (5) | Drive alone in a car (or other vehicle) (6) | Carpool and/or vanpool with others going to campus (7) | Get dropped off by a friend or family (the driver continues on elsewhere) (8) | Lyft, Uber, or other ride- hailing service (9) | Motorcycle or Vespa- like scooter (10) | Bus and /or shuttle (11) | Train and /or light rail (12) | Other: (13) |
|-------------------------------------|-------------|--|--|---|--|---|--|---|---|--------------------------------------|--|----------------|

Display
This
Choice:

If
On
which
days last
week
(November 9 -
15) did
you go
somewhere
on
campus?
If you
went to
a UC
Dav... =
Monday

Monday
(1)

○ (○ ○ ((○ (○ (((

Display
This
Choice:

If
On
which
days last
week
(Novem
ber 9 -
15) did
you go
somewh
ere on
campus?
If you
went to
a UC
Dav... =
Tuesday

Tuesda
y (2)



Display
This
Choice:

If
On
which
days last
week
(Novem
ber 9 -
15) did
you go
somewh
ere on
campus?
If you
went to
a UC
Dav... =
Wednes
day

Wedne
sday (3)



Display
This
Choice:

If
On
which
days last
week
(Novem
ber 9 -
15) did
you go
somewh
ere on
campus?
If you
went to
a UC
Dav... =
Thursda
y

Thursd
ay (4)



Display
This
Choice:

If
On
which
days last
week
(Novem
ber 9 -
15) did
you go
somewh
ere on
campus?
If you
went to
a UC
Dav... =
Friday

Friday
(5)



Display
This
Choice:

If
On
which
days last
week
(Novem
ber 9 -
15) did
you go
somewh
ere on
campus?
If you
went to
a UC
Dav... =
Saturda
y

**Saturda
y (6)**

Display
This
Choice:

If
On
which
days last
week
(Novem
ber 9 -
15) did
you go
somewh
ere on
campus?
If you
went to
a UC
Dav... =
Sunday

**Sunday
(7)**

End of Block: Section 6 - Travel to Campus - Modes used last week

Start of Block: Section 8 - Travel to campus - More details about mode last week

Display This Question:

If First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us all the different means of transportation you used at some point on your way to scho... Skate, skateboard, or scooter Is Selected

Or Next, consider each day specifically. Please select how you got to your first campus destination... [Skate, skateboard, or scooter] (Count) > 0

And If

If What kind of skates, skateboard, or scooter is available to you? Select all that apply. q://QID374/SelectedChoicesCount Is Greater Than 1

Carry Forward Selected Choices from "What kind of skates, skateboard, or scooter is available to you? Select all that apply."



Q53 What kind of skates, skateboard, or scooter did you use **last week**?

Rollers skates or rollerblades (1)

Skateboard (2)

Scooter (3)

Display This Question:

If First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us all the different means of transportation you used at some point on your way to scho... Get dropped off by a friend or family (the driver continues on elsewhere) Is Selected

Or Next, consider each day specifically. Please select how you got to your first campus destination... [Get dropped off by a friend or family (the driver continues on elsewhere)] (Count) > 0

Q54 During the times when you got dropped off by a friend or family **last week**, how many people did your driver usually drop off?

- 1 (just you) (1)
- 2 people (2)
- 3 people (3)
- 4 people (4)
- 5 people (5)
- 6 people (6)
- 7 people (7)
- 8 people (8)
- 9 people (9)
- 10 people (10)
- 11 or more people (11)

Display This Question:

If First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us all the different means of transportation you used at some point on your way to scho... Drive alone in a car (or other vehicle) Is Selected

Or Or First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us all the different means of transportation you used at some point on your way to scho... Carpool and/or vanpool with others going to campus Is Selected

Or Or First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us all the different means of transportation you used at some point on your way to scho... Get dropped off by a friend or family (the driver continues on elsewhere) Is Selected

Or Or First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us all the different means of transportation you used at some point on your way to scho... Motorcycle or Vespa-like scooter Is Selected

Q55 Which type of vehicle did you use to get to campus **last week**?

- Gasoline or diesel vehicle (1)
- Conventional hybrid vehicle (does not plug into the electricity grid) (2)
- Plug-in hybrid electric vehicle (3)
- All-electric vehicle (4)
- CNG fueled vehicle (5)
- Biofuel vehicle (6)
- Hydrogen fuel cell vehicle (7)

Page Break

Display This Question:

If First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us the different means of transportation you used at some point on your way to school... Drive alone in a car (or other vehicle) Is Selected

Or First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us the different means of transportation you used at some point on your way to school... Carpool and/or vanpool with others going to campus Is Selected

Or First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us the different means of transportation you used at some point on your way to school... Motorcycle or Vespa-like scooter Is Selected

Or What means of transportation do you usually use to get to campus? (If you usually use more than one) Drive alone in a car (or other vehicle) Is Selected

Or What means of transportation do you usually use to get to campus? (If you usually use more than one) Carpool and/or vanpool with others going to campus Is Selected

Or What means of transportation do you usually use to get to campus? (If you usually use more than one) Motorcycle or Vespa-like scooter Is Selected

Q57 When you drive to Davis for school or work, do you **usually** park on-campus or off-campus?

On-campus (1)

Off-campus (2)

Display This Question:

If When you drive to Davis for school or work, do you usually park on-campus or off-campus? = Off-campus

Q58 How do you **usually** get from your parked car to campus?

Walk (or wheelchair) (8)

Personal bike (9)

Bike share (e.g. JUMP) (10)

Skate, skateboard, or scooter (11)

Get dropped off by a friend or family (12)

Bus or shuttle (13)

Lyft, Uber, or other ride hailing service (14)

Other: (15) _____

Display This Question:

If First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us all the different means of transportation you used at some point on your way to school... Carpool and/or vanpool with others going to campus Is Selected

Or Next, consider each day specifically. Please select how you got to your first campus destination... [Carpool and/or vanpool with others going to campus] (Count) > 0

Q59 You mentioned that you carpoled or vanpoled last week. Which was it?

Carpool (1)

Vanpool (2)

Display This Question:

If First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us all the different means of transportation you used at some point on your way to school... Carpool and/or vanpool with others going to campus Is Selected

Or Next, consider each day specifically. Please select how you got to your first campus destination... [Carpool and/or vanpool with others going to campus] (Count) > 0

Q60 During the times when you carpoled or vanpoled last week, about how many people were in your carpool or vanpool (including yourself)?

2 (you plus one other person) (1)

3 people (2)

4 people (3)

5 people (4)

6 people (5)

7 people (6)

8 people (7)

9 people (8)

10 people (9)

11 people (10)

12 or more people (11)

Display This Question:

If First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us all the different means of transportation you used at some point on your way to scho... Bus and/or shuttle Is Selected

Or Next, consider each day specifically. Please select how you got to your first campus destination... = Bus and/or shuttle

Carry Forward All Choices - Entered Text from "Which bus or shuttle is available to you? Select all that apply."



