Results of the 2019-2020 Campus Travel Survey

July 2020

A Research Report from the National Center for Sustainable Transportation

Amy Lee, University of California, Davis

National Center for Sustainable Transportation

ITS UCDAVIS INSTITUTE OF TRANSPORTATION STUDIES

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Disclaimer

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NCST

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Results of the 2019-20 Campus Travel Survey

Institute of Transportation Studies

and

Transportation Services

University of California, Davis

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Institute of Transportation Studies

July 2020

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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.

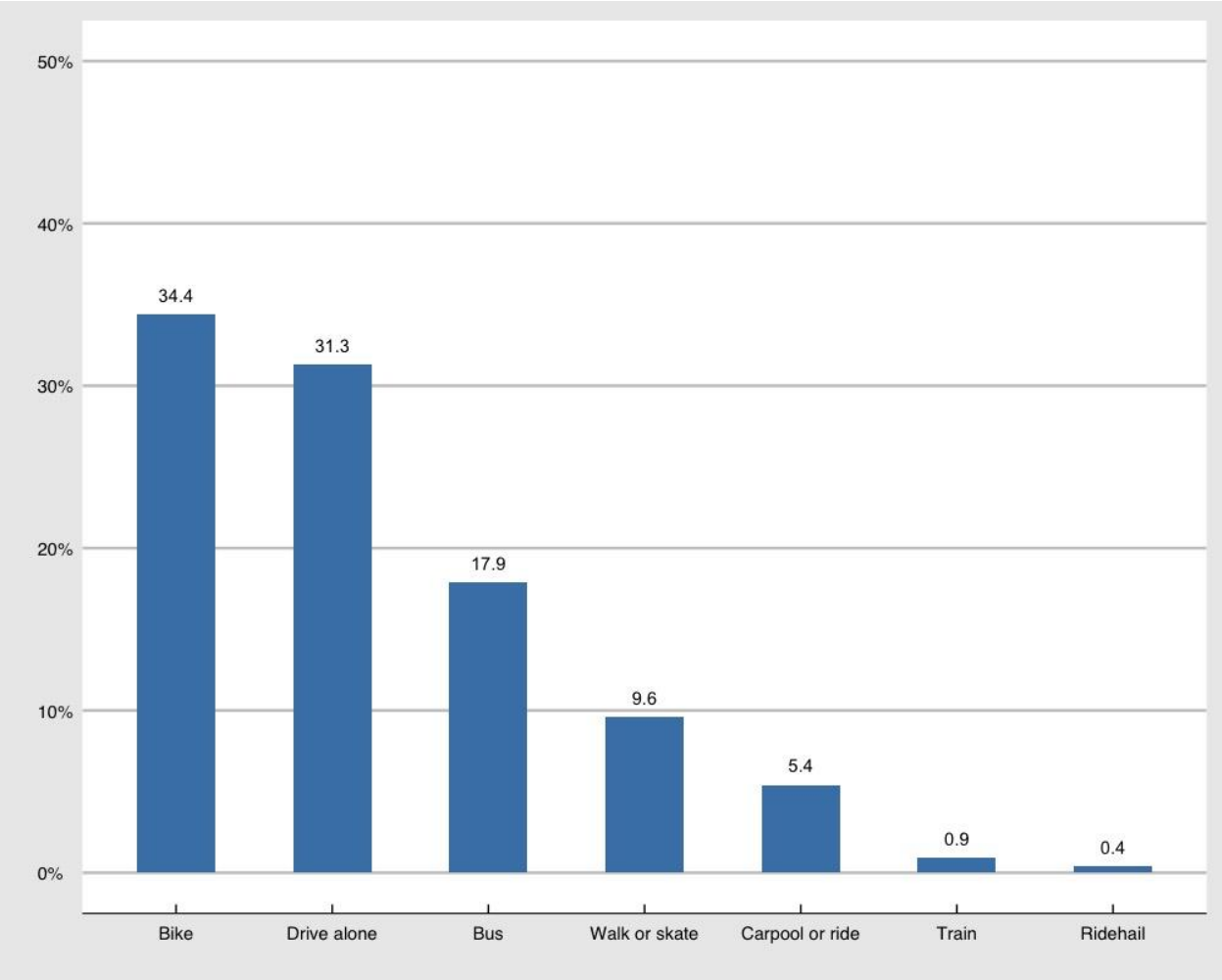
The 2019–20 survey collected data from 3,098 people affiliated with UC Davis about their travel to campus during a single week in October 2019. It used a stratified random sampling method with the intent to gather a representative sample of the campus population. About 18 percent of those invited responded 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 proportion in the campus population.

Main Findings

Overall Mode Share

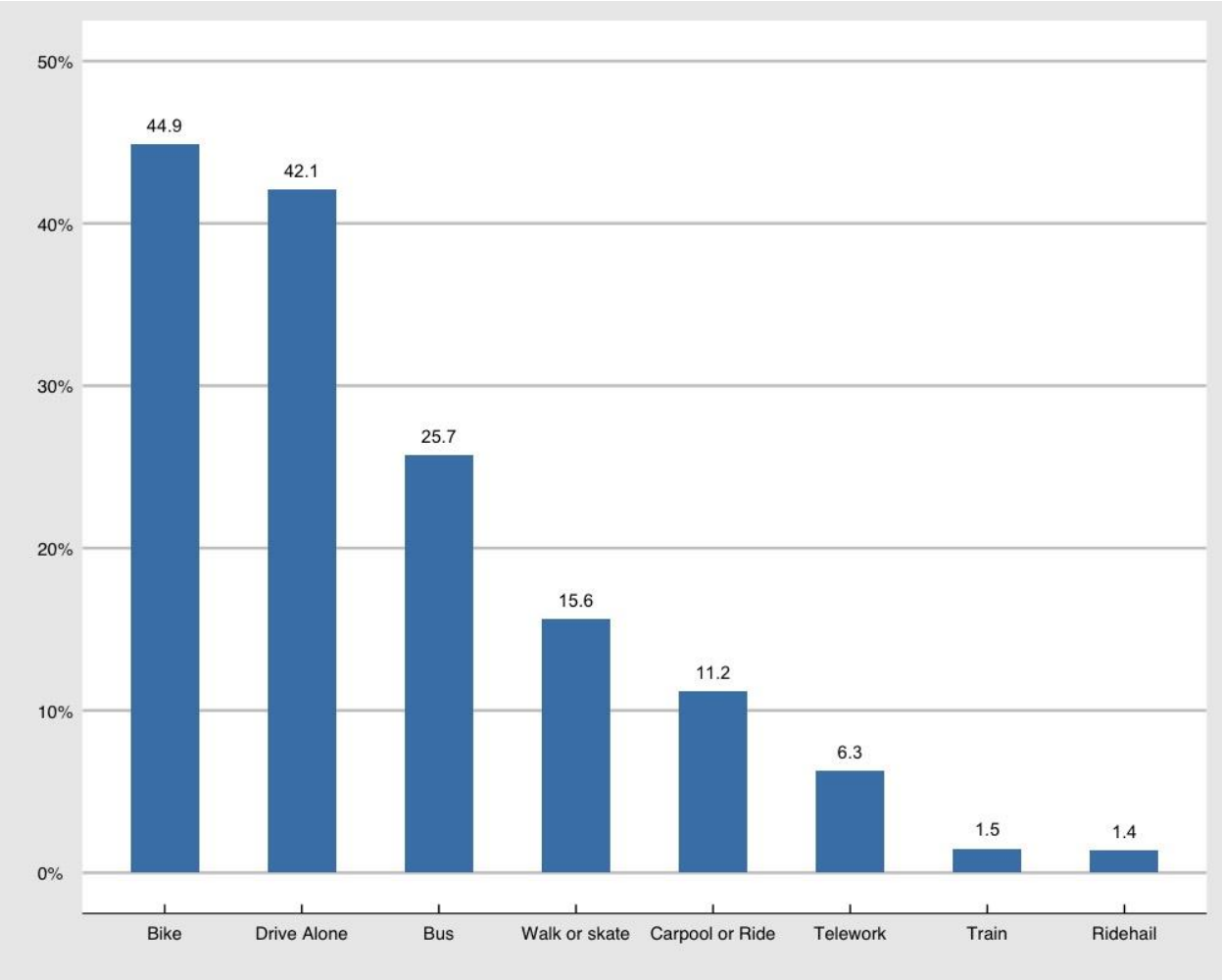
On an average weekday, about 85 percent of people physically travel to campus (approximately 46,500 people, including those living on campus). Among these, 34 percent bike to get there, 31 percent drive alone, 18 percent ride the bus, 10 percent walk or skate, 5 percent carpool or get a ride, nearly 1 percent ride the train, and 0.4 percent use ridehailing services (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, 2019-20



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 45 percent reported biking as their primary means at least once during the week. Similarly, about 42 percent drove alone, 25 percent rode the bus, 16 percent walked or skated, 11 percent carpooled or got a ride, 1.5 percent rode the train, and 1.4 percent used ridehailing services at least once during the week for most of the distance to campus. About 6 percent teleworked at least one day in the reference week. See Figure 2.

Figure 2. Used mode at least once during reference week, 2019-20



Change in Mode Share, 2017-18 to 2018-19

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 2018-19 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 2018-19 and 2019-20 surveys.

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

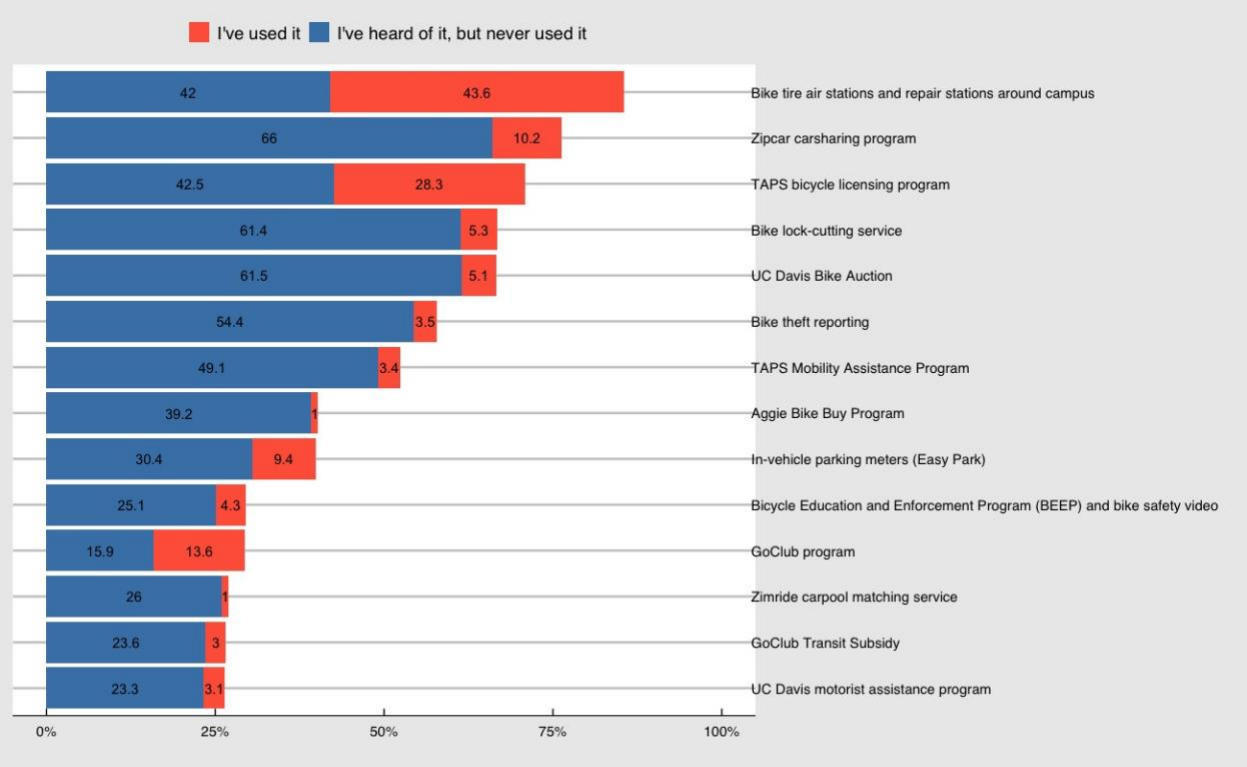
Survey Years	Physically Travelled	*Of those who physically traveled to campus*						
		Bike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail
2018-19, Overall	84.0%	37.3%	9.4%	31.2%	5.9%	15.5%	0.79%	0.35%
2019-20, Overall	85.3%	34.4%	9.6%	31.3%	5.4%	17.9%	0.93%	0.41%
Difference	1.3%	-2.9%	0.22%	0.16%	-0.5%	2.4%	0.14%	0.06%

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

Familiarity with TAPS 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 nearly 44 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 results 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

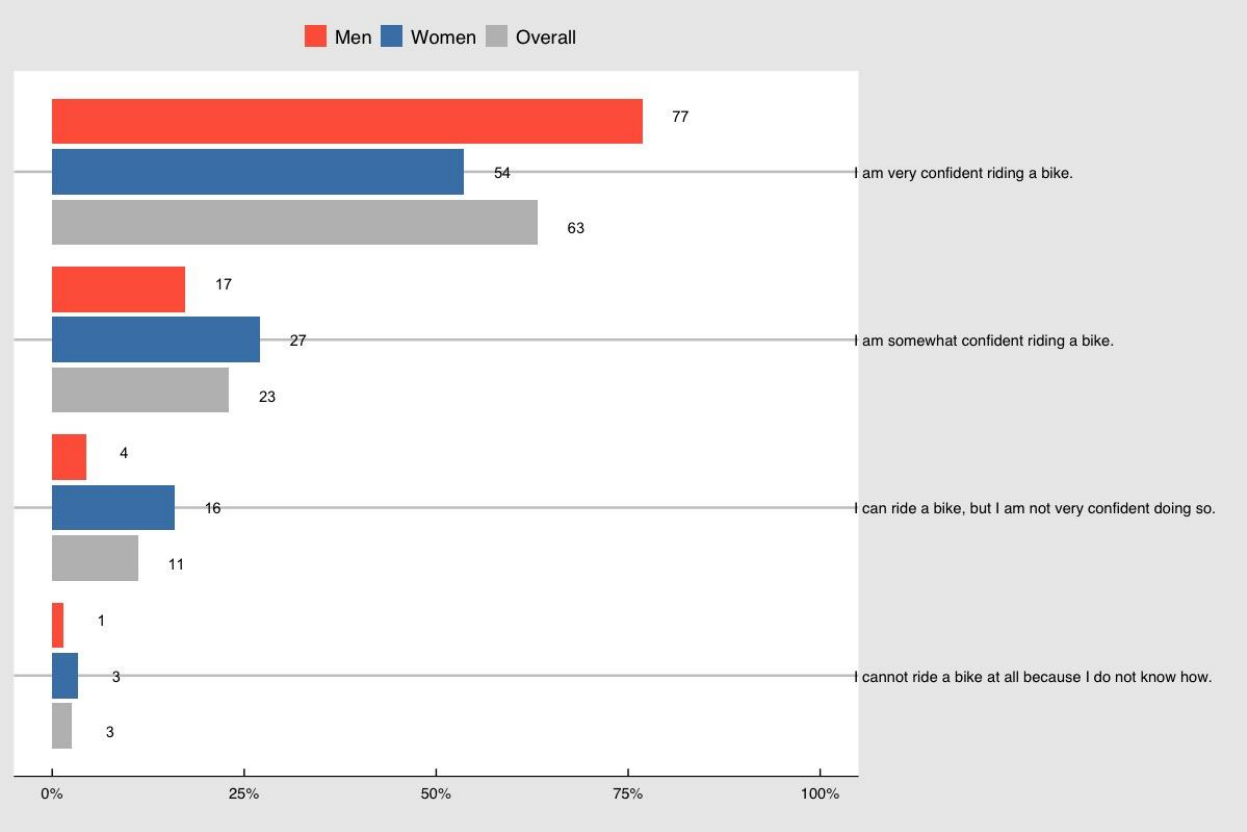
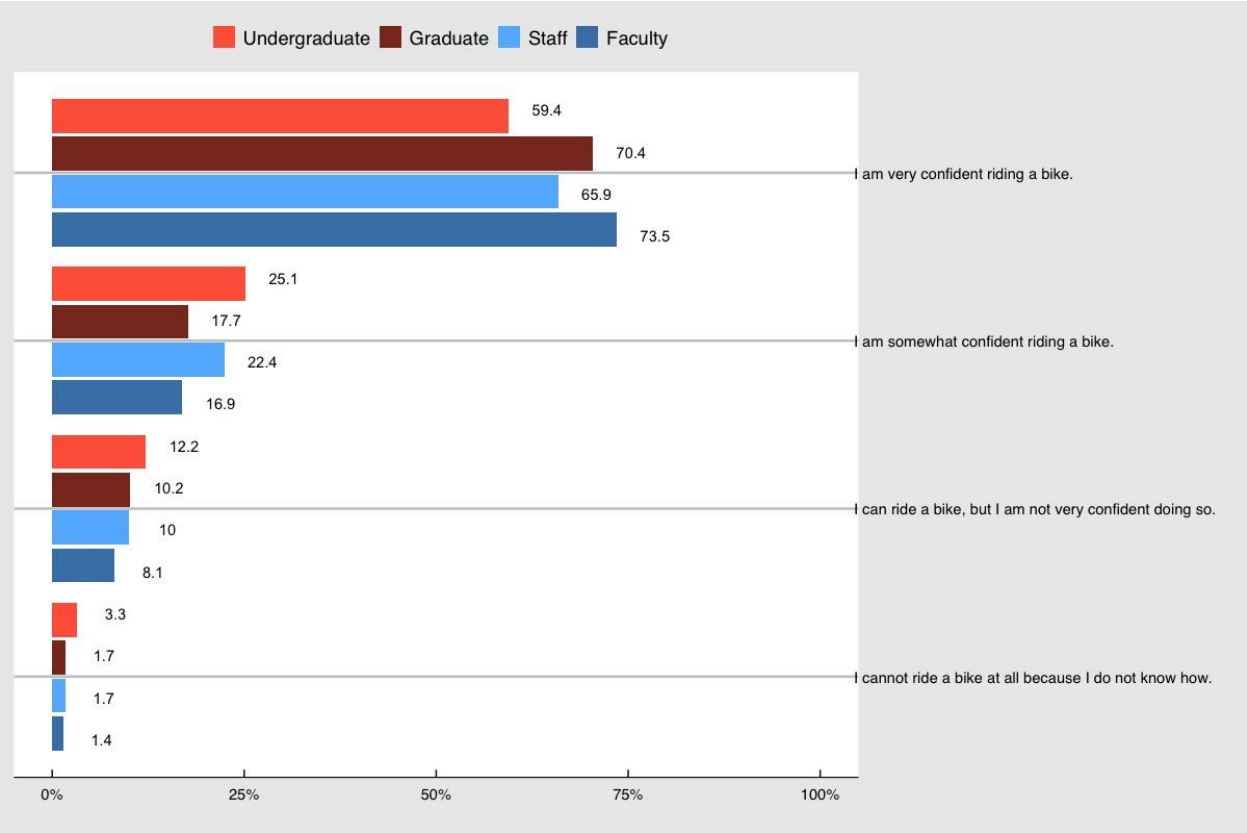


Figure 5. Bicycling Aptitude by Campus Role



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 (CO_2e) 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 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, 2019-20 Campus Travel Survey" for a full copy of the survey instrument. See "Appendix B: Changes from the 2018-19 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 2019-20 survey was administered online in October and November 2020, distributed by email to a stratified random sample of 17,094 students, faculty, and staff (out of an estimated total population of 54,497). 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 40 $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 first welcome page of the online survey. On the final page of the survey, respondents were asked to indicate whether it would be okay for us 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 3,584 respondents at least started the survey (responding to the question about their role on campus), representing 21 percent of those invited. Of those who began the survey, 86 percent (3,098 respondents) completed the survey through the set of questions that asked respondents about 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.

Table B-2 shows the number of valid responses at three key points in the survey: those who answered the first question about role at the university, those who gave valid responses to questions about primary mode and gender, and those whose residential locations were successfully geocoded in addition to meeting the previous criteria.

Table B- 1. Response Rates for 2019-20 versus 2018-19

Role	Assumed Population	Number Invited	Actual Responses	Target Response Rate	2019-20 Actual Response Rate	2018-19 Actual Response Rate
Student	**38,071**	**13,621**	**2,351**	**15.8%**	**17.3%**	22%
Undergraduate	**31,085**	**10,441**	**1,754**	**14.0%**	**16.8%**	20%
Freshman	6,156	1,574	428	23.0%	27.2%	28%
Sophomore	5,865	3,610	533	10.0%	14.8%	15%
Junior	8,473	2,165	328	17.0%	15.2%	22%
Senior	10,591	3,092	465	12.0%	15.0%	17%
Graduate	**6,986**	**3,180**	**597**	**21.7%**	**18.8%**	27%
Master's	2,796	2,113	333	16.0%	15.8%	21%
PhD	4,190	1,067	264	33.0%	24.7%	38%
Employee	**16,426**	**3,473**	**747**	**20.3%**	**21.5%**	**25%**
Faculty	2,392	1,273	263	26.0%	20.7%	31%
Staff	14,034	2,200	484	17.0%	22.0%	22%
Overall Percent	54,497	17,094	3,098	2,857	18.1%	22%
Overall	100.0%	31.4%	18.1%	16.7%	18.1%	22%

Table B- 2. Number of Valid Responses by Role

Role	Population	Invited	Target (5% margin of error)	Valid role (started survey)	Mode and gender (weighted for bulk of analysis)	Geocoded (weighted for CO2 emissions, VMT)
Student	**38,071**	**13,621**	**2,152**	**2,675**	**2,351**	**2,293**
Undergraduate	**31,085**	**10,441**	**1,462**	**1,905**	**1,754**	**1,718**
Freshman	6,156	1,574	362	452	428	426
Sophomore	5,865	3,610	361	579	533	517
Junior	8,473	2,165	368	373	328	321
Senior	10,591	3,092	371	501	465	454
Graduate	**6,986**	**3,180**	**690**	**770**	**597**	**575**
Master's	2,796	2,113	338	476	333	318
PhD	4,190	1,067	352	294	264	257
Employee	**16,426**	**3,473**	**705**	**909**	**747**	**703**
Faculty	2,392	1,273	331	366	263	249
Staff	14,034	2,200	374	543	484	454
Overall	54,497	17,094	2,857	3,584	3,098	2,996
Overall percent	100.0%	31.4%	16.7%	21.0%	17.5%	100.0%

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 (and 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

Role	Men	Women	Unweighted Sample	Projected Population
Undergraduate	28.2%	71.8%	1,754	31,085
Graduate	35.7%	64.3%	597	6,986
Faculty	53.2%	46.8%	263	2,392
Staff	34.9%	65.1%	484	14,034

Table B- 4. Weighted Gender Distribution of Respondents

	Men	Women	Weighted Sample	Projected Population
Undergraduate	39.2%	60.8%	1,767	31,085
Graduate	45.0%	55.0%	397	6,986
Faculty	58.4%	41.6%	136	2,392
Staff	42.6%	57.4%	798	14,034

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.

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

Role	Sample Size	Population Size	Margin of Error
Student	**2,351**	**38,071**	**1.96%**
Undergraduate	**1,754**	**31,085**	**2.27%**
Freshman	428	6,156	4.57%
Sophomore	533	5,865	4.05%
Junior	328	8,473	5.31%
Senior	465	10,591	4.44%
Graduate	**597**	**6,986**	**3.84%**
Master's	333	2,796	5.04%
PhD	264	4,190	5.84%
Employee	**747**	**16,426**	**3.50%**
Faculty	263	2,392	5.70%
Staff	484	14,034	4.38%
Overall	3,098	54,497	1.71%

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, about 88 percent of university affiliates physically traveled to campus on each day Monday through Thursday, with a low of 81 percent traveling to campus on Friday. Faculty travel to campus least often, while sophomores travel to campus most often.

Table 1. Share Physically Travelling to Campus by Weekday

Role	Share physically traveling to campus by weekday						Weighted Sample	Projected Population
	Monday	Tuesday	Wed.	Thursday	Friday	No Days		
Student	**89.0%**	**90.3%**	**90.1%**	**89.8%**	**83.0%**	**4.1%**	**2,164**	**38,071**
Undergraduate	**89.6%**	**90.7%**	**90.6%**	**90.1%**	**83.6%**	**4.3%**	**1,767**	**31,085**
Freshman	84.3%	84.4%	86.0%	83.3%	86.2%	8.4%	350	6,156
Sophomore	93.1%	92.1%	93.5%	91.8%	90.6%	3.2%	333	5,865
Junior	90.3%	93.0%	91.3%	91.8%	81.4%	3.9%	482	8,473
Senior	90.1%	91.8%	91.2%	91.8%	79.9%	3.0%	602	10,591
Graduate	**86.6%**	**88.7%**	**87.9%**	**88.2%**	**80.4%**	**3.3%**	**397**	**6,986**
Master's	85.2%	86.2%	86.7%	85.3%	73.9%	5.2%	159	2,796
PhD	87.5%	90.4%	88.8%	90.1%	84.7%	1.9%	238	4,190
Employee	**81.3%**	**83.5%**	**83.4%**	**82.3%**	**75.1%**	**8.1%**	**934**	**16,426**
Faculty	74.5%	77.1%	78.5%	74.2%	68.4%	10.6%	136	2,392
Staff	82.5%	84.5%	84.3%	83.7%	76.3%	7.7%	798	14,034
Overall	**86.7%**	**88.3%**	**88.1%**	**87.5%**	**80.6%**	**5.3%**	**3,098**	**54,497**
Weighted Sample	2,686	2,734	2,730	2,711	2,497	165	3,098	NA
Projected Population	47,251	48,101	48,026	47,697	43,932	2,910	NA	54,497

Results are based on responses to questions Q37 and Q38. 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 in Davis travel to campus more often than those living outside Davis (89 percent versus 80 percent).

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	**87.8%**	**83.4%**	**91.5%**	**90.5%**	**79.9%**	**2,093**	**38,071**
Undergraduate	**88.1%**	**82.9%**	**91.6%**	**90.9%**	**81.8%**	**1,709**	**31,085**
Freshman	81.6%	81.1%	100.0%	90.4%	85.3%	338	6,156
Sophomore	91.5%	88.3%	87.0%	92.9%	84.7%	322	5,865
Junior	89.8%	89.6%	91.8%	90.3%	85.1%	466	8,473
Senior	88.7%	85.1%	96.0%	90.3%	78.8%	582	10,591
Graduate	**86.5%**	**90.3%**	**90.4%**	**89.1%**	**76.3%**	**384**	**6,986**
Master's	84.3%	90.2%	84.5%	88.8%	70.9%	154	2,796
PhD	87.9%	90.3%	100.0%	89.3%	81.0%	230	4,190
Employee	**81.2%**	**92.4%**	**0.0%**	**83.4%**	**79.9%**	**903**	**16,426**
Faculty	74.1%	64.3%	0.0%	80.5%	62.6%	132	2,392
Staff	82.5%	100.0%	0.0%	84.3%	81.5%	772	14,034
Overall	**85.8%**	**83.5%**	**90.0%**	**89.0%**	**79.9%**	**2,996**	**54,497**
Weighted Sample	2,572	388	83	1,482	618	2,996	NA
Projected Population	46,777	7,061	1,517	26,962	11,237	NA	54,497

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

About 5 percent of the sample did not physically travel to campus on any day during the reference week. These respondents were asked to give the reason they were away all week (Table 3). Employees were more likely to be away all week than students, with work travel and study abroad or sabbatical being the most common reasons given for being away.