Q61 Which bus or shuttle did you use on your way to campus last week? If you used more than one, please select the service used for the greater distance of your trip.

- Unitrans (1)
- Yolobus (2)
- Sacramento Regional Transit (3)
- UCD/UCDMC Intercampus Shuttle (Causeway Connection) (4)
- UC Berkeley/Davis Shuttle (5)
- Other: (6)

Page Break

Display This Question:

If First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us all the different means of transportation you used at some point on your way to scho... Train and/or light rail Is Selected

Or Next, consider each day specifically. Please select how you got to your first campus destination... [Train and/or light rail] (Count) > 0

Carry Forward Displayed Choices from "Which train or light rail is available to you? Select all that apply."



Q62 Which train or light rail did you use on your way to campus last week? If you used more than one, please select the service you used for the greater portion of your trip.

- Amtrak/Capitol Corridor (1)
- BART (2)
- Sacramento Regional Transit (3)

Page Break

Q63 Now consider this past summer, from June 22 – September 25, 2020.

Q64 How much time did you spend at UC Davis over the summer? We're interested in the number of weeks you spent last summer traveling to and from campus destinations on a regular basis. Please estimate how many weeks you were on campus at least once a week during this period.

If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count that as well. (Note: There were a total of 12 weeks in the academic summer.)

- None (15)
- 1 week (14)
- 2 weeks (13)
- 3 weeks (12)
- 4 weeks (11)
- 5 weeks (10)
- 6 weeks (equivalent to just ONE summer session, I or II) (9)
- 7 weeks (8)
- 8 weeks (7)
- 9 weeks (6)
- 10 weeks (5)
- 11 weeks (4)
- 12 weeks (3)
- 13 weeks (2)
- All summer / 14 weeks (June 22 - September 25) (1)

Skip To: End of Block If How much time did you spend at UC Davis over the summer? We're interested in the number of weeks... = None

Q65 During the weeks you were on campus over the summer, how many days per week were you typically on campus?

- Less than 1 day per week (8)
- 1 day per week (1)
- 2 days per week (2)
- 3 days per week (3)
- 4 days per week (4)
- 5 days per week (5)
- 6 days per week (6)
- 7 days per week (7)

Carry Forward All Choices - Displayed & Hidden from "We are interested in your available means of transportation. Select all options that are available to you for getting to campus, whether or not you use them on a regular basis. Include options you would only use for part of the way."



Q310 What means of transportation did you usually use to get to campus over summer (June 22 – September 25, 2020)? (If you usually used more than one mode of transportation, please select the one you usually used for most of the distance).

- Walk (or wheelchair) (1)
- Bike (2)
- Electric-assist bike (e-bike) (3)
- Skate, skateboard, or scooter (4)
- Electric-assist scooter or skateboard (e-scooter or e-skateboard) (5)
- Drive alone in a car (or other vehicle) (6)
- Carpool and/or vanpool with others going to campus (7)
- Get dropped off by a friend or family (the driver continues on elsewhere) (8)
- Lyft, Uber, or other ride-hailing service (9)
- Motorcycle or Vespa-like scooter (10)
- Bus and/or shuttle (11)
- Train and/or light rail (12)
- Other: (13) _____

End of Block: Section 7 - Travel to campus - in the summer

Start of Block: Section 9 - Campus transportation programs

Q66 Are you familiar with any of these campus programs?

Note that Transportation and Parking Services (TAPS) is now known as Transportation Services (TS)

| | I've used it (1) | I've heard of it, but never used it (2) | I've never heard of it (3) |
|--|-----------------------|---|----------------------------|
| GoClub program (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Aggie Bike Buy Program (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Bike tire air stations and repair stations around campus (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Bicycle Education and Enforcement Program (BEEP) and bike safety video (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Zipcar carsharing program (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| UC Davis motorist assistance program (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Transportation Services (TS) bike lock-cutting service (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| UC Davis bicycle theft reporting system (14) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| UC Davis Bike Auction (10) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Transportation Services (TS) Mobility Assistance Program (11) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Transportation Services (TS) bicycle licensing program (12) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

End of Block: Section 9 - Campus transportation programs

Start of Block: Add On - Commute Satisfaction/Attitudes & TNCs

Q92 Thanks for staying with us!

Q93 We'd like to ask about your opinions with respect to transportation. There are no right or wrong answers; we want only your true opinions.

To what extent do you agree or disagree with the following statements?

| | Strongly disagree (1) | Somewhat disagree (2) | Neither agree nor disagree (3) | Somewhat agree (4) | Strongly agree (5) |
|---|--------------------------|--------------------------|-----------------------------------|-----------------------|-----------------------|
| Travel time is generally wasted time. (Q53_1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I like riding a bike. (Q53_2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Climate change concerns affect the choices I make about my daily travel. (Q53_3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I like driving. (Q53_5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have been riding my bicycle more as a result of the COVID-19 pandemic. (Q93_37) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I like using public transit. (Q53_11) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I already bicycle as often as I can. (Q53_14) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I try to limit my driving as much as possible. (Q53_15) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am more dependent on driving as a result of the COVID-19 pandemic. (Q93_36) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Getting around is easier than ever with my smartphone. (Q53_17) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Page Break

Q97 How would you **rate your ability** to ride a bike? In particular, we are interested in **whether you know how to ride a bike**, regardless of whether it is practical or desirable for you to do so as a means of transportation to campus.

- I cannot ride a bike at all because I do not know how (1)
 - I can ride a bike, but I am not very confident doing so (2)
 - I am somewhat confident riding a bike (3)
 - I am very confident riding a bike (4)
-

Q339 In general, how comfortable would you be riding a bike on a **four-lane street (two lanes in either direction) without a bicycle lane**, in daylight and good weather?

- Uncomfortable and I wouldn't ride on it (1)
 - Uncomfortable but I would ride on it (2)
 - Comfortable (3)
-

Page Break

Q264

The next set of questions will help the university get a better sense of housing affordability for UC Davis students and employees. We'll ask you about your residence and living expenses.

Your responses are entirely confidential.

Display This Question:

If Where do you live now? = City of Davis (off-campus)

Or Where do you live now? = Outside of Davis



Q272 Do you live alone or with other people?

Alone (1)

With other people (2)

Display This Question:

If Do you live alone or with other people? = With other people

Q274 How many **other people** live in your residence? Don't count yourself.