Employees (but not students) who were away from campus just some of the days during the week were also asked to give the reason they did not travel to campus for each weekday they were away (Table 4). Nearly 20 percent of employees did not travel to campus on an average weekday (Table 4). The most common reasons for being away from campus are working from home (telecommuting) and vacation, sickness, or personal leave.

Table 3. Share Away from Campus All Week and Reasons Given, by Role

Role	Share Away All Week	*Of those away all week*						Weighted Sample	Projected Population
		Didn't Say	Study Abroad or Sabbatical	Telecommuting (working from home or remotely)	Temporary Appointment Elsewhere	Vacation, Sickness, or Personal Leave	Work- or School-Related Travel or Field Work		
Student	**4.1%**	**58.0%**	**19.1%**	**6.8%**	**4.2%**	**5.6%**	**6.3%**	**89**	**1,573**
Undergraduate	**4.3%**	**59.7%**	**21.3%**	**5.0%**	**4.9%**	**6.5%**	**2.5%**	**76**	**1,346**
Freshman	8.4%	77.9%	6.3%	5.3%	2.6%	7.9%	0.0%	29	514
Sophomore	3.2%	63.2%	5.2%	0.0%	8.0%	5.2%	18.4%	11	185
Junior	3.9%	50.2%	37.4%	12.5%	0.0%	0.0%	0.0%	19	328
Senior	3.0%	38.2%	38.2%	0.0%	11.8%	11.8%	0.0%	18	318
Graduate	**3.3%**	**47.8%**	**6.0%**	**17.4%**	**0.0%**	**0.0%**	**28.9%**	**13**	**227**
Master's	5.2%	51.2%	0.0%	26.9%	0.0%	0.0%	22.0%	8	147
PhD	1.9%	41.5%	17.0%	0.0%	0.0%	0.0%	41.5%	5	80
Employee	**8.1%**	**41.3%**	**3.6%**	**7.9%**	**0.0%**	**16.9%**	**30.3%**	**76**	**1,338**
Faculty	10.6%	30.6%	18.9%	3.9%	0.0%	3.2%	43.4%	14	254
Staff	7.7%	43.7%	0.0%	8.9%	0.0%	20.1%	27.2%	62	1,083
Overall	**5.3%**	**50.3%**	**12.0%**	**7.3%**	**2.3%**	**10.8%**	**17.3%**	**165**	**2,910**
Weighted Sample	165	83	20	12	4	18	29	165	NA
Projected Population	2,910	1,464	348	214	66	314	505	NA	2,910

Results are based on responses to question Q39 (main reason for not traveling to campus). Data are weighted by role and gender.

Table 4. Share of employees not traveling to campus on an average weekday, and reason

Role	Share Away from Campus on an Average Weekday	*Of those not travelling to campus*						Weighted Sample	Projected Population
		Telecommuting (working from home or remotely)	Work- or School-Related Activities Elsewhere	Regularly Scheduled Day Off	Vacation, Sickness, or Personal Leave	Day Off as Part of a Compressed Work Week	Other		
Employee	19.7%	41.7%	9.2%	2.5%	31.7%	3.3%	11.7%	934	16,426
Faculty	26.4%	70.6%	16.7%	4.4%	4.9%	0.5%	2.9%	136	2,392
Staff	18.6%	47.3%	10.6%	2.9%	26.5%	2.8%	10.0%	798	14,034
Weighted Sample	184	77	17	5	58	6	21	3,098	NA
Projected Population	3,240	1,350	297	81	1,026	108	378	NA	54,497

Results are based on responses to question Q40 (reason for not traveling to campus by day) and on responses to Q39 for those away from campus all week. Data are weighted by role and gender.

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 5 through 11 show the overall mode share among those physically traveling to campus on a given weekday. Table 5 shows mode share among the entire sample. Tables 6 through 11 show mode share by residential location, as outlined below. The results suggest that mode splits vary substantially by neighborhood.

- Table 6 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 7 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 8 shows the mode shares among those living in the West Village apartments. Because the sample sizes in most role groups are very low, 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 9 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. Undergraduate students have high bus

ridership rates (37 percent), whereas graduate students and employees in Davis who do not bike are more likely to commute by car.

- Table 10 shows the mode share for students and employees who live outside Davis (an estimated 14,069 people). Among those traveling from outside Davis, about 80 percent commute by car, 9 percent carpool or get a ride, 5 percent ride the bus, and 3.6 percent ride the train.

- Table 11 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, 2019-20 Campus Travel Survey”.

Table 5. 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	**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**
Freshman	81.5%	62.0%	28.4%	4.0%	1.4%	2.6%	0.55%	0.86%	350	6,156
Sophomore	91.2%	38.2%	8.9%	9.6%	4.0%	38.9%	0.00%	0.43%	333	5,865
Junior	89.3%	33.9%	11.8%	17.9%	4.7%	31.0%	0.00%	0.65%	482	8,473
Senior	88.4%	30.3%	9.9%	25.3%	4.1%	30.0%	0.14%	0.31%	602	10,591
Graduate	**85.7%**	**49.6%**	**7.1%**	**26.6%**	**7.2%**	**7.5%**	**1.60%**	**0.47%**	**397**	**6,986**
Master's	82.8%	46.9%	8.3%	29.3%	5.7%	8.1%	1.27%	0.46%	159	2,796
PhD	87.6%	51.4%	6.2%	24.9%	8.1%	7.1%	1.82%	0.47%	238	4,190
Employee	**80.3%**	**18.7%**	**2.4%**	**64.6%**	**8.1%**	**3.8%**	**2.25%**	**0.13%**	**934**	**16,426**
Faculty	73.6%	39.3%	3.6%	42.7%	7.0%	3.6%	3.62%	0.21%	136	2,392
Staff	81.4%	15.5%	2.2%	68.0%	8.3%	3.8%	2.03%	0.12%	798	14,034
Overall	**85.3%**	**34.4%**	**9.6%**	**31.3%**	**5.4%**	**17.9%**	**0.93%**	**0.41%**	**3,098**	**54,497**
Weighted sample	2,642	909	254	828	143	472	25	11	3,098	NA
Projected population	46,467	15,992	4,467	14,559	2,518	8,308	433	190	NA	54,497

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 6. 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	**88.8%**	**45.4%**	**13.5%**	**11.0%**	**3.9%**	**25.5%**	**0.09%**	**0.56%**	**1,860**	**33,827**
Undergraduate	**88.7%**	**42.2%**	**14.4%**	**10.1%**	**3.5%**	**29.1%**	**0.10%**	**0.57%**	**1,558**	**28,346**
Freshman	81.5%	64.6%	29.4%	1.1%	1.0%	2.4%	0.52%	0.90%	326	5,930
Sophomore	91.9%	40.2%	9.3%	5.2%	3.8%	41.0%	0.00%	0.47%	306	5,569
Junior	90.3%	37.6%	12.3%	11.7%	4.1%	33.6%	0.00%	0.72%	421	7,655
Senior	90.2%	34.2%	10.7%	17.0%	4.1%	33.7%	0.00%	0.31%	505	9,191
Graduate	**89.2%**	**61.6%**	**8.8%**	**15.5%**	**6.4%**	**7.2%**	**0.03%**	**0.50%**	**301**	**5,481**
Master's	88.7%	60.2%	10.8%	16.5%	4.6%	7.5%	0.08%	0.36%	116	2,103
PhD	89.6%	62.5%	7.6%	14.8%	7.5%	7.0%	0.00%	0.58%	186	3,379
Employee	**83.3%**	**45.2%**	**3.7%**	**40.1%**	**7.7%**	**3.3%**	**0.00%**	**0.04%**	**363**	**6,601**
Faculty	80.2%	54.2%	4.8%	32.2%	6.8%	1.8%	0.00%	0.17%	86	1,563
Staff	84.2%	42.6%	3.3%	42.5%	7.9%	3.7%	0.00%	0.00%	277	5,038
Overall	**87.9%**	**45.3%**	**12.0%**	**15.5%**	**4.5%**	**22.1%**	**0.07%**	**0.48%**	**2,223**	**40,428**
Weighted Sample	1,954	886	234	303	88	432	1	9	2,223	NA
Projected Population	35,540	16,117	4,261	5,505	1,606	7,855	26	170	NA	40,428

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 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	**83.4%**	**60.4%**	**31.4%**	**1.9%**	**1.1%**	**4.2%**	**0.36%**	**0.71%**	**457**	**8,315**
Undergraduate	**82.9%**	**59.7%**	**32.0%**	**1.7%**	**1.1%**	**4.4%**	**0.39%**	**0.70%**	**429**	**7,801**
Freshman	81.1%	65.0%	30.6%	0.5%	1.1%	1.3%	0.54%	0.94%	314	5,718
Sophomore	88.3%	59.3%	35.9%	0.4%	0.4%	3.6%	0.00%	0.37%	33	601
Junior	89.6%	40.5%	40.5%	2.7%	2.1%	14.2%	0.00%	0.00%	48	882
Senior	85.1%	42.1%	27.4%	12.6%	0.0%	17.9%	0.00%	0.00%	33	599
Graduate	**90.3%**	**68.9%**	**23.2%**	**4.1%**	**1.3%**	**1.6%**	**0.00%**	**0.85%**	**28**	**515**
Master's	90.2%	78.9%	7.9%	6.8%	1.5%	4.9%	0.00%	0.00%	9	169
PhD	90.3%	64.1%	30.7%	2.7%	1.3%	0.0%	0.00%	1.27%	19	346
Employee	**92.4%**	**8.2%**	**44.9%**	**21.3%**	**25.5%**	**0.0%**	**0.00%**	**0.00%**	**8**	**139**
Faculty	64.3%	55.4%	44.6%	0.0%	0.0%	0.0%	0.00%	0.00%	2	30
Staff	100.0%	0.0%	45.0%	25.0%	30.0%	0.0%	0.00%	0.00%	6	109
Overall	**83.5%**	**59.4%**	**31.7%**	**2.2%**	**1.5%**	**4.1%**	**0.35%**	**0.70%**	**465**	**8,454**
Weighted Sample	388	231	123	9	6	16	1	3	465	NA
Projected Population	7,061	4,195	2,237	156	108	291	25	49	NA	8,454

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 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	**91.5%**	**46.2%**	**8.0%**	**5.0%**	**1.4%**	**39.0%**	**0.00%**	**0.41%**	**91**	**1,658**
Undergraduate	**91.6%**	**46.2%**	**5.1%**	**5.3%**	**1.6%**	**41.5%**	**0.00%**	**0.44%**	**83**	**1,517**
Freshman	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.00%	0.00%	1	14
Sophomore	87.0%	48.5%	3.1%	2.8%	1.4%	43.6%	0.00%	0.47%	26	480
Junior	91.8%	42.8%	8.8%	4.8%	1.6%	41.2%	0.00%	0.80%	31	567
Senior	96.0%	49.3%	2.6%	8.3%	1.8%	38.0%	0.00%	0.00%	25	456
Graduate	**90.4%**	**46.0%**	**39.9%**	**2.3%**	**0.0%**	**11.9%**	**0.00%**	**0.00%**	**8**	**141**
Master's	84.5%	52.7%	22.7%	4.0%	0.0%	20.6%	0.00%	0.00%	5	87
PhD	100.0%	36.8%	63.2%	0.0%	0.0%	0.0%	0.00%	0.00%	3	54
Employee	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.00%**	**0.00%**	**2**	**27**
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%	2	27
Overall	**90.0%**	**46.2%**	**8.0%**	**5.0%**	**1.4%**	**39.0%**	**0.00%**	**0.41%**	**93**	**1,685**
Weighted Sample	83	38	7	4	1	33	0	0	93	NA
Projected Population	1,517	700	121	76	22	591	0	6	NA	1,685

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 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	**90.5%**	**40.5%**	**8.1%**	**14.3%**	**5.0%**	**31.5%**	**0.01%**	**0.52%**	**1,311**	**23,854**
Undergraduate	**90.9%**	**35.3%**	**8.6%**	**13.6%**	**4.5%**	**37.4%**	**0.00%**	**0.53%**	**1,046**	**19,028**
Freshman	90.4%	59.4%	0.0%	18.2%	0.0%	22.4%	0.00%	0.00%	11	198
Sophomore	92.9%	36.9%	6.5%	6.1%	4.5%	45.5%	0.00%	0.48%	247	4,488
Junior	90.3%	36.8%	8.6%	13.6%	4.6%	35.6%	0.00%	0.82%	341	6,206
Senior	90.3%	32.8%	10.0%	17.8%	4.5%	34.5%	0.00%	0.35%	447	8,136
Graduate	**89.1%**	**61.3%**	**6.3%**	**17.1%**	**7.1%**	**7.6%**	**0.03%**	**0.47%**	**265**	**4,826**
Master's	88.8%	58.8%	10.5%	18.0%	5.1%	7.1%	0.09%	0.41%	102	1,847
PhD	89.3%	62.9%	3.7%	16.6%	8.4%	8.0%	0.00%	0.51%	164	2,979
Employee	**83.4%**	**46.1%**	**2.7%**	**40.6%**	**7.2%**	**3.4%**	**0.00%**	**0.04%**	**354**	**6,435**
Faculty	80.5%	54.2%	4.2%	32.7%	6.9%	1.9%	0.00%	0.17%	84	1,533
Staff	84.3%	43.7%	2.2%	42.9%	7.3%	3.8%	0.00%	0.00%	269	4,902
Overall	**89.0%**	**41.6%**	**7.1%**	**19.6%**	**5.5%**	**25.9%**	**0.01%**	**0.42%**	**1,665**	**30,289**
Weighted Sample	1,482	617	105	290	81	383	0	6	1,665	NA
Projected Population	26,962	11,222	1,903	5,273	1,476	6,973	1	114	NA	30,289

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 10. 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	**79.9%**	**1.4%**	**4.2%**	**76.0%**	**7.8%**	**7.1%**	**3.22%**	**0.25%**	**233**	**4,244**
Undergraduate	**81.8%**	**0.6%**	**6.3%**	**79.4%**	**6.8%**	**6.0%**	**0.72%**	**0.17%**	**151**	**2,739**
Freshman	85.3%	0.0%	7.1%	77.4%	4.2%	9.9%	1.41%	0.00%	12	226
Sophomore	84.7%	0.0%	0.0%	88.8%	5.5%	5.7%	0.00%	0.00%	16	296
Junior	85.1%	0.0%	9.1%	70.3%	11.5%	9.1%	0.00%	0.00%	45	818
Senior	78.8%	1.2%	5.9%	83.3%	4.5%	3.5%	1.21%	0.35%	77	1,400
Graduate	**76.3%**	**2.9%**	**0.0%**	**69.5%**	**9.7%**	**9.3%**	**8.09%**	**0.40%**	**83**	**1,505**
Master's	70.9%	1.2%	0.0%	74.4%	7.5%	11.0%	5.05%	0.93%	38	693
PhD	81.0%	4.2%	0.0%	65.9%	11.4%	8.1%	10.36%	0.00%	45	811
Employee	**79.9%**	**1.2%**	**1.1%**	**80.7%**	**8.9%**	**4.0%**	**3.83%**	**0.19%**	**540**	**9,825**
Faculty	62.6%	5.5%	1.6%	68.7%	6.0%	8.0%	10.30%	0.00%	46	829
Staff	81.5%	0.9%	1.1%	81.6%	9.2%	3.7%	3.38%	0.21%	495	8,996
Overall	**79.9%**	**1.2%**	**2.0%**	**79.3%**	**8.6%**	**5.0%**	**3.65%**	**0.21%**	**773**	**14,069**
Weighted Sample	618	8	12	490	53	31	23	1	773	NA
Projected Population	11,237	140	227	8,913	965	558	410	23	NA	14,069

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

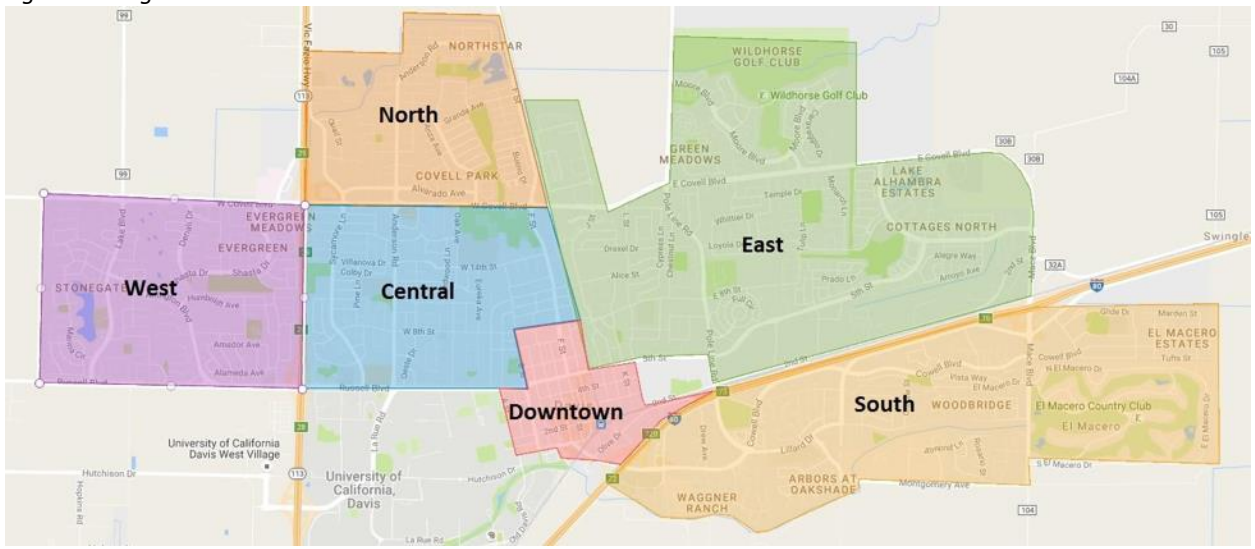


Table 11. Share Using Each Mode on an Average Weekday, by Neighborhood in Davis

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	86.9%	33.3%	2.5%	16.0%	5.3%	42.7%	0.00%	0.20%	324	5,893
South	90.9%	28.3%	4.8%	29.9%	6.6%	30.1%	0.00%	0.38%	262	4,761
East	87.2%	35.5%	5.6%	29.5%	7.0%	21.9%	0.00%	0.50%	299	5,435
West	91.8%	42.8%	4.7%	20.0%	6.3%	25.4%	0.00%	0.77%	343	6,232
Central	89.3%	61.2%	9.7%	9.7%	3.0%	16.0%	0.03%	0.38%	324	5,894
Downtown	86.9%	52.3%	29.1%	6.3%	3.8%	8.5%	0.00%	0.00%	113	2,050
Overall	**89.0%**	**41.6%**	**7.1%**	**19.6%**	**5.5%**	**25.9%**	**0.01%**	**0.42%**	**1,665**	**30,289**
Weighted sample	1,482	617	105	290	81	383	0	6	1,665	NA
Projected population	26,962	11,222	1,903	5,273	1,476	6,973	1	114	NA	30,289

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 2019-20 Mode Share with 2018-19

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 12 shows mode share estimates for 2018-19 and 2019-20. Data for both years are weighted by role and gender.

Table 12. 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		
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**
2018-19										
Student	85.2%	43.7%	12.0%	18.5%	4.4%	20.8%	0.64%	0.49%	2,800	37,593
Undergraduate	85.1%	42.7%	13.2%	15.7%	3.7%	24.2%	0.55%	0.54%	2,295	30,810
Graduate	85.4%	48.4%	6.4%	31.0%	7.6%	5.5%	1.03%	0.28%	505	6,783
Employee	81.3%	21.7%	3.2%	61.8%	9.4%	2.7%	1.15%	0.02%	1,214	16,293
Outside Davis	79.5%	2.1%	1.8%	81.4%	9.0%	3.5%	2.23%	0.09%	938	12,937
Within Davis	86.2%	48.0%	11.5%	16.1%	4.9%	19.2%	0.29%	0.44%	2,971	40,949
Overall	**84.0%**	**37.3%**	**9.4%**	**31.2%**	**5.9%**	**15.5%**	**0.79%**	**0.35%**	**4,014**	**53,886**

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 13 shows the share of respondents who have a driver's license, can drive alone, or can bicycle to campus for their commute.

Table 13. Driver's License, Car, and Bicycle Access

	Driver's License	Access to a Car	Access to a Bike	Weighted Sample	Projected Population
Student	**80.0%**	**47.9%**	**76.1%**	**2,093**	**38,071**
Undergraduate	**78.9%**	**43.4%**	**75.7%**	**1,709**	**31,085**
Freshman	62.5%	10.4%	83.5%	338	6,156
Sophomore	73.4%	35.9%	79.1%	322	5,865
Junior	83.2%	49.0%	76.5%	466	8,473
Senior	88.0%	62.2%	68.8%	582	10,591
Graduate	**84.8%**	**68.0%**	**77.9%**	**384**	**6,986**
Master's	81.1%	66.5%	72.5%	154	2,796
PhD	87.3%	69.0%	81.4%	230	4,190
Employee	**96.7%**	**90.3%**	**48.2%**	903	16,426
Faculty	98.0%	90.3%	72.9%	132	2,392
Staff	96.5%	90.2%	44.0%	772	14,034
Outside Davis	98.1%	94.5%	24.8%	773	14,069
Within Davis	80.5%	48.9%	82.6%	2,223	40,428
Overall	**85.0%**	**60.7%**	**67.7%**	**2,996**	**54,497**
Weighted sample	2,547	1,817	2,029	2,996	NA
Projected population	46,336	33,056	36,899	NA	54,497

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 14 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 14. Potential for Bicycling

Residence	Share Biking on an Average Weekday	Share Who Consider Biking an Option
Within 1 mile	55.5%	85.0%
1 to 2.9 miles	39.2%	83.7%
3 to 4.9 miles	15.3%	67.2%
5 to 9.9 miles	4.6%	29.1%
10 to 19.9 miles	1.1%	27.0%
20 miles or more	0.5%	23.0%
Overall	**31.7%**	**68.3%**

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 2,996 responses that were successfully geocoded and had mode choice data in Q51 (daily travel).

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 the 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 15.

Among those who carpooled at any point during the reference week, the average number of passengers was 2.5, including the driver. Most people dropped off on campus were the sole passenger with an average of 1.3 passengers dropped off per ride to campus, excluding the driver.

Table 15. Average Carpool Size

	Average Occupancy for those who carpooled or got a ride at least once		Weighted Sample		Projected Population	
Role	**Carpool**	**Ride**	**Weighted Carpoolers**	**Weighted Riders**	**Projected Carpoolers**	**Projected Riders**
Undergraduate	2.75	1.33	164	167	2,982	3,046
Graduate	2.36	1.30	38	37	688	675
Faculty	2.76	1.20	13	5	229	87
Staff	2.13	1.11	87	47	1,581	854
Outside Davis	2.32	1.09	77	46	1,406	833
Within Davis	2.49	1.33	196	171	3,564	3,110
Overall	2.52	1.28	301	256	5,480	4,662

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 16.

Table 16. 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	**5,877**	**313**	**612**	**6,801**	**38,071**
Undergraduate	**4,322**	**200**	**475**	**4,997**	**31,085**
Freshman	204	7	34	244	6,156
Sophomore	490	49	79	618	5,865
Junior	1,299	73	163	1,536	8,473
Senior	2,328	79	200	2,607	10,591
Graduate	**1,555**	**122**	**136**	**1,813**	**6,986**
Master's	673	30	47	750	2,796
PhD	882	94	90	1,065	4,190
Employee	**8,542**	**403**	**234**	**9,178**	**16,426**
Faculty	760	36	17	814	2,392
Staff	7,781	371	216	8,369	14,034
Outside Davis	8,913	331	197	9,441	14,069
Within Davis	5,349	361	601	6,311	31,974
Overall	**14,418**	**685**	**846**	**15,949**	**54,497**

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 making 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 2.66 campus-wide, and 1.59 among non-student employees only (Table 17). This means that for every car coming to campus, there are an estimated 2.66 off-campus people coming to campus or telecommuting. This ratio is higher than it was last year.

Table 17 and Table 18 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 17. Average Vehicle Ridership (AVR) 2010-11 through 2019-20, Off-Campus Only

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

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 18. Average Vehicle Ridership (AVR) 2009-10 through 2019-20, On- and Off-Campus

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

*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 19.

Table 19. 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	**7**	**2**	**1**	**93**	**816**	0	**12**	**930**
Undergraduate	**5**	**2**	**1**	**73**	**632**	0	**9**	**721**
Freshman	1	1	0	5	57	0	1	64
Sophomore	2	0	1	11	100	0	2	115
Junior	2	0	0	25	205	0	2	234
Senior	0	1	0	32	270	0	4	307
Graduate	**2**	**0**	**0**	**20**	**185**	0	**3**	**209**
Master's	0	0	0	8	71	0	1	80
PhD	2	0	0	12	114	0	2	129
Employee	**24**	**1**	**0**	**67**	**585**	0	**15**	**692**
Faculty	5	0	0	12	56	0	5	77
Staff	19	1	0	55	529	0	11	615
Overall	**30**	**3**	**1**	**160**	**1,401**	0	**27**	**1,622**
Weighted sample	30	3	1	160	1,401	0	27	1,622
Projected population	532	61	10	2,814	24,642	0	473	28,531

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*).

About 20 percent of respondents reported having an annual parking permit and 10 percent reported having a monthly or quarterly permit: a projected 10,769 and 5,091 people, respectively (Table 20). 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. About 38 percent of the population, or a projected 19,829 people use a daily permit. Nearly 2 percent of respondents, or a projected 983 people, indicated using an EasyPark meter.

Table 20. 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	**17.6%**	**6,533**	**7.4%**	**2,735**	**10.2%**	**3,798**	**40.2%**	**14,937**	**2.3%**	**866**	**37,196**
Undergraduate	**16.0%**	**4,879**	**6.1%**	**1,858**	**9.9%**	**3,021**	**38.7%**	**11,791**	**2.2%**	**666**	**30,447**
Freshman	3.2%	195	2.5%	152	0.7%	43	22.8%	1,397	0.4%	27	6,126
Sophomore	9.7%	554	3.1%	179	6.6%	375	43.3%	2,462	0.8%	44	5,690
Junior	18.8%	1,559	7.2%	596	11.6%	964	43.3%	3,592	2.7%	225	8,288
Senior	24.9%	2,571	9.0%	932	15.8%	1,639	42.0%	4,340	3.6%	370	10,343
Graduate	**24.5%**	**1,654**	**13.0%**	**877**	**11.5%**	**777**	**46.6%**	**3,146**	**3.0%**	**201**	**6,749**
Master's	29.1%	773	11.9%	315	17.2%	458	43.0%	1,144	2.0%	54	2,660
PhD	21.5%	880	13.7%	562	7.8%	319	49.0%	2,002	3.6%	147	4,088
Employee	**60.4%**	**9,327**	**52.1%**	**8,034**	**8.4%**	**1,293**	**31.7%**	**4,892**	**0.8%**	**116**	**15,432**
Faculty	50.0%	1,133	42.9%	970	7.2%	163	41.0%	928	0.9%	20	2,264
Staff	62.2%	8,195	53.6%	7,064	8.6%	1,131	30.1%	3,964	0.7%	96	13,169
Outside Davis	72.7%	9,705	53.0%	7,074	19.7%	2,631	23.1%	3,083	0.8%	107	13,357
Within Davis	19.2%	5,928	11.5%	3,558	7.7%	2,370	47.1%	14,563	2.7%	848	30,919
Overall	**30.1%**	**15,860**	**20.5%**	**10,769**	**9.7%**	**5,091**	**37.7%**	**19,829**	**1.9%**	**983**	**52,629**

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 21 and Table 22 show the share of bus and train users who used each service at least once during the reference week.