▼ 1 (1) ... 10 or more (10)

Display This Question:

If Do you live alone or with other people? = With other people

Q278

Of the other people who live in your residence, how many are...

| | Number of People (1) |
|--|----------------------|
| Your partner or spouse (6) | |
| Your children (3) | |
| Your parents or guardians (8) | |
| Other relatives (e.g. siblings, cousins) (2) | |

Page Break

Display This Question:

If Where do you live now? = **City of Davis** (off-campus)

Or Where do you live now? = **Outside of Davis**

Q68 What type of place is your current residence? Please pick the option that best describes your unit.

- Building with 4 or fewer units or apartments (2)
- Building with 5 or more units or apartments (3)
- Duplex (two units, side-by-side or two stories, with separate front doors) (4)
- Accessory dwelling unit (smaller unit behind, attached to, or within a main house, but which also has its own sleeping, cooking, and bathroom facilities. Also called a "granny" or "in-law" unit) (8)
- House (stand-alone unit usually intended for a single family) (5)
- Mobile home or trailer (6)
- Other: (7) _____

Display This Question:

If Where do you live now? = **City of Davis** (off-campus)

Or Where do you live now? = **Outside of Davis**

Q340 How long have you lived at your current residence?

- Less than a year (1)
- Between 1 and 2 years (2)
- Between 2 and 4 years (3)
- Between 4 and 10 years (4)
- Between 10 and 20 years (5)
- More than 20 years (6)

Display This Question:

If *Where do you live now?* = **City of Davis** (off-campus)

Or *Where do you live now?* = **Outside of Davis**

Q77 Do you rent or own your residence?

- Rent (1)
- Own (with or without a mortgage) (2)
- Other arrangement where I don't personally pay (e.g. live with friends or family) (4)
- Other: (3) _____

Page Break

Display This Question:

If Do you rent or own your residence? = Own (with or without a mortgage)

And What type of place is your current residence? Please pick the option that best describes your unit. = House (stand-alone unit usually intended for a single family)

Q339 Have you considered building an accessory dwelling unit on your property? Accessory dwelling units are smaller units behind, attached to, or inside a main house. They're also called "granny," "secondary" or "in-law" units.

- No, I have never considered building one (1)
- Yes, I have considered building one in the past (3)
- Yes, I am currently considering building one (4)
- Yes, I already have one on my property or am in the process of building one (2)

Page Break

Display This Question:

If Where do you live now? = City of Davis (off-campus)

Or Where do you live now? = Outside of Davis



Q310 In the last 12 months, did you do any of the following? Select all that apply.

- Did not pay the full amount of rent or mortgage (1)
- Did not pay the full amount of utilities (2)
- Moved 2 or more times (3)
- Doubled up in a bedroom (without a lease agreement for the room) (4)
- Moved in with other people due to financial problems (5)
- Skipped meals to pay for living expenses (7)
- None of these happened to me (9)

Display This Question:

If Where do you live now? = Outside of Davis

Or Where do you live now? = City of Davis (off-campus)



Q312 Within the last 12 months, did any of the following happen to you? Select all that apply.

- Kicked out of residence by family or housemates (1)
- Legally evicted (2)
- Stayed in a shelter (3)
- Stayed in an auto, campus building, or another public building (4)
- Did not know where I was going to sleep for one or more nights (5)
- Stayed temporarily with a friend or acquaintance while looking for housing ("couch surfed") (6)
- Did not have a home (7)
- Slept outside (non-recreationally) (9)
- Evacuated from my home due to wildfires (11)
- None of these happened to me (10)

Page Break

Start of Block: Add On - General Remote Work Questions

Q311 Next we'd like to ask you some questions about remote work and instruction related to the ongoing COVID-19 pandemic and partial campus closure.

Display This Question:

If What is your primary role at UC Davis? = Undergraduate student (including Post-baccalaureate)

Or What is your primary role at UC Davis? = Graduate student

Q258 After COVID-19 is no longer a threat, do you expect to be able to attend classes or otherwise complete your degree requirements remotely, at least some of the time?

Yes (1)

No (3)

Display This Question:

If What is your primary role at UC Davis? = Faculty

Or What is your primary role at UC Davis? = Staff

Or What is your primary role at UC Davis? = Visiting scholar

Or What is your primary role at UC Davis? = Post doc

Or What is your primary role at UC Davis? = Faculty emeritus

Or What is your primary role at UC Davis? = Other:

Or Or What is your primary role at UC Davis? Other: Is Not Empty

Q259 After COVID-19 is no longer a threat, do you expect to be able to work remotely, at least some of the time?

Yes (1)

No (3)

Display This Question:

If What is your primary role at UC Davis? = Undergraduate student (including Post-baccalaureate)

Or What is your primary role at UC Davis? = Graduate student

Q260 After COVID-19 is no longer a threat, are you **interested** in continuing to attend classes remotely?

- Not at all (1)
- Some of the time (2)
- All of the time (3)

Display This Question:

If What is your primary role at UC Davis? = Faculty
Or What is your primary role at UC Davis? = Staff
Or What is your primary role at UC Davis? = Visiting scholar
Or What is your primary role at UC Davis? = Post doc
Or What is your primary role at UC Davis? = Faculty emeritus
Or What is your primary role at UC Davis? = Other:
Or Or What is your primary role at UC Davis? Other: Is Not Empty

Q261 After COVID-19 is no longer a threat, are you **interested** in continuing to work remotely?

- Not at all (1)
- Some of the time (2)
- All of the time (3)

Display This Question:

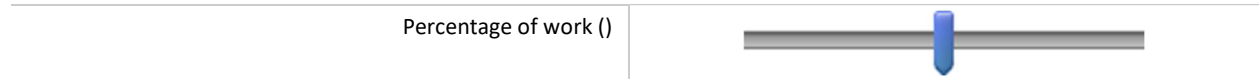
If Were you enrolled or working at UC Davis during the 2019–2020 academic year? = Yes

Q262 How has your productivity changed since the beginning of the COVID-19 pandemic?

- Decreased significantly (1)
- Decreased somewhat (2)
- Stayed about the same (3)
- Increased somewhat (4)
- Increased significantly (5)
- Increased in some ways and decreased in others (6)

Q296 What percentage of your work are you able to complete remotely?

0 10 20 30 40 50 60 70 80 90 100



Q297 How many days per week would you prefer to work remotely when COVID-19 is no longer a threat?

- 0 (1)
 - 1 (2)
 - 2 (3)
 - 3 (4)
 - 4 (5)
 - 5 (6)
-

Display This Question:

If What is your primary role at UC Davis? = Staff

Q298 What kind of work tasks would you prefer to do on campus (select all that apply)?

Planning out work tasks with others (1)

Working in teams (2)

Individual work (3)

Communicating with staff/students, etc. (4)

Other: (5) _____

Page Break

Q300 Which of the following are important to your success in working remotely?

| | Not at all important (14) | Slightly important (15) | Somewhat important (16) | Very important (17) |
|--|------------------------------|-------------------------|----------------------------|-----------------------|
| Quiet / comfortable workspace (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Adequate Internet connection (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sufficient computer hardware (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Software (programs on your computer) (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Webcam / visual accessories (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Microphone / audio accessories (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| A consistent work schedule (11) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other (12) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Page Break



Q301 Do you have the following at home, and how adequate are they for your remote work needs?

| | Don't have (9) | Have, but not adequate (4) | Have, but minimally adequate (5) | Have, and somewhat adequate (6) | Have, and adequate (7) |
|---|-----------------------|----------------------------|----------------------------------|---------------------------------|------------------------|
| Quiet / comfortable workspace (x4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Adequate Internet connection (x5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sufficient computer hardware (x6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Software (programs on your computer) (x7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Webcam / visual accessories (x8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Microphone / audio accessories (x9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| A consistent work schedule (x11) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other (x12) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Page Break

Q303 How satisfied are you with the following aspects of your remote work situation?

| | Very unsatisfied (28) | Somewhat unsatisfied (29) | Neutral (30) | Somewhat satisfied (31) | Very satisfied (32) |
|--|--------------------------|------------------------------|-----------------------|----------------------------|------------------------|
| Physical workspace (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Interaction with colleagues (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Interaction with supervisors/managers (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Interaction with employees/supervisees (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Work/life balance (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Page Break

Q304 Are you responsible for providing care to children or other dependents in your home?

Yes (1)

No (3)

Display This Question:

If Are you responsible for providing care to children or other dependents in your home? = Yes

Q305 What percentage of your work time do you have to access to childcare provided by someone other than yourself?

0 10 20 30 40 50 60 70 80 90 100

% of worktime with access to childcare ()



Q306 We'd like to ask about your opinions with respect to working remotely. There are no right or wrong answers; we want only your true opinions.

| | Strongly disagree (31) | Somewhat disagree (32) | Neutral (33) | Somewhat agree (34) | Strongly agree (35) |
|--|---------------------------|------------------------|-----------------------|------------------------|------------------------|
| Working from home has saved me a lot of time during my day (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My work life and personal life feel more blended together (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel more comfortable working from home than in an office (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Working from home has given me more time to focus on my health (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel more connected with my family because I am working from home (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| While working from home, my daily routine has changed for the better (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel disconnected from co-workers since working remotely (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The quality of my work has increased since working from home (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Working from home has made me feel more isolated and lonely (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

I'm finding it
harder to
concentrate at
home compared
to in the office.
(10)

Page Break

Q317 How much of your own money have you spent on items to enable you to work remotely in the 7+ months since the campus closure due to COVID-19? Please respond in dollars.

\$ (4) _____

Page Break

Q307 Is there anything else you'd like to share with us regarding your experiences working remotely?

End of Block: Add On - Remote Work Questions for Staff/Faculty

Start of Block: Add On - Remote Learning and Lease Questions for Students

Display This Question:

If Do you rent or own your residence? = Rent

Or Do you rent or own your residence? = Other arrangement where I don't personally pay (e.g. live with friends or family)

Or Do you rent or own your residence? = Other:

Q290 Did you sign a contract or lease agreement for a residence near campus for the 2020-2021 school year?

- Yes (1)
- No, but my pre-existing lease agreement for a residence near campus rolled over into the 2020-2021 school year (2)
- No, my name was never on a contract or lease agreement for a residence near campus for the 2020-2021 school year (4)

Page Break

Display This Question:

If Did you sign a contract or lease agreement for a residence near campus for the 2020-2021 school year = Yes

Or Did you sign a contract or lease agreement for a residence near campus for the 2020-2021 school year = No, but my pre-existing lease agreement for a residence near campus rolled over into the 2020-2021 school year

Q291 What is the current situation regarding the lease on your residence near campus?

- Living in my residence near campus (1)
- Used a lease break option written into my lease/contract (2)
- Negotiated a release from my lease/contract (3)
- Found a sub-let to pay all of the rent (4)
- Found a sub-let to pay a portion of the rent (5)
- Still paying rent but not living in or sub-letting the residence (6)
- Not paying rent and not living in or sub-letting the residence (8)

Page Break

Display This Question:

If What is the current situation regarding the lease on your residence near campus? = Found a sub-let to pay all of the rent

Or What is the current situation regarding the lease on your residence near campus? = Found a sub-let to pay a portion of the rent

Or What is the current situation regarding the lease on your residence near campus? = Still paying rent but not living in or sub-letting the residence

Or What is the current situation regarding the lease on your residence near campus? = Not paying rent and not living in or sub-letting the residence

Q292 Do you anticipate returning to your residence near campus?

- Yes, during fall 2020 (1)
- Yes, during winter 2021 (2)
- Yes, during spring 2021 (3)
- Yes, during a future schoolyear (4)
- Not at all (5)
- Not sure (6)

Display This Question:

If Did you sign a contract or lease agreement for a residence near campus for the 2020-2021 school year = No, my name was never on a contract or lease agreement for a residence near campus for the 2020-2021 school year

Or If

Do you anticipate returning to your residence near campus? = Yes, during fall 2020

Or Do you anticipate returning to your residence near campus? = Yes, during fall 2020

Or Do you anticipate returning to your residence near campus? = Yes, during winter 2021

Or Do you anticipate returning to your residence near campus? = Yes, during spring 2021

Or Do you anticipate returning to your residence near campus? = Yes, during a future schoolyear

Or Do you anticipate returning to your residence near campus? = Not sure

Q341 How important are the following factors in thinking about the possibility of living near campus?

| | Not at all important (1) | Somewhat important (2) | Very important (3) |
|---|--------------------------|------------------------|-----------------------|
| Availability of in-person instruction (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| COVID-19 rates in Davis (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Proximity to friends or family (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Flexibility to rent month-to-month (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Housing availability (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Housing cost (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other financial concerns (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other: (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Page Break

Q293 Which of the following are important to your success in learning remotely?

| | Not at all important (1) | Slightly important (2) | Somewhat important (3) | Very important (4) |
|--|-----------------------------|------------------------|---------------------------|-----------------------|
| Quiet / comfortable workspace (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sufficient internet connection (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sufficient computer hardware (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Software (programs on your computer) (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Webcam / visual accessories (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Microphone / audio accessories (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| A consistent school schedule (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Page Break



Q294 Do you have the following at home, and how adequate are they for your remote work needs?

| | Don't have (1) | Have, but not adequate (2) | Have, but minimally adequate (3) | Have, and somewhat adequate (4) | Have, and adequate (5) |
|---|-----------------------|----------------------------|----------------------------------|---------------------------------|------------------------|
| Quiet / comfortable workspace (x1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sufficient internet connection (x2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sufficient computer hardware (x3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Software (programs on your computer) (x4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Webcam / visual accessories (x5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Microphone / audio accessories (x6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| A consistent school schedule (x8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other (x9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Page Break

Q295 How satisfied are you with the following aspects of your remote learning situation?

| | Very unsatisfied (1) | Somewhat unsatisfied (2) | Neutral (3) | Somewhat satisfied (4) | Very satisfied (5) |
|---|-------------------------|-----------------------------|-----------------------|---------------------------|-----------------------|
| Physical workspace (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Interaction with classmates / peers (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Interaction with instructors (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Interaction with campus staff (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| School/life balance (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Page Break

Q323 Are you responsible for providing care to children or other dependents in your home?