Of the 678 respondents who indicated riding the bus in the past week, most reported using Unitrans at least once, followed distantly by use of the UCD/UCDMC shuttle and Yolobus. Three respondents reported taking Sacramento Regional Transit and five reported taking the UCD/UC Berkeley Shuttle.

Of the 40 respondents who indicated riding the train to campus in the past week, most reported using Amtrak at least once. One respondent reported taking Bay Area Rapid Transit (BART) and four reported taking Sacramento Regional Transit light rail.

Table 21. 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	95.7%	2.0%	1.6%	0.1%	0.5%	592	10,418
Graduate	73.6%	4.4%	17.3%	3.1%	1.6%	41	716
Faculty	50.0%	6.6%	43.4%	0.0%	0.0%	6	104
Staff	46.1%	15.5%	38.4%	0.0%	0.0%	39	686
Overall	**91.6%**	**2.9%**	**4.8%**	**0.3%**	**0.5%**	**678**	**11,924**

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

Table 22. Share Using Specific Train Services at Least Once during the Reference Week

Role	Of those riding the train to campus at least once			Weighted Sample	Projected Population
	Amtrak	BART	Sacramento Regional Transit		
Undergraduate	77.4%	0.0%	22.6%	7	117
Graduate	95.9%	4.1%	0.0%	9	151
Faculty	100.0%	0.0%	0.0%	7	118
Staff	92.5%	0.0%	7.5%	18	315
Overall	**90.6%**	**0.8%**	**8.6%**	**40**	**701**

Results are based on responses to Q62 (train 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 15.5 percent live on campus (an estimated 8,454 people), 3.1 percent live in West Village (1,685 people), 55.6 percent live off-campus in Davis (30,289 people), and nearly 26 percent live outside of Davis (14,069 people) (Table 23). 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).

Table 23. Residential Location by Role Group

	On Campus	West Village	Off-Campus in Davis	Outside Davis	Weighted Sample	Projected Population
Student	**21.8%**	**4.4%**	**62.7%**	**11.1%**	**2,093**	**38,071**
Undergraduate	**25.1%**	**4.9%**	**61.2%**	**8.8%**	**1,709**	**31,085**
Freshman	92.9%	0.2%	3.2%	3.7%	338	6,156
Sophomore	10.2%	8.2%	76.5%	5.0%	322	5,865
Junior	10.4%	6.7%	73.2%	9.7%	466	8,473
Senior	5.7%	4.3%	76.8%	13.2%	582	10,591
Graduate	**7.4%**	**2.0%**	**69.1%**	**21.5%**	**384**	**6,986**
Master's	6.0%	3.1%	66.1%	24.8%	154	2,796
PhD	8.3%	1.3%	71.1%	19.4%	230	4,190
Employee	**0.8%**	**0.2%**	**39.2%**	**59.8%**	**903**	**16,426**
Faculty	1.2%	0.0%	64.1%	34.7%	132	2,392
Staff	0.8%	0.2%	34.9%	64.1%	772	14,034
Overall	**15.5%**	**3.1%**	**55.6%**	**25.8%**	**2,996**	**54,497**
Weighted Sample	465	93	1,665	773	2,996	NA
Projected Population	8,454	1,685	30,289	14,069	NA	54,497

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 in ArcGIS, 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 24 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 24).

Table 24. Average Distance from Residence to Campus, by Role Group

		Of those geocoded, distance from campus (miles)					
	Geocoded	**Mean**	**Median**	**Minimum**	**Maximum**	**Weighted Sample**	**Projected Population**
Student	**97.5%**	**4.47**	**1.65**	**0.48**	**122.80**	**2,093**	**38,071**
Undergraduate	**97.9%**	**3.79**	**1.48**	**0.50**	**90.71**	**1,709**	**31,085**
Freshman	99.5%	1.80	0.77	0.77	69.99	338	6,156
Sophomore	97.0%	3.04	1.80	0.57	61.47	322	5,865
Junior	97.9%	3.99	1.87	0.57	74.18	466	8,473
Senior	97.6%	5.22	1.89	0.50	90.71	582	10,591
Graduate	**96.3%**	**7.48**	**1.97**	**0.48**	**122.80**	**384**	**6,986**
Master's	95.5%	8.34	1.98	0.48	88.58	154	2,796
PhD	97.3%	6.91	1.96	0.54	122.80	230	4,190
Employee	**94.1%**	**13.94**	**8.73**	**0.43**	**125.24**	**903**	**16,426**
Faculty	94.7%	12.49	2.82	0.43	110.05	132	2,392
Staff	93.8%	14.19	11.75	0.57	125.24	772	14,034
Outside Davis	91.8%	23.54	18.57	0.74	125.24	773	14,069
Within Davis	97.7%	1.92	1.87	0.43	7.15	1,758	31,974
Overall	**96.7%**	**7.33**	**1.89**	**0.43**	**125.24**	**2,996**	**54,497**
Weighted Sample	2,897	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 25.

Table 25. Destination on Campus, among Employees and Graduate Students

Role	Main Campus	West Campus (west of SR 113)	South Campus (south of I-80)	Off-Campus but in Davis	Outside of Davis	Weighted Sample	Projected Population
Graduate	**86.3%**	**6.4%**	**5.2%**	**2.1%**	**0.0%**	**397**	**6,986**
Master's	87.1%	3.7%	7.7%	1.6%	0.0%	159	2,796
PhD	85.7%	8.2%	3.5%	2.5%	0.0%	238	4,190
Employee	**77.9%**	**7.5%**	**3.9%**	**10.7%**	**0.0%**	**934**	**16,426**
Faculty	92.6%	3.6%	2.3%	1.5%	0.0%	136	2,392
Staff	75.3%	8.2%	4.2%	12.3%	0.0%	798	14,034
Overall	**80.4%**	**7.2%**	**4.3%**	**8.2%**	**0.0%**	**1,331**	**23,412**
Weighted Sample	1,064	95	57	108	0	1,331	NA
Projected Population	18,723	1,675	1,000	1,900	0	NA	23,412

Results are based on responses to Q9 (office, lab, department location). Data are weighted by role and gender.

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 2019-20 academic year; because of the COVID-19 pandemic the campus closed for daily operations at the end of the winter quarter and operated remotely for the entirety of spring quarter. The annual VMT estimates should thus be interpreted with that important caveat. We will publish an

addendum to this report that will adjust annual VMT for the campus closure, using a follow-up survey in which we inquired about travel to campus during spring quarter.

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.

Vehicle-miles traveled (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 miles × 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 miles × 2) / 10 ≈ 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 miles × 2) / 102 = 1.96 person-miles.

Our estimates for person-miles traveled, by mode and role, are shown in Table 26 and Table 27.

[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 26. 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%	14.2%	7,720
No vehicle (bike, walk, or skate)	0	0.0	0	0.0	0.0%	38.2%	20,745
Personal vehicles	448,710	26.4	100,654,656	5,924.5	98.8%	31.3%	16,990
Drive alone	423,455	29.4	94,893,069	6,581.4	93.2%	26.6%	14,418
Carpool or ride	25,255	9.8	5,761,587	2,240.7	5.6%	4.7%	2,571
Bus	5,339	0.6	1,117,348	132.8	1.2%	15.5%	8,413
Train	329	0.8	71,644	164.2	0.1%	0.8%	436
Total	**454,378**	**8.4**	**101,843,648**	**1,875.4**	**100.0%**	**100.0%**	**54,304**

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 27. 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			
Student	**165,403**	**4.3**	**32,790,106**	**861**	**36.3%**	**69.9%**	**38,071**
Undergraduate	**114,981**	**3.7**	**22,749,978**	**732**	**25.2%**	**57.0%**	**31,085**
Freshman	9,945	1.6	1,797,171	292	2.2%	11.3%	6,156
Sophomore	15,856	2.7	2,927,236	499	3.5%	10.8%	5,865
Junior	34,311	4.0	6,977,610	824	7.5%	15.5%	8,473
Senior	54,868	5.2	11,047,961	1,043	12.0%	19.4%	10,591
Graduate	**50,422**	**7.2**	**10,040,128**	**1,437**	**11.1%**	**12.8%**	**6,986**
Master's	22,194	7.9	4,292,170	1,535	4.9%	5.1%	2,796
PhD	28,229	6.7	5,747,958	1,372	6.2%	7.7%	4,190
Employee	**290,280**	**17.7**	**69,324,702**	**4,220**	**63.7%**	**30.1%**	**16,426**
Faculty	20,765	8.7	4,321,732	1,807	4.6%	4.4%	2,392
Staff	269,515	19.2	65,002,969	4,632	59.1%	25.8%	14,034
Outside Davis	**422,182**	**30.0**	**94,758,011**	**6,735**	**92.6%**	**25.8%**	**14,069**
Within Davis	**33,501**	**0.8**	**7,356,797**	**182**	**7.4%**	**74.2%**	**40,428**
On Campus	462	0.1	93,983	11	0.1%	15.5%	8,454
West Village	418	0.2	85,962	51	0.1%	3.1%	1,685
Off Campus	32,620	1.1	7,176,852	237	7.2%	55.6%	30,289
Overall	**455,683**	**8.4**	**102,114,808**	**1,874**	**100.0%**	**100.0%**	**54,497**

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 (CO_2e) 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 CO_2e 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 28 through Table 31.

Table 28. Daily Pounds of CO2e Emitted, by Mode and Role

Role	Pounds-equivalent of CO_2e generated on an average weekday							Average lbs per Person	Share of Total CO2e	Share of Population	Projected Population
	Drive Alone	Carpool	Ride	Bus	Train	Ridehail	Total				
Student	**149,823**	**5,360**	**4,525**	**20,115**	**3,060**	**806**	**183,689**	**4.82**	**37.6%**	**69.9%**	**38,071**
Undergraduate	**103,919**	**3,726**	**2,711**	**16,768**	**930**	**620**	**128,675**	**4.14**	**26.3%**	**57.0%**	**31,085**
Freshman	9,572	99	40	686	60	67	10,523	1.71	2.2%	11.3%	6,156
Sophomore	13,948	357	495	4,433	0	58	19,291	3.29	4.0%	10.8%	5,865
Junior	30,187	1,268	1,328	5,705	0	220	38,707	4.57	7.9%	15.5%	8,473
Senior	50,213	2,002	848	5,945	870	276	60,154	5.68	12.3%	19.4%	10,591
Graduate	**45,903**	**1,635**	**1,814**	**3,347**	**2,129**	**186**	**55,015**	**7.87**	**11.3%**	**12.8%**	**6,986**
Master's	20,370	515	797	1,620	659	110	24,072	8.61	4.9%	5.1%	2,796
PhD	25,533	1,119	1,018	1,727	1,470	76	30,943	7.38	6.3%	7.7%	4,190
Employee	**271,427**	**11,641**	**3,597**	**8,524**	**9,001**	**492**	**304,683**	**18.55**	**62.4%**	**30.1%**	**16,426**
Faculty	19,663	680	91	961	2,113	11	23,519	9.83	4.8%	4.4%	2,392
Staff	251,764	10,961	3,506	7,563	6,889	481	281,163	20.03	57.6%	25.8%	14,034
Outside Davis	**395,790**	**15,056**	**5,781**	**14,543**	**12,046**	**724**	**443,938**	**31.55**	**90.9%**	**25.8%**	**14,069**
Within Davis	**25,461**	**1,945**	**2,342**	**14,097**	**15**	**574**	**44,434**	**1.10**	**9.1%**	**74.2%**	**40,428**
On Campus	239	41	59	213	14	76	641	0.08	0.1%	15.5%	8,454
West Village	202	12	27	775	0	16	1,033	0.61	0.2%	3.1%	1,685
Off Campus	25,020	1,892	2,256	13,109	2	482	42,761	1.41	8.8%	55.6%	30,289
Overall	**421,250**	**17,001**	**8,123**	**28,639**	**12,061**	**1,298**	**488,372**	**8.96**	**100.0%**	**100.0%**	**54,497**

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

Role	*Annual Tons of CO_2e Emissions*							Average Tons per Person	Share of Total CO2e	Share of Population	Projected Population
	Drive Alone	Carpool	Ride	Bus	Train	Ridehail	Total				
Student	**16,990**	**608**	**513**	**2,281**	**347**	**91**	**20,830**	**0.55**	**37.6%**	**69.9%**	**38,071**
Undergraduate	**11,784**	**423**	**307**	**1,901**	**105**	**70**	**14,591**	**0.47**	**26.3%**	**57.0%**	**31,085**
Freshman	1,085	11	4	78	7	8	1,193	0.19	2.2%	11.3%	6,156
Sophomore	1,582	41	56	503	0	7	2,188	0.37	4.0%	10.8%	5,865
Junior	3,423	144	151	647	0	25	4,389	0.52	7.9%	15.5%	8,473
Senior	5,694	227	96	674	99	31	6,821	0.64	12.3%	19.4%	10,591
Graduate	**5,205**	**185**	**206**	**380**	**241**	**21**	**6,239**	**0.89**	**11.3%**	**12.8%**	**6,986**
Master's	2,310	58	90	184	75	12	2,730	0.98	4.9%	5.1%	2,796
PhD	2,895	127	115	196	167	9	3,509	0.84	6.3%	7.7%	4,190
Employee	**30,779**	**1,320**	**408**	**967**	**1,021**	**56**	**34,550**	**2.10**	**62.4%**	**30.1%**	**16,426**
Faculty	2,230	77	10	109	240	1	2,667	1.11	4.8%	4.4%	2,392
Staff	28,550	1,243	398	858	781	55	31,883	2.27	57.6%	25.8%	14,034
Outside Davis	**44,882**	**1,707**	**656**	**1,649**	**1,366**	**82**	**50,342**	**3.58**	**90.9%**	**25.8%**	**14,069**
Within Davis	**2,887**	**221**	**266**	**1,599**	**2**	**65**	**5,039**	**0.12**	**9.1%**	**74.2%**	**40,428**
On Campus	27	5	7	24	2	9	73	0.01	0.1%	15.5%	8,454
West Village	23	1	3	88	0	2	117	0.07	0.2%	3.1%	1,685
Off Campus	2,837	215	256	1,487	0	55	4,849	0.16	8.8%	55.6%	30,289
Overall	**47,769**	**1,928**	**921**	**3,248**	**1,368**	**147**	**55,381**	**1.02**	**100.0%**	**100.0%**	**54,497**