Yes (1)

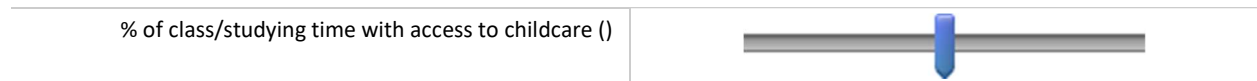
No (3)

Display This Question:

If Are you responsible for providing care to children or other dependents in your home? = Yes

Q324 What percentage of your class and studying time do you have to access to childcare provided by someone other than yourself?

0 10 20 30 40 50 60 70 80 90 100



Q308 Is there anything else you'd like to share with us regarding your experiences learning remotely?

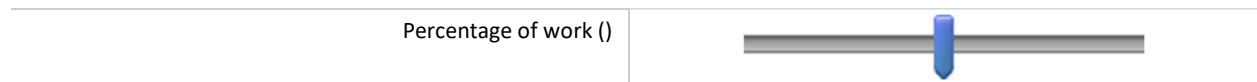
End of Block: Add On - Remote Learning and Lease Questions for Students

Start of Block: Add On - Remote Work Questions for Student Employees

Q336 Earlier in the survey, you indicated that you work for UC Davis in addition to being a student. The next few questions are specifically about your campus-related employment, not your experience as a student.

Q599 What percentage of your employment duties are you able to complete remotely?

0 10 20 30 40 50 60 70 80 90 100



Q602 Earlier in the survey, you indicated the importance of the following to your success in learning remotely. Thinking about your role as a student employee, which of the following are important to your success in **working** remotely?

| | Not at all important (14) | Slightly important (15) | Somewhat important (16) | Very important (17) |
|--|------------------------------|-------------------------|----------------------------|-----------------------|
| Quiet / Comfortable workspace (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Adequate Internet connection (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sufficient computer hardware (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Software (programs on your computer) (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Webcam / visual accessories (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Microphone / audio accessories (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| A consistent work schedule (11) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other (12) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Page Break

Q605 How satisfied are you with the following aspects of your remote work situation?

| | Very unsatisfied (28) | Somewhat unsatisfied (29) | Neutral (30) | Somewhat satisfied (31) | Very satisfied (32) |
|--|--------------------------|------------------------------|-----------------------|----------------------------|------------------------|
| Physical workspace (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Interaction with colleagues (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Interaction with supervisors/managers (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Interaction with employees/supervisees (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Work/life balance (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Page Break

Q608 We'd like to ask about your opinions with respect to working remotely. There are no right or wrong answers; we want only your true opinions.

| | Strongly disagree (31) | Somewhat disagree (32) | Neutral (33) | Somewhat agree (34) | Strongly agree (35) |
|--|---------------------------|------------------------|-----------------------|------------------------|------------------------|
| Working from home has saved me a lot of time during my day (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My work life and personal life feel more blended together (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel more comfortable working from home than in an office (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Working from home has given me more time to focus on my health (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel more connected with my family because I am working from home (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| While working from home, my daily routine has changed for the better (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel disconnected from co-workers since working remotely (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The quality of my work has increased since working from home (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Working from home has made me feel more isolated and lonely (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

I'm finding it
harder to
concentrate at
home compared
to in the office.
(10)



Page Break

Q604 How much of your own money have you spent on items to enable you to work remotely in the 7+ months since the campus closure due to COVID-19? Please respond in dollars.

\$ (4) _____

Page Break

Q609 Is there anything else you'd like to share with us regarding your experiences working remotely?

End of Block: Add On - Remote Work Questions for Student Employees

Start of Block: Section 13 - Demographics

Q117 We're almost finished – just a few more questions about yourself. We use this information to help understand travel choices and how the people taking the survey represent the UC Davis community as a whole. Your answers are confidential and will not be used for any other purpose.



Q118 In what year were you born?

▼ 1919 (1) ... 2005 (102)

Q14 Where were you born?

- In California (1)
- Outside of California, but in the United States (2)
- Outside the United States, in: (3) _____

Display This Question:

If What is your primary role at UC Davis? = Undergraduate student (including Post-baccalaureate)

And We are interested in your available means of transportation. Select all options that are availabl... = Drive alone in a car (or other vehicle)

Or If

What is your primary role at UC Davis? = Graduate student

And We are interested in your available means of transportation. Select all options that are availabl... = Drive alone in a car (or other vehicle)

Q120 Earlier, you indicated that you have access to a car. Do you receive financial support from family or other individuals for driving-related expenses such as gas, insurance, and vehicle maintenance?

- No - None at all (1)
- Yes - For some things (2)
- Yes - For most things (3)
- Yes - For everything (4)

Display This Question:

If What is your primary role at UC Davis? = Staff

Q119 What is your highest level of education completed?

- No formal education (1)
 - Grade school or junior high school (2)
 - High school diploma or equivalent (3)
 - Associates degree or technical school certificate (4)
 - Four-year bachelor's degree (5)
 - Graduate degree(s) (6)
-

Q321 Which categories describe you? Select all that apply.

- American Indian or Alaska Native (1)
- Asian (2)
- Black or African American (3)
- Hispanic, Latino, or Spanish origin (4)
- Middle Easterner or North African (5)
- Native Hawaiian or other Pacific Islander (6)
- White (8)
- A race, ethnicity, or origin that is not listed (7) _____
- Prefer not to answer (10)

End of Block: Section 13 - Demographics

Start of Block: Section 14 - Prize Opt-In

Q121 Please let us know if we may contact you in the future for the following purposes. We will only contact you for the purposes you've approved below.

Q123 As mentioned at the start of the survey, we are offering a chance to win forty \$50 Amazon gift cards and grand prizes of two Amazon Fire tablets for survey respondents who wish to enter our drawing. We would need your name and email address in order to participate in the drawing. Would you like to enter your name in our drawing?

- Yes (1)
- No (2)

Q124 May we contact you should we have any questions regarding your survey responses?

Yes (2)

No (1)

Q320 May we contact you in the future about other campus-related or transportation-related surveys?