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

Role	*Pound-equivalent of CO_2e emissions generated on an average weekday*							Average lbs per person	Share of total CO2e	Share of Population	Projected Population
	Drive Alone	Carpool	Ride	Bus	Train	Ridehail	Total				
Student	**149,823**	**5,360**	**4,525**	**7,246**	**3,060**	**806**	**170,820**	**4.49**	**36.0%**	**69.9%**	**38,071**
Undergraduate	**103,919**	**3,726**	**2,711**	**4,497**	**930**	**620**	**116,404**	**3.74**	**24.5%**	**57.0%**	**31,085**
Freshman	9,572	99	40	579	60	67	10,416	1.69	2.2%	11.3%	6,156
Sophomore	13,948	357	495	828	0	58	15,686	2.67	3.3%	10.8%	5,865
Junior	30,187	1,268	1,328	1,860	0	220	34,862	4.11	7.3%	15.5%	8,473
Senior	50,213	2,002	848	1,230	870	276	55,439	5.23	11.7%	19.4%	10,591
Graduate	**45,903**	**1,635**	**1,814**	**2,749**	**2,129**	**186**	**54,416**	**7.79**	**11.5%**	**12.8%**	**6,986**
Master's	20,370	515	797	1,415	659	110	23,867	8.54	5.0%	5.1%	2,796
PhD	25,533	1,119	1,018	1,333	1,470	76	30,549	7.29	6.4%	7.7%	4,190
Employee	**271,427**	**11,641**	**3,597**	**8,161**	**9,001**	**492**	**304,320**	**18.53**	**64.0%**	**30.1%**	**16,426**
Faculty	19,663	680	91	919	2,113	11	23,477	9.81	4.9%	4.4%	2,392
Staff	251,764	10,961	3,506	7,242	6,889	481	280,843	20.01	59.1%	25.8%	14,034
Outside Davis	**395,790**	**15,056**	**5,781**	**14,335**	**12,046**	**724**	**443,731**	**31.54**	**93.4%**	**25.8%**	**14,069**
Within Davis	**25,461**	**1,945**	**2,342**	**1,072**	**15**	**574**	**31,409**	**0.78**	**6.6%**	**74.2%**	**40,428**
On Campus	239	41	59	24	14	76	453	0.05	0.1%	15.5%	8,454
West Village	202	12	27	164	0	16	422	0.25	0.1%	3.1%	1,685
Off Campus	25,020	1,892	2,256	883	2	482	30,535	1.01	6.4%	55.6%	30,289
Overall	**421,250**	**17,001**	**8,123**	**15,407**	**12,061**	**1,298**	**475,140**	**8.72**	**100.0%**	**100.0%**	**54,497**

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

Table 31. Annual Tons of CO2e Emitted, by Mode and Role (not Including Unitrans)

Role	*Annual Tons of CO_2e Emissions*							Average Tons per Person	Share of Total CO2e	Share of Population	Projected Population
	Drive Alone	Carpool	Ride	Bus	Train	Ridehail	Total				
Student	**16,990**	**608**	**513**	**822**	**347**	**91**	**19,371**	**0.51**	**36.0%**	**69.9%**	**38,071**
Undergraduate	**11,784**	**423**	**307**	**510**	**105**	**70**	**13,200**	**0.42**	**24.5%**	**57.0%**	**31,085**
Freshman	1,085	11	4	66	7	8	1,181	0.19	2.2%	11.3%	6,156
Sophomore	1,582	41	56	94	0	7	1,779	0.30	3.3%	10.8%	5,865
Junior	3,423	144	151	211	0	25	3,953	0.47	7.3%	15.5%	8,473
Senior	5,694	227	96	139	99	31	6,287	0.59	11.7%	19.4%	10,591
Graduate	**5,205**	**185**	**206**	**312**	**241**	**21**	**6,171**	**0.88**	**11.5%**	**12.8%**	**6,986**
Master's	2,310	58	90	161	75	12	2,707	0.97	5.0%	5.1%	2,796
PhD	2,895	127	115	151	167	9	3,464	0.83	6.4%	7.7%	4,190
Employee	**30,779**	**1,320**	**408**	**925**	**1,021**	**56**	**34,509**	**2.10**	**64.0%**	**30.1%**	**16,426**
Faculty	2,230	77	10	104	240	1	2,662	1.11	4.9%	4.4%	2,392
Staff	28,550	1,243	398	821	781	55	31,847	2.27	59.1%	25.8%	14,034
Outside Davis	**44,882**	**1,707**	**656**	**1,626**	**1,366**	**82**	**50,318**	**3.58**	**93.4%**	**25.8%**	**14,069**
Within Davis	**2,887**	**221**	**266**	**122**	**2**	**65**	**3,562**	**0.09**	**6.6%**	**74.2%**	**40,428**
On Campus	27	5	7	3	2	9	51	0.01	0.1%	15.5%	8,454
West Village	23	1	3	19	0	2	48	0.03	0.1%	3.1%	1,685
Off Campus	2,837	215	256	100	0	55	3,463	0.11	6.4%	55.6%	30,289
Overall	**47,769**	**1,928**	**921**	**1,747**	**1,368**	**147**	**53,880**	**0.99**	**100.0%**	**100.0%**	**54,497**

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 TAPS Programs

We presented respondents with a list of campus transportation services and asked them to indicate their familiarity with them. Table 32 summarizes the responses for each service, and Table 33 compares responses for the past six years for those services that appeared on each of the surveys.

Table 32. 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	13.6%	15.9%	70.6%
GoClub Transit Subsidy	3.0%	23.6%	73.4%
Aggie Bike Buy Program	1.0%	39.2%	59.8%
Bike tire air stations and repair stations around campus	43.6%	42.0%	14.4%
Bicycle Education and Enforcement Program (BEEP) and bike safety video	4.3%	25.1%	70.6%
Zipcar carsharing program	10.2%	66.0%	23.8%
Zimride carpool matching service	1.0%	26.0%	73.1%
In-vehicle parking meters (Easy Park)	9.4%	30.4%	60.2%
UC Davis motorist assistance program	3.1%	23.3%	73.6%
Bike lock-cutting service	5.3%	61.4%	33.3%
Bike theft reporting	3.5%	54.4%	42.2%
UC Davis Bike Auction	5.1%	61.5%	33.4%
TAPS Mobility Assistance Program	3.4%	49.1%	47.6%
TAPS bicycle licensing program	28.3%	42.5%	29.1%

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

Table 33. Awareness of Transportation Programs & Services, 2015 through 2019-20

Program	Change 2018-19 to 2019-20	*Percent who have heard of it or used it*				
		2019-20	2018-19	2017-18	2016-17	2015-16
Zimride carpool matching service	2%	27%	25%	28%	27%	31%
TAPS motorist assistance program	1%	26%	25%	32%	32%	54%
Zipcar carsharing program	3%	76%	73%	74%	77%	79%
Bike lock-cutting service	2%	67%	65%	65%	69%	66%
GoClub program	0%	29%	29%	34%	37%	37%
In-vehicle parking meters (Easy Park)	0%	40%	40%	47%	45%	44%
UC Davis Bike Auction	-2%	29%	65%	68%	76%	74%
Bicycle Education and Enforcement Program (BEEP) and bike safety video	1%	40%	31%	32%	35%	34%
TAPS Mobility Assistance Program	3%	86%	51%	52%	56%	52%
Aggie Bike Buy Program	0%	71%	39%	43%	44%	43%
Bike tire air stations and repair stations around campus	0%	27%	83%	87%	88%	91%
TAPS bicycle licensing program	2%	27%	71%	74%	76%	79%
GoClub Transit Subsidy	1%	26%	27%	NA	NA	NA

Results are based on responses to Q66 (familiarity with TAPS 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, 2019-20 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.

Start of Block: Welcome Page

Q1 Welcome to the 2019-20 Campus Travel Survey!

This annual survey is intended for everyone who regularly travels to UC Davis for school or work. 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 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 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!
Amy Lee, PhD Student, Institute of Transportation Studies (aelee@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 Q2 = I'm no longer affiliated with UC Davis

Display This Question:

If Q2 = Faculty

Q3 What is your current faculty status?

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

Display This Question:

If Q2 = 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 Q4 = Sophomore

Or Q4 = Junior

Or Q4 = Senior

Or Q4 = Fifth-year senior

Or Q4 = Post-baccalaureate

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

- ○ Yes (1)
- ○ No (2)

Display This Question:

If Q2 = 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 Q2 = 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 Q2 = Undergraduate student (including Post-baccalaureate)

Or Q2 = Graduate student

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

- ○ Yes (1)
- ○ No (2)

Display This Question:

If Q2 != Undergraduate student (including Post-baccalaureate)

Q9 Where is your office, lab, or department? (That is, wherever you usually spend your time 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 Q9 = 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 Q9 = 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 Q11 Is Displayed

Display This Question:

If Q2 = 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 Q12 Is Displayed

End of Block: Section 1 - Role

Start of Block: Section 2a - General Background Information

Q13 Next, we have a few questions about you.

Q14 Where were you born?

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

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)

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

	Yes (1)	No (2)
Walking (1)	○	○
Bicycling (2)	○	○
Driving (3)	○	○
Using public transit (4)	○	○

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

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)
- [ ] Skate, skateboard, or scooter (2)
- [ ] 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 Q18 = Bike

Or Q18 = Skate, skateboard, or scooter

Or Q18 = Carpool and/or vanpool with others going to campus

Or Q18 = Bus and/or shuttle

Or Q18 = Train and/or light rail

Q19 You mentioned that you have these modes available...

Display This Question:

If Q18 = Bike

Q20 What kind of bike is available to you? Select all that apply.

- ☐ Bike that I own (1)
- ☐ Electric bike that I own (2)
- ☐ Bike that I borrow or rent (4)
- ☐ Bike share (e.g. JUMP) (3)

Display This Question:

If Q18 = 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)
- ☐ Electric skateboard (3)
- ☐ Scooter (4)
- ☐ Electric scooter (5)

Display This Question:

If Q18 = 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 Q18 = 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 (3)
- ☐ UC Berkeley/Davis Shuttle (5)
- ☐ Other: (6) _____

Display This Question:

If Q18 = 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 Q18 = Drive alone in a car (or other vehicle)

Or Q18 = Carpool and/or vanpool with others going to campus

Or Q18 = 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 Q18 = Bus and/or shuttle

Or Q18 = Train and/or light rail

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

Q2 = 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

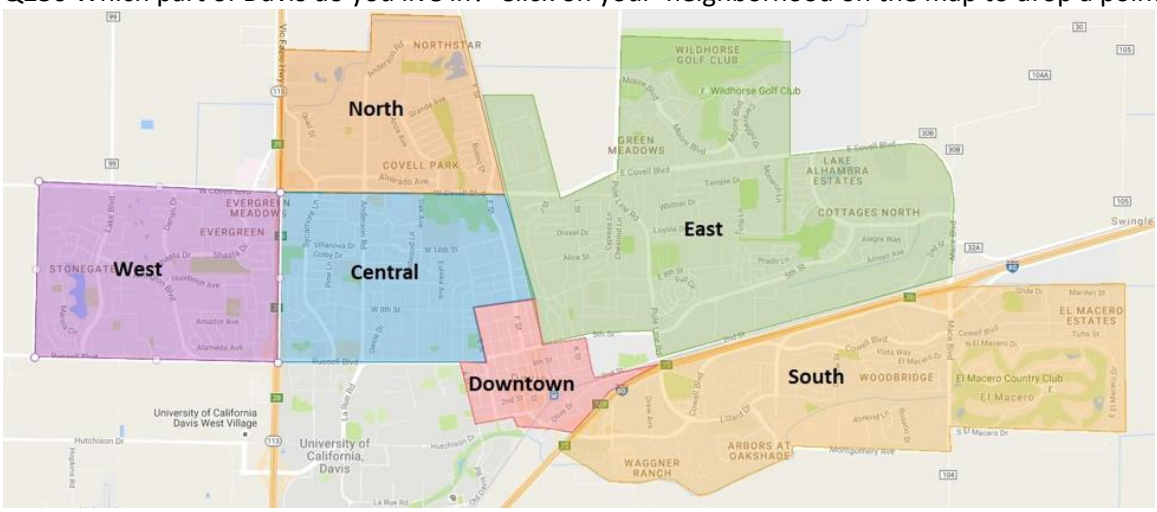
Q27 Where do you live now?

- 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)
- Off-campus elsewhere in the city of Davis (3)
- Outside of Davis (4)

Display This Question:

If Q27 = Off-campus elsewhere in the city of Davis

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 Q27 = Off-campus elsewhere in the city of Davis

Or Q27 = Outside of Davis

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 Q27 = Outside of Davis

Q30 In what city (or unincorporated county) do you live?

- Dixon (4)
- Elk Grove (5)
- Sacramento (2)
- Vacaville (3)
- West Sacramento (6)
- Winters (7)
- Woodland (1)
- Other city: (8) _____
- Unincorporated county: (10) _____

Display This Question:

If Q27 = Off-campus elsewhere in the city of Davis

Or Q27 = On-campus in the West Village apartments

Or Q27 = 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)

Q31 Do you regularly (at least once per week) spend the night at a second residence that is **outside of Davis** from which you sometimes commute to campus? (E.g. Home of partner/spouse, family's home, second home)

- ○ Yes (1)
- ○ No (2)

Display This Question:

If Q31 = Yes

Q32 Where is this secondary residence?