Yes (1)

No (2)

Display This Question:

If As mentioned at the start of the survey, we are offering a chance to win forty \$50 Amazon gift ca... = Yes

Or May we contact you should we have any questions regarding your survey responses? = Yes

Q125 Please provide the following contact information. This information will ONLY be used for the purposes you specified.

Name (1) _____

Your UC Davis email address (2) _____

Q126 Optional: Is there anything else you would like to tell us about transportation at UC Davis? We welcome any additional comments in the space below.

Appendix B: Changes from the 2019-20 survey instrument

The following sections have been added, omitted, reduced, or altered:

1. Housing and housing security (shortened from 2019-2020)
2. Bike security and theft (omitted)
3. Accessory dwelling units (added three short questions)
4. Remote work questions (added for everyone working remotely)
5. Future lease questions (asked to students who had relocated due to COVID)

The reference week was scheduled for a similar week as the previous year's survey, and we sent participants two reminders via email: one and two weeks after the initial invitation, respectively.

Appendix C: Text of the recruitment emails

Initial recruitment email:

From: UCD Travel Survey <travelsurvey@ucdavis.edu>

To: <...@ucdavis.edu>

Subject: 2020-21 Campus Travel Survey

Dear UC Davis Student/Employee,

You are invited to participate in the 2020-2021 UC Davis Campus Travel Survey. This annual survey provides campus planners with valuable feedback on how people get to campus and their experiences with various transportation programs. It is intended for everyone who is affiliated with UC Davis for school or work, even if you are not regularly traveling to campus due to the ongoing COVID-19 pandemic.

Your feedback helps improve the campus!

UC Davis Transportation Services (TS) and graduate students from the Institute of Transportation Studies have used the results from this survey to:

Identify trends in the way that people get to campus from year to year

Prioritize bike infrastructure improvements on campus

Estimate UCD's greenhouse gas emissions

Better understand the factors that encourage biking in our community

Develop new TS programs to serve the campus community

Participating in this research survey takes 10-15 minutes to complete. Doing so is voluntary, and we assure you that all responses are confidential and the results will only be published in the aggregate, without connection to any individual. You must be at least 18 years old to complete this survey.

We're going to ask you questions in the following areas:

Your role at UC Davis

Your travel to and from campus

Your experience with campus transportation programs and infrastructure

Some background information about you

Your housing and experience with housing affordability

Your experience working/studying remotely due to the COVID-19 pandemic

In appreciation for your time, we're offering anyone who completes the survey entry into a drawing for forty \$50 Amazon gift cards and two grand prizes of Amazon Fire tablets!

To start the survey, click on the link below:

[\\${!://SurveyLink?d=Take%20the%20survey}](#)

Thanks for your participation in this year's survey!

Sincerely,

Mary Croughan

Provost and Executive Vice Chancellor

Follow the link to opt out of future emails:

[\\${!://OptOutLink?d=Click here to unsubscribe}](#)

Reminder recruitment email:

From: UCD Travel Survey <travelsurvey@ucdavis.edu>

To: <...@ucdavis.edu>

Subject: Final Chance to Provide Feedback: 2020-21 Campus Travel Survey

Dear UC Davis Student/Employee,

Two weeks ago, we invited you to take the 2020-2021 Campus Travel Survey. If you finished the survey over the last two weeks, thank you so much! Your responses have been recorded, and you can disregard the rest of this message.

If not, we encourage you to complete the survey today! We are especially in need of responses from upper-level students, as your response rates (particularly for 4th years and above) have not yet matched those of first-years and sophomores! Your participation helps us ensure that we have feedback from a representative cross-section of the UC Davis campus community, and remember, this survey is intended for everyone, even if you are living away from Davis due to the COVID-19 pandemic.

Participating in this research survey takes 10-15 minutes to complete. Doing so is voluntary, and we assure you that all responses are confidential and the results will only be published in the aggregate, without connection to any individual. You must be at least 18 years old to complete this survey.

We're going to ask you questions in the following areas:

Your role at UC Davis

Your travel to and from campus

Your experience with campus transportation programs and infrastructure

Some background information about you

Your housing and experience with housing affordability

Your experience working/studying remotely due to the COVID-19 pandemic

In appreciation for your time, we're offering anyone who completes the survey entry into a drawing for forty \$50 Amazon gift cards and two grand prizes of Amazon Fire tablets!

To start the survey, click on the link below:

[\\${://SurveyLink?d=Take%20the%20survey}](#)

Thanks for your participation in this year's survey!

Sincerely,

The 2020-2021 Campus Travel Survey Team

Follow the link to opt out of future emails:

[\\${://OptOutLink?d=Click here to unsubscribe}](#)

Appendix D: Calculation of Average Vehicle Ridership (AVR)

AVR (average vehicle ridership) is a ratio of the number of person-arrivals to private-vehicle-arrivals. If everyone drove alone to campus, the campus AVR would be equal to one. AVR values greater than 1.0 indicate more carpooling and/or use of active modes of transportation.

To compare AVR statistics on the Davis campus with other UC campuses, we calculate AVR using a standard formula developed by the South Coast Air Quality Management District (AQMD) in “Rule 2202 – On Road Motor Vehicle Mitigation Options.”³ We attempt to adhere to the AQMD formula, although our overall survey methodology deviates to some extent from that prescribed by the AQMD.⁴ The AQMD formula excludes weekend travel (considering Monday through Friday only) and excludes on-campus residents (considering travel among off-campus residents only). It includes adjustments for vehicle occupancy and the use of zero-emission vehicles (ZEV).

In particular, we use the following formula:

$$AVR = \frac{\text{Total weekly arrivals}}{\text{weekly vehicle arrivals}} = \frac{\text{arrivals by all modes} + \text{employee telecommuting days} + \text{CWW days}}{\text{drive alone arrivals} + \text{fractional carpool arrivals}}$$

with:

Arrivals by all modes = a count of all respondents arriving by bus, driving, carpooling, getting a ride, walking, biking, skating, and riding transit on Monday, plus the same for Tuesday, Wednesday, etc. through Friday (using Q51 – daily travel).

Employee telecommuting days = a count of respondents telecommuting on Monday, plus those doing so on Tuesday, etc. through Friday. These are based on responses to questions Q37, Q39, and Q40 for any respondents who traveled some days and telecommuted other days. But for respondents who indicated no travel during any of the five days of the reference week (in Q37) and then indicated the reason for no travel was telecommuting (in Q39), we assume the respondent telecommuted all five days of the reference week.

Employee CWW days = a count of respondents reporting that they did not travel on Monday because they had a CWW (compressed work week) day off, plus those who did so for Tuesday, Wednesday, etc. through Friday (using responses to questions Q37 and Q40).

Drive-alone arrivals = a count of respondents arriving by driving alone on Monday, plus those doing so on Tuesday, Wednesday, etc. through Friday (using responses to Q51). As an adjustment for the use of ZEV vehicles, we exclude from the count any arrivals by a respondent who has indicated using an all-electric or fuel cell vehicle for their travel during the reference week (in question Q55).

Fractional carpool arrivals = A count of the fractions of vehicle-arrivals accounted for those arriving in carpools (or getting rides) for each day Monday through Friday. In particular, for each day a respondent carpools (or gets a ride, using Q51) we add to the arrival count a fraction equal to one divided by the

³ As of July 2017, this rule is available online (<http://www.aqmd.gov/docs/default-source/rule-book/reg-xxii/rule-2202.pdf?sfvrsn=4>).

⁴ For instance, the AQMD specifies that response to the survey must be 90 percent response rate, whereas we rely on surveying only a sample and weighting the responses.

total number of people in the carpool (using *Q60*) or the number of passengers dropped off by the driver (using *Q54*). We exclude from the count any arrivals by a respondent who has indicated using an all-electric or hydrogen vehicle (in question *Q55*).

In all cases, the estimated number of arrivals for the entire campus community is a projection. In particular, we weight (and expand) the sample responses by role and gender based on the valid responses to question *Q51*.

We calculate AVR both excluding and including on-campus residents, and by each role group. The AQMD and most other UC campuses exclude on-campus residents and most only calculate AVR for employees rather than for students. The inclusion of student employees can greatly change AVR statistics, though to a different extent at different campuses. We include a question about whether student respondents are also paid employees of UC Davis (question *Q8*) to allow us to estimate AVR including student employees.

Appendix E: Geocoding and network distances

We used the ESRI Streetmap USA dataset to do all of the geocoding and network route assignments. It is based on the TIGER/Line 2000 streets dataset produced by the U.S. Census Bureau, and has been enhanced by ESRI and Tele Atlas. If the exact street was not available, then we geocoded the point to the nearest pre-existing road. In all cases, the differences were minor and expected to be negligible.

Geocoding residential locations

We used address information to geocode points to the ESRI Streetmap USA dataset. First, we used the statistical computing language, R, to filter out empty records and to divide the data into separate tables for each subcategory (On Campus, West Village, Off Campus in Davis, and Outside Davis), and concatenate the street names into a single field. This allowed us to input the data into an appropriate address locator that would be able to automatically geocode as many addresses as possible.

Inputting the data directly into an address locator resulted in successful matching of nearly all addresses. Because there was the potential for a small percentage of addresses to be matched incorrectly by the address locator, we also manually verified that the match address was the same as the input address. We geocoded unmatched addresses by manually placing points in the correct locations, or by modifying the input addresses so that they matched correctly using an automatic address locator.

Network distance

The network route assignments were created using the ArcGIS Network Analyst extension and the ESRI Streetmap USA dataset (the same dataset used to geocode the residential locations). For those living off campus in Davis (excluding West Village) and outside Davis, distances were calculated from the geocoded residential location points to a point located on the UC Davis campus at the corner of Hutchison Drive and California Avenue, near the Silo. The network route assignments were calculated by optimizing for the fastest travel times (based on assumptions about the expected speed of travel on each facility type), which was deemed to produce more realistic routes than optimizing for distance, because it produces routes that favor major roads and highways where possible.

We assign an average distance from campus destinations for all on-campus respondents equal to the mean calculated network distance for on-campus respondents. This distance is equal to 0.77 miles and reflects our best estimate of the average distance from residential locations within the “on campus” area to campus destinations. For the respondents living in the West Village apartments, we assumed that distance from campus is equal to the calculated network distance from the center of the West Village complex to the Silo (traveling along Hutchison Drive). This distance is equal to 1.3 miles and reflects our best estimate of the average distance from residential locations in West Village to campus destinations.

Comparability with results from previous surveys

We used the same procedures to geocode and calculate network distances as were used in the Campus Travel Surveys from 2008-09 through 2017-18, so results from this survey should be comparable with these surveys. Because the 07-08 survey employed a different method both to collect data on the respondents’ residential locations (allowing respondents to click on a map versus typing cross streets into a text field); to geocode points; and to calculate network distances, the estimated distances and calculations based on them (miles traveled and emissions) are not comparable to later survey years.

Appendix F: Imputation of Valid Responses

To make the most out of the available data, the following process was used to impute missing data to question *Q51*, the primary mode used to get to campus for each day of the reference week:

1. Missing answers were only coded for days on which the respondent indicated traveling to campus (*Q38*) but did not indicate a primary mode.
2. In cases where all answers were missing for *Q50* (all modes used to get to campus) and *Q51* (modes used each day), the answer to *Q44* about “usual mode” was imputed for each day traveled in *Q38*.
3. In cases where only one answer was given for *Q50* (all modes used to get to campus), missing answers to *Q51* (modes used each day) were recoded as this answer.
4. In the cases where usual mode was listed and only some answers to *Q51* (modes used each day) were missing, the missing modes were imputed so that the “usual” mode made up the majority and the “secondary” mode made up the minority of days traveled.

Appendix G: Sampling Plan

Table G- 1. Sampling Plan for 2015-16 through 2020-21, Percent Invited

| Role | 2020-21 | | Percent Invited | | | | | |
|------------------------|--------------------|----------------|-----------------|------------|---------------|---------------|---------------|---------------|
| | Assumed Population | Number Invited | 2020-21 | 2019-20 | 2018-19 | 2017-18 | 2016-17 | 2015-16 |
| Student | 37,593 | 17,052 | 45.4% | 36% | 41% | 45% | 60% | 63% |
| Undergraduate | 30,810 | 12,630 | 41.0% | 34% | 37% | 40% | 57% | 59% |
| Freshman | 6,567 | 1,650 | 25.1% | 26% | 42% | 43% | 81% | 58% |
| Sophomore | 5,443 | 3,590 | 66.0% | 62% | 52% | 50% | 64% | 77% |
| Junior | 8,388 | 3,680 | 43.9% | 26% | 27% | 33% | 50% | 48% |
| Senior | 10,412 | 3,710 | 35.6% | 29% | 33% | 34% | 50% | 59% |
| Graduate | 6,783 | 4,422 | 65.2% | 46% | 60% | 69% | 77% | 80% |
| Master's | 2,662 | 2,662 | 100.0% | 76% | 100% | 93% | 100% | 100% |
| PhD | 4,121 | 1,760 | 42.7% | 25% | 33% | 45% | 58% | 63% |
| Employee | 16,293 | 4,238 | 26.0% | 21% | 16% | 28% | 30% | 61% |
| Faculty | 2,152 | 2,038 | 94.7% | 53% | 46% | 118% | 100% | 100% |
| Staff | 14,141 | 2,200 | 15.6% | 16% | 11% | 12% | 19% | 48% |
| Overall percent | NA | - | 39.5% | 31% | 33% | 41% | 53% | 62% |
| Overall number | 53886 | 21290 | NA | - | 17,888 | 19,796 | 24,029 | 27,429 |