- ○ City or nearest city: (1) _____

Display This Question:

If Q27 = Outside of Davis

Q33 Do you regularly (at least once per week) stay at a second residence from which you sometimes commute to campus? (E.g. Home of partner/spouse, apartment near work or school, second home)

- ○ Yes (1)
- ○ No (2)

Display This Question:

If Q33 = Yes

Q34 Where is this secondary residence?

- ○ In Davis (1)
- ○ Outside of Davis, in (city): (6) _____

Display This Question:

If Q33 = Yes

Or Q31 = Yes

Q35 About how many days per week do you typically commute to campus from the secondary residence?

▼ 1 (1) ... 7 (7)

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

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

Q36 Consider your activities during the last week, from Monday (November 4) through Sunday (November 10).

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!

Q37
Did you go somewhere on campus any day last week (November 4 – 10) 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 was away all week (2)

Display This Question:

If Q37 = Yes, I traveled to campus destinations for school or work last week

Q38 On which days last week (November 4 – 10) 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)

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 Q37 = No, I was away all 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 Q2 = Faculty

And And On which days last week (November 4 – 10) 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 4 – 10) 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

Q2 = Staff

And And On which days last week (November 4 – 10) 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 4 – 10) 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

Q2 = Visiting scholar

And And On which days last week (November 4 – 10) 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 4 – 10) 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

Q2 = Post doc

And And On which days last week (November 4 – 10) 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 4 – 10) 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

Q2 = Graduate student

And And On which days last week (November 4 – 10) 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 4 – 10) 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

Q2 = Faculty emeritus

And And On which days last week (November 4 – 10) 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 4 – 10) 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

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.

	Q1 Is Displayed Monday (1)	Telecommuting (working from home or another remote location) (6)	Q1 Is Displayed Tuesday (2)	Work or school-related travel (e.g. meeting, conference, field work) (7)	Q1 Is Displayed Wednesday (3)	Regularly scheduled day off (8)	Q1 Is Displayed Thursday (4)	Vacation, sickness, or personal leave (9)	Q1 Is Displayed Friday (5)	Day off as part of a compressed work week (e.g. 9/80 schedule) (10)	Other (11)
Q1 Is Displayed Telecommuting (working from home or another remote location) (1)											
Q38 != Monday Monday (7)											
Q1 Is Displayed Work or school-related travel (e.g. meeting, conference, field work) (2)											

Q38 != Tuesday Tuesday (8)	○	○	○	○	○	○	○	○	○	○	(
Q1 Is Displayed Regularly scheduled day off (3)	○	○	○	○	○	○	○	○	○	○	(
Q38 != Wednesday Wednesday (9)	○	○	○	○	○	○	○	○	○	○	(
Q1 Is Displayed Vacation, sickness, or personal leave (4)	○	○	○	○	○	○	○	○	○	○	(
Q38 != Thursday Thursday (10)	○	○	○	○	○	○	○	○	○	○	(

Q1 Is Displayed Day off as part of a compressed work week (i.e. 4/40, 9/80, or 3/36 schedule) (5)	○	○	○	○	○	○	○	○	○	○	○
Q38 != Friday Friday (11)	○	○	○	○	○	○	○	○	○	○	○
Q1 Is Displayed Other (6)	○	○	○	○	○	○	○	○	○	○	○

Display This Question:

If Q37 = No, I was away all week

Q41 Do you expect to resume regular travel to campus for school or work this academic year?

- ○ Yes (1)
- ○ No (2)

Skip To: Q42 If Q41 = No

Display This Question:

If Q41 = No

Q42 Thank you for taking this shortened version of the Campus Travel Survey. Since you do not intend to resume regular travel to campus, we do not need any further information from you at this time.

Skip To: End of Survey If Q42 Is Displayed

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

Q43 When you are regularly traveling to campus, about how many days per week do you **typically** travel to campus for school or work?

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

Page Break

Carry Forward All Choices - Entered Text from "Q18"

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

Display This Question:

If If 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).<o:p></o:p> Bus and/or shuttle Is Selected

Carry Forward Selected Choices - Entered Text from "Q23"

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

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

Q46 What means of transportation do you usually use to **get around campus**?

- ○ Walk (or wheelchair) (1)
- ○ Bike (3)
- ○ Skate, skateboard, or scooter (2)
- ○ Drive alone in a car (or other vehicle) (6)
- ○ Carpool (7)
- ○ Get a dropped off by a friend or family (8)
- ○ Lyft, Uber, or other ride-hailing service (12)
- ○ Motorcycle or Vespa-like scooter (5)
- ○ Bus or shuttle (9)
- ○ Other: (10) _____

Display This Question:

If Q2 = Staff

Q48 When do you typically arrive on campus?

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

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 4 – 10) 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 4 – 10) 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 "Q18"

Q50 **First think back to the entire week (Monday, November 4 - Sunday, November 10).** 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)
- ☐ Skate, skateboard, or scooter (3)
- ☐ Drive alone in a car (or other vehicle) (4)
- ☐ Carpool and/or vanpool with others going to campus (5)
- ☐ Get dropped off by a friend or family (the driver continues on elsewhere) (6)
- ☐ Lyft, Uber, or other ride-hailing service (7)
- ☐ Motorcycle or Vespa-like scooter (8)
- ☐ Bus and/or shuttle (9)
- ☐ Train and/or light rail (10)
- ☐ Other: (11) _____

Display This Question:

If If On which days last week (November 4 – 10) 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 "Q50"

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**.)

	Walk (or wheelchair) (1)	Bike (2)	Skate, skateboard, or scooter (3)	Drive alone in a car (or other vehicle) (4)	Carpool and/or vanpool with others going to campus (5)	Get dropped off by a friend or family (the driver continues on elsewhere) (6)	Lyft, Uber, or other ride-hailing service (7)	Motorcycle or Vespa-like scooter (8)	Bus and/or shuttle (9)	Train and/or light rail (10)	Other: (11)
Q38 = Monday Monday (1)	○		○	○	○	○	○	○	○	○	○
Q38 = Tuesday Tuesday (2)	○		○	○	○	○	○	○	○	○	○
Q38 = Wednesday Wednesday (3)	○		○	○	○	○	○	○	○	○	○
Q38 = Thursday Thursday (4)	○		○	○	○	○	○	○	○	○	○
Q38 = Friday Friday (5)	○		○	○	○	○	○	○	○	○	○
Q38 = Saturday Saturday (6)	○		○	○	○	○	○	○	○	○	○

Q38 = 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 If First think back to the entire week (Monday, November 4 - Sunday, November 10).   Please tell us all the different means of transportation you used at some point on your way to sch... Bike Is Selected

Or Q51 [Bike] (Count) > 0

And If

If What kind of bike is available to you? Select all that apply. q://QID375/SelectedChoicesCount Is Greater Than 1

Carry Forward Selected Choices from "Q20"

Q52 What kind of bike did you use **last week**?

- ☐ Bike that I own (1)
- ☐ Electric bike that I own (2)
- ☐ Bike that I borrow or rent (3)
- ☐ Bike share (e.g. JUMP) (4)

Display This Question:

If If First think back to the entire week (Monday, November 4 - Sunday, November 10).   Please tell us all the different means of transportation you used at some point on your way to sch... Skate, skateboard, or scooter Is Selected

Or Q51 [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 "Q21"

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

- [ ] Rollers skates or rollerblades (1)
- [ ] Skateboard (2)
- [ ] Electric skateboard (3)
- [ ] Scooter (4)
- [ ] Electric scooter (5)

Display This Question:

If If First think back to the entire week (Monday, November 4 - Sunday, November 10).   Please tell us all the different means of transportation you used at some point on your way to sch... Get dropped off by a friend or family (the driver continues on elsewhere) Is Selected

Or Q51 [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 If First think back to the entire week (Monday, November 4 - Sunday, November 10).   Please tell us all the different means of transportation you used at some point on your way to sch... Drive alone in a car (or other vehicle) Is Selected

Or Or First think back to the entire week (Monday, November 4 - Sunday, November 10).   Please tell us all the different means of transportation you used at some point on your way to sch... Carpool and/or vanpool with others going to campus Is Selected

Or Or First think back to the entire week (Monday, November 4 - Sunday, November 10).   Please tell us all the different means of transportation you used at some point on your way to sch... 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 4 - Sunday, November 10).   Please tell us all the different means of transportation you used at some point on your way to sch... 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 If First think back to the entire week (Monday, November 4 - Sunday, November 10). Please tell us ... Drive alone in a car (or other vehicle) Is Selected

Or Or First think back to the entire week (Monday, November 4 - Sunday, November 10). Please tell us ... Carpool and/or vanpool with others going to campus Is Selected

Or Or First think back to the entire week (Monday, November 4 - Sunday, November 10). Please tell us ... Motorcycle or Vespa-like scooter Is Selected

Or Or 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).<o:p></o:p> Drive alone in a car (or other vehicle) Is Selected

Or Or 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).<o:p></o:p> Carpool and/or vanpool with others going to campus Is Selected

Or Or 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).<o:p></o:p> 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 Q57 = 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 If First think back to the entire week (Monday, November 4 - Sunday, November 10).   Please tell us all the different means of transportation you used at some point on your way to sch... Carpool and/or vanpool with others going to campus Is Selected

Or Q51 [Carpool and/or vanpool with others going to campus] (Count) > 0

Q59 You mentioned that you carpooled or vanpooled last week. Which was it?

- Carpool (1)
- Vanpool (2)

Display This Question:

If If First think back to the entire week (Monday, November 4 - Sunday, November 10).   Please tell us all the different means of transportation you used at some point on your way to sch... Carpool and/or vanpool with others going to campus Is Selected

Or Q51 [Carpool and/or vanpool with others going to campus] (Count) > 0

Q60 During the times when you carpooled or vanpooled 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 If First think back to the entire week (Monday, November 4 - Sunday, November 10).   Please tell us all the different means of transportation you used at some point on your way to sch... Bus and/or shuttle Is Selected

Or Q51 = Bus and/or shuttle

Carry Forward All Choices - Entered Text from "Q23"

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 (4)
- ○ UC Berkeley/Davis Shuttle (5)
- ○ Other: (6)

Page Break

Display This Question:

If If First think back to the entire week (Monday, November 4 - Sunday, November 10).   Please tell us all the different means of transportation you used at some point on your way to sch... Train and/or light rail Is Selected

Or Q51 [Train and/or light rail] (Count) > 0

Carry Forward Displayed Choices from "Q24"

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

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

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

Q63 Now consider this past summer, from June 25 - September 24, 2019.

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 14 weeks in the academic summer.)

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

Display This Question:

If Q64 != None

Q65 During this summer, how many days per week were you typically on campus?

- ○ 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)

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?

	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)	○	○	○
Aggie Bike Buy Program (2)	○	○	○
Transit Pass Subsidies (13)	○	○	○
Bike tire air stations and repair stations around campus (3)	○	○	○
Bicycle Education and Enforcement Program (BEEP) and bike safety video (4)	○	○	○
Zipcar carsharing program (5)	○	○	○
Zimride carpool matching service (6)	○	○	○
In-vehicle parking meters (Easy Park) (7)	○	○	○
UC Davis motorist assistance program (8)	○	○	○
TAPS bike lock-cutting service (9)	○	○	○
UC Davis bicycle theft reporting system (14)	○	○	○
UC Davis Bike Auction (10)	○	○	○
TAPS Mobility Assistance Program (11)	○	○	○
TAPS bicycle licensing program (12)	○	○	○

End of Block: Section 9 - Campus transportation programs

Start of Block: Section 10 - Housing

Q67
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, living expenses, and financial resources.

Your responses are entirely confidential.

Display This Question:

If Q27 = Off-campus elsewhere in the city of Davis

Or Q27 = 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) _____

Q69
How many bedrooms are in your residence?

▼ Studio (1) ... 6 or more (7)

Q70 Are there any spaces in your residence that weren't built as bedrooms (with walls and door) but are used as sleeping areas for residents? (e.g. living room, converted garage)

- Yes (1)
- No (2)
- Not sure (4)

Q71 Do you live alone or with other people?

- Alone (1)
- With other people (2)

Display This Question:

If Q71 = With other people

Q72 How many **other people** live in your residence? Don't count yourself.

▼ 1 (1) ... 10 or more (10)

Display This Question:

If Q71 = With other people

Q73 Of the other people who live in your residence, how many are enrolled as UC Davis students?

▼ 0 (12) ... 10 or more (11)

Display This Question:

If Q71 = With other people

Q74
Of the other people who live in your residence, how many are...

	Number of People (1)
Your partner or spouse (6)	
Your children (3)	
Other immediate relatives (e.g. parents, siblings) (2)	

Display This Question:

If Q71 = With other people

Q75 With how many people do you share your **bedroom?**

▼ 0 (11) ... 6 or more (10)

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Q87 How satisfied are you with your current residence and its location?

	Very Unsatisfied (1)	Somewhat Unsatisfied (2)	Neutral (5)	Somewhat Satisfied (6)	Very Satisfied (7)
Characteristics of the residence itself (1)	○	○	○	○	○
Location of your residence within your neighborhood (2)	○	○	○	○	○
Characteristics of the neighborhood itself (3)	○	○	○	○	○
Location of your city in the region (5)	○	○	○	○	○

Page Break

Display This Question:

If Q4 != Freshman

Q76 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 (5)
- Between 10 and 20 years (6)
- More than 20 years (7)

Display This Question:

If Q27 = Off-campus elsewhere in the city of Davis

Or Q27 = 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 pay (e.g. live with friends or family) (4)
- Other: (3) _____

Display This Question:

If Q77 = Rent

Q78 About how much is the **total monthly rent payment** for your residence, and how much do you personally pay in rent each month?

- Total ($) (1) _____
- My share ($) (2) _____

Display This Question:

If Q77 = Own (with or without a mortgage)

Q79 About how much is the **total monthly amount** your household pays for your mortgage?

- Total ($) (1) _____

Display This Question:

If Q77 = Rent

Q80 About how much do you **pay each month** for the following utilities and services? If they are included in your rent or you do not otherwise pay for the service, enter 0. If you split those costs with others in your residence, enter how much you personally pay each month.