Table G- 2. Sampling Plan for 2015-16 through 2020-21, Response Rates

| Role | 2020-21 | | | Actual Response Rate | | | | | |
|------------------------|--------------------|----------------|-----------------|----------------------|--------------|--------------|--------------|--------------|--------------|
| | Assumed Population | Number Invited | Target Response | 2020-21 | 2019-20 | 2018-19 | 2017-18 | 2016-17 | 2015-16 |
| Student | 37,593 | 17,052 | 13% | 19% | 17% | 22% | 19% | 15% | 10% |
| Undergraduate | 30,810 | 12,630 | 12% | 18% | 17% | 20% | 18% | 14% | 9% |
| Freshman | 6,567 | 1,650 | 22% | 41% | 27% | 28% | 18% | 14% | 11% |
| Sophomore | 5,443 | 3,590 | 10% | 16% | 15% | 15% | 18% | 15% | 10% |
| Junior | 8,388 | 3,680 | 10% | 17% | 15% | 22% | 21% | 16% | 10% |
| Senior | 10,412 | 3,710 | 10% | 12% | 15% | 17% | 15% | 12% | 6% |
| Graduate | 6,783 | 4,422 | 16% | 22% | 19% | 27% | 21% | 18% | 14% |
| Master's | 2,662 | 2,662 | 13% | 15% | 16% | 21% | 16% | 13% | 10% |
| PhD | 4,121 | 1,760 | 20% | 33% | 25% | 38% | 31% | 25% | 16% |
| Employee | 16,293 | 4,238 | 17% | 29% | 22% | 25% | 33% | 33% | 12% |
| Faculty | 2,152 | 2,038 | 16% | 20% | 21% | 31% | 38% | 31% | 13% |
| Staff | 14,141 | 2,200 | 17% | 37% | 22% | 22% | 28% | 35% | 11% |
| Overall percent | 100% | 100% | 13% | 21% | 18% | 22% | 20% | 17% | 10% |
| Overall number | 53,886 | 21,290 | - | 4,506 | 3,098 | 4,014 | 3,748 | 4,132 | 2,834 |

Appendix H: Weighting by Role and Gender

The appropriate weight factor is a ratio of the population share to the sample share for each role group. That is, with N total population, n in the sample, and N_i in role and gender group i in the population (for instance, female freshmen), and n_i of that group i in the sample, we apply the weight factor $W_i = (N_i/N) / (n_i/n)$ to all cases in group i . Applying the weight factors alters the apparent distribution of respondents by role and gender, but the overall sample size is unchanged. In instances where we would like to expand the sample to a projection of the full population, we weight each case by an *expansion* factor E_i , equal to (N_i / n_i) . Applying the expansion factors alters both the distribution of respondents by role, and inflates the sample to the size of the population.

Although the number of valid responses varies from question to question (that is, n and n_i), we use the same set of weight factors for most variables, based on the distribution of roles among the $n = 2,261$ valid responses to question *Q51*, the main question relating to mode choice on each day during the travel week. For variables relying on geocoding of respondents' residential location, we generated a separate set of weight factors, based on the 2,179 cases successfully geocoded (by cross streets and zip code given in questions *Q29* and *Q30*; see "Appendix E: Geocoding and network distances"). Both sets of weights are shown in Table H1.

Table H- 1. Weight Factors, applied by Role, Gender, Mode, and Geocoding

| Role | Gender | Population (N) | Factors by Role, Gender, and Mode ^a | | | | Factors by Role, Gender, Mode, and Geocoding ^b | | | |
|-----------|--------|----------------|--|-----------------------------|--------------------------|----------------------|---|-----------------------------|--------------------------|----------------------|
| | | | Valid Responses (n) | Weight Factor (Ni/N)/(ni/n) | Expansion Factor (Ni/ni) | Weighted Sample Size | Valid Responses (n) | Weight Factor (Ni/N)/(ni/n) | Expansion Factor (Ni/ni) | Weighted Sample Size |
| Freshman | Woman | 4,255 | 161 | 1.109 | 26.429 | 179 | 160 | 1.077 | 26.594 | 172 |
| | Man | 2,312 | 44 | 2.205 | 52.545 | 97 | 43 | 2.178 | 53.767 | 94 |
| Sophomore | Woman | 3,386 | 175 | 0.812 | 19.349 | 142 | 170 | 0.807 | 19.918 | 137 |
| | Man | 2,057 | 68 | 1.269 | 30.250 | 86 | 65 | 1.282 | 31.646 | 83 |
| Junior | Woman | 4,974 | 205 | 1.018 | 24.263 | 209 | 198 | 1.018 | 25.121 | 202 |
| | Man | 3,414 | 82 | 1.747 | 41.634 | 143 | 77 | 1.796 | 44.338 | 138 |
| Senior | Woman | 6,049 | 149 | 1.703 | 40.597 | 254 | 142 | 1.726 | 42.599 | 245 |
| | Man | 4,363 | 50 | 3.661 | 87.260 | 183 | 49 | 3.607 | 89.041 | 177 |
| Master's | Woman | 1,499 | 101 | 0.623 | 14.842 | 63 | 96 | 0.633 | 15.615 | 61 |
| | Man | 1,163 | 61 | 0.800 | 19.066 | 49 | 59 | 0.799 | 19.712 | 47 |
| PhD | Woman | 2,188 | 258 | 0.356 | 8.481 | 92 | 251 | 0.353 | 8.717 | 89 |
| | Man | 1,933 | 122 | 0.665 | 15.844 | 81 | 120 | 0.653 | 16.108 | 78 |
| Faculty | Woman | 876 | 129 | 0.285 | 6.791 | 37 | 124 | 0.286 | 7.065 | 35 |
| | Man | 1,276 | 138 | 0.388 | 9.246 | 54 | 136 | 0.380 | 9.382 | 52 |
| Staff | Woman | 7,664 | 332 | 0.969 | 23.084 | 322 | 316 | 0.983 | 24.253 | 310 |
| | Man | 6,477 | 186 | 1.461 | 34.823 | 272 | 177 | 1.482 | 36.593 | 262 |
| Overall | – | 53,886 | 2,261 | 0 | 23.833 | 2,261 | 2,183 | 0 | 24.684 | 2,183 |

^a Based on valid responses to Q2 (campus role), Q17 (gender).

^b Based on valid responses to Q2 (campus role), Q17 (gender), and successful geocoding of residential location (from questions Q29 and Q30).