- Electricity and/or Gas (1) _____
- Water, Sewer, Garbage (2) _____
- Internet (3) _____
- Renters' Insurance (4) _____
- Other (5) _____

Display This Question:

If Q77 = Own (with or without a mortgage)

Q241 About how much does your household **pay each month** for the following utilities, services, taxes, etc.? If you do not pay for the service, enter 0 or leave blank.

- Electricity and/or Gas (1) _____
- Water, Sewer, Garbage (2) _____
- Internet (3) _____
- Homeowner's Insurance (4) _____
- Property Taxes (6) _____
- Other (5) _____

Page Break

Q81
We'd like to get an idea of the financial resources available to you for living expenses. By **living expenses**, we mean all housing, transportation, food, and other living expenses. If you are a student, living expenses do **not** include your tuition and fees.

About how much do you receive per month from the following sources **for living expenses**?

	$ per Month (1)
Employment income (including your spouse's income, if applicable) (1)	
Financial aid, grants, etc. (2)	
Q2 = Undergraduate student (including Post-baccalaureate) *Or Q2 = Graduate student* Student loans for living expenses (3)	
Family or other individuals (4)	
Other (rental income, etc.) (5)	
Total	

Q82 Do any of the following apply to you? Select all that apply.

- [ ] I am married or in a domestic partnership. (1)
- [ ] I have children or other dependents. (2)
- [ ] I am a veteran. (3)
- [ ] I am emancipated from my parents or legal guardians. (5)

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Q83 If an unexpected $400 expense came up, how would you pay for it?

- I wouldn't be able to (1)
- I'd pay with money in my checking or savings account (2)
- I'd borrow from family or friends and pay them back (4)
- Family or friends would pay it for me (6)
- I'd pay with a credit card and repay later (7)
- Other: (8) _____

Display This Question:

If Q2 = Undergraduate student (including Post-baccalaureate)

Q84 Are you a Pell Grant recipient?

- Yes (1)
- No (2)

Page Break

Display This Question:

If Q27 = Outside of Davis

Q85 You mentioned that you live outside of Davis. Would you prefer to live in Davis?

- Yes (1)
- Maybe (4)
- No (2)

Display This Question:

If Q27 = Outside of Davis

Q86 Which factors influenced your decision to live outside of Davis? Select all that apply.

- [ ] Cost (1)
- [ ] Commute time for another person in my household (3)
- [ ] Public transportation access (4)
- [ ] Availability of housing (14)
- [ ] Housing options or choice (5)
- [ ] Proximity to family or friends (19)
- [ ] Proximity to shops, restaurants, services, etc. (7)
- [ ] Variety or quality of shops, restaurants, services, etc. (16)
- [ ] Safe neighborhoods (20)
- [ ] School choice (9)
- [ ] Proximity to parks or nature (10)
- [ ] Walkable or bikeable neighborhoods (11)
- [ ] Ease of driving places (12)
- [ ] Quiet neighborhoods (13)

Page Break

Display This Question:

If Q76 = Less than a year

Or Q76 = Between 1 and 2 years

Or Q76 = Between 2 and 4 years

Q88 Pick the option that best describes your most recent search for a place to live.

- ○ I had lots of good options to choose from. (1)
- ○ I had a couple of good option to choose from. (6)
- ○ Good options were hard to find. (2)

Q89 Within 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)
- ☐ Regularly skipped meals to pay for living expenses (7)
- ☐ ⊗ None of these happened to me (9)

Q90 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)
- ☐ ⊗ None of these happened to me (10)

Q91 Do you experience any of the following as problems or deficiencies in your current housing? Select all that apply.

- [ ] Expensive rent/mortgage (1)
- [ ] No in-unit kitchen (2)
- [ ] No in-unit washer and dryer (3)
- [ ] Difficult to find parking (4)
- [ ] Unaddressed pest issues (e.g. mold, bugs) (5)
- [ ] Unaddressed maintenance issues (e.g. broken heat, plumbing, electrical) (6)
- [ ] Poor treatment by landlord/leasing company (7)
- [ ] Poor lease terms (8)
- [ ] Neighborhood concerns (e.g. noise, crime, safety) (9)
- [ ] Safety concerns with structure (10)
- [ ] Overcrowding or sharing bedrooms (11)
- [ ] Too far from campus (12)
- [ ] Too far from amenities (e.g. shopping, entertainment) (13)
- [ ] No pets allowed (14)
- [ ] Overly restrictive rules (15)
- [ ] Poor access to transit (16)

☐ Too far from public schools (17)

☐ Too far from parks and green spaces (18)

☐ Could not choose my housemates/roommates (19)

☐ Conflict with housemates/roommates (20)

☐ ⊗ I experience none of these (22)

End of Block: Section 10 - Housing

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)
Traveling to campus stresses me out. (Q53_19)	○	○	○	○	○
Travel time is generally wasted time. (Q53_1)	○	○	○	○	○
I like riding a bike. (Q53_2)	○	○	○	○	○
Environmental concerns affect the choices I make about my daily travel. (Q53_3)	○	○	○	○	○
I like driving. (Q53_5)	○	○	○	○	○
I need a car to do many of the things I like to do. (Q53_6)	○	○	○	○	○
My schedule makes it hard or impossible for me to use public transit. (Q53_8)	○	○	○	○	○
I feel safe biking on campus. (Q53_10)	○	○	○	○	○
My commute is expensive. (Q53_35)	○	○	○	○	○
I like using public transit. (Q53_11)	○	○	○	○	○

I often need to use my own vehicle to travel to different sites during the day. (Q53_12)	○	○	○	○	○
I already bicycle as often as I can. (Q53_14)	○	○	○	○	○
I try to limit my driving as much as possible. (Q53_15)	○	○	○	○	○
Getting around is easier than ever with my smartphone. (Q53_17)	○	○	○	○	○
I need to dress professionally for my job. (Q53_18)	○	○	○	○	○

Page Break

Display This Question:

If If Which bus do you usually use to get to campus? Unitrans Is Selected

And If

Q93 = Traveling to campus stresses me out. [Strongly agree]

Or Q93 = Traveling to campus stresses me out. [Somewhat agree]

Q94 What do you find most stressful about using Unitrans to get to campus?

- Uncertainty about my bus picking me up on time (1)
- Uncertainty about my bus arriving to campus on time (2)
- How full the bus will be when it gets to my stop (3)
- Harassment while riding the bus (4)
- Lack of knowledge about bus schedules or routes (7)
- Paying the fare / Showing my pass (9)
- Other: (6) _____

Display This Question:

If Q2 = Undergraduate student (including Post-baccalaureate)

And If

If Which bus do you usually use to get to campus? Unitrans Is Selected

Q95 When deciding whether to use Unitrans, what is the relative importance of the following factors? Your answers will sum to 100%.

_____ My bus picking me up at its scheduled time (1)
_____ My bus arriving to campus on time (5)
_____ Having enough space on the bus when it gets to my stop (2)
_____ Not being harassed on the bus (3)
_____ Buses running frequently enough that I don't have to know the schedule (4)
_____ Bus stops near my home and where I need to go (7)
_____ Convenience of paying the fare (9)
_____ Being able to sit down on the bus (10)
_____ Ability to work on the bus (11)
_____ Other: (8)

Display This Question:

If Q23 = UCD/UCDMC Intercampus Shuttle

Q96 When deciding whether to use the UCD/UCDMC Intercampus shuttle, what is the relative importance of the following factors? Your answers will sum to 100%.

_____ The shuttle picking me up at the scheduled time (1)
_____ The shuttle arriving to campus on time (2)
_____ The shuttle having enough space for me (3)
_____ Not being harassed on the shuttle (9)
_____ The frequency with which the shuttle runs (8)
_____ Shuttle stops near my home and campus destination (7)
_____ Convenience of paying the fare (10)
_____ Being able to sit down on the shuttle (6)
_____ Ability to work on the shuttle (5)
_____ Ability to bring my bike on the shuttle (4)
_____ Other: (11)

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)

Q98 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)

Q99 How comfortable do you feel riding a bike **at night**?

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

Page Break

Q100 We're interested in your familiarity with and use of these transportation services.

Please select the single most appropriate answer for each service below:

	I have never heard of it. (1)	I have heard of it but I've never used it. (2)	I have used it in Davis. (3)	I have used it outside of Davis. (4)	I have used it in Davis AND outside of Davis. (5)
Carsharing (e.g. Zipcar, City CarShare) (1)	○	○	○	○	○
On-demand ridehailing (e.g. Uber, Lyft) (2)	○	○	○	○	○
Shared ridehailing (e.g. Uber Pool, Shared Lyft) (4)	○	○	○	○	○

Display This Question:

If Q100 [I have used it in Davis.] (Count) >= 1

Or Q100 [I have used it outside of Davis.] (Count) >= 1

Or Q100 [I have used it in Davis AND outside of Davis.] (Count) >= 1

Q101 Please indicate **how often** you use the following transportation services.

	I used it in the past, but I don't use it anymore. (1)	I use it less than once a **month**. (2)	I use it 1-3 times a **month**. (3)	I use it 1-2 times a **week**. (4)	I use it 3-4 times a **week**. (5)	I use it 5 or more times a **week**. (6)
Q100 = Carsharing (e.g. Zipcar, City CarShare) [I have used it in Davis.] *Or Q100 = Carsharing (e.g. Zipcar, City CarShare) [I have used it outside of Davis.]* *Or Q100 = Carsharing (e.g. Zipcar, City CarShare) [I have used it in Davis AND outside of Davis.]* Carsharing (e.g. Zipcar, City CarShare) (1)	○	○	○	○	○	○

Q100 = On-demand ridehailing (e.g. Uber, Lyft) [I have used it in Davis.] *Or Q100 = On-demand ridehailing (e.g. Uber, Lyft) [I have used it outside of Davis.]* *Or Q100 = On-demand ridehailing (e.g. Uber, Lyft) [I have used it in Davis AND outside of Davis.]*	○	○	○	○	○	○
On-demand ridehailing (e.g. Uber, Lyft) (2)						

Q100 = Shared ridehailing (e.g. Uber Pool, Shared Lyft) [I have used it in Davis.] *Or Q100 = Shared ridehailing (e.g. Uber Pool, Shared Lyft) [I have used it outside of Davis.]* *Or Q100 = Shared ridehailing (e.g. Uber Pool, Shared Lyft) [I have used it in Davis AND outside of Davis.]* Shared ridehailing (e.g. Uber Pool, Shared Lyft) (4)	○	○	○	○	○	○

Page Break

Display This Question:

If Q100 = On-demand ridehailing (e.g. Uber, Lyft) [I have used it in Davis.]

Or Q100 = On-demand ridehailing (e.g. Uber, Lyft) [I have used it outside of Davis.]

Or Q100 = On-demand ridehailing (e.g. Uber, Lyft) [I have used it in Davis AND outside of Davis.]

Q102 Thinking about the **last trip** you made with **Lyft, Uber, or another ridehailing company**, which of the following categories best describes the **main purpose of your trip**?

- ○ Commuting to/from campus (1)
- ○ Other school- or work-related trip (2)
- ○ Visiting friends and/or family (3)
- ○ Shopping or running errands (4)
- ○ Traveling to/from the airport (5)
- ○ Traveling to/from an Amtrak station or other transportation hub (12)
- ○ Going to/from a restaurant (6)
- ○ Going to/from a bar (7)
- ○ Going to a special event (e.g. sporting event, concert, etc.) (9)
- ○ Other (please specify): (8) _____

Page Break

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

Start of Block: Add On - JUMP Bikes

Q103 We're interested in your experience with bike share systems and particularly JUMP. JUMP bikes are the red bikes available in Davis and Sacramento (and elsewhere), shown in the photo below.

Q104

Q105 Have you ever used JUMP bike share?

- Yes, in Davis (1)
- Yes, outside of Davis (2)
- Yes, both in Davis and outside of Davis (3)
- No (4)

Q239 Have you ever **tried** to use JUMP bike share but couldn't find a bike that was nearby/available?

- ○ Yes, in Davis (1)
- ○ Yes, outside of Davis (2)
- ○ Yes, both in Davis and outside of Davis (3)
- ○ No (4)

Page Break

Display This Question:

If Q105 = Yes, in Davis

Or Q105 = Yes, outside of Davis

Or Q105 = Yes, both in Davis and outside of Davis

Q106 In the last week, how many times have you used JUMP in Davis for any purpose?

▼ 0 (22) ... More than 20 (21)

Display This Question:

If Q105 = Yes, in Davis

Or Q105 = Yes, both in Davis and outside of Davis

Q233 In the last week, how many times have you used JUMP to get around campus?

▼ 0 (1) ... More than 20 (22)

Display This Question:

If Q239 = Yes, in Davis

Or Q239 = Yes, outside of Davis

Or Q239 = Yes, both in Davis and outside of Davis

Q107 In the last week, how many times have you tried to use a JUMP bike in Davis but couldn't find one that was nearby/available?

▼ 0 (22) ... More than 20 (21)

End of Block: Add On - JUMP Bikes

Start of Block: Add On - E-bike Questions - Owners

Q108 We're interested in your electric bike!

Q109 Select all the reasons that you bought your electric bike.

- [ ] To travel farther (1)
- [ ] To travel faster (4)
- [ ] To more easily carry cargo or people (2)
- [ ] To sweat less (5)
- [ ] Because it's fun (3)
- [ ] Other: (6) _____

Q110 If you didn’t have an electric bike, how would you get to campus on the days you normally ride your e-bike?

- ○ Walk (1)
- ○ Skate or skateboard (2)
- ○ Bike (3)
- ○ Motorcycle or Scooter (4)
- ○ Drive alone in a car (or other vehicle) (5)
- ○ Carpool or vanpool with others going to campus (either as driver or passenger) (6)
- ○ Get a ride (the driver continues to elsewhere) (7)
- ○ Bus (8)
- ○ Train or light rail (9)
- ○ Taxi Services (10)
- ○ Uber or Lyft services (11)
- ○ Other: (12) _____

End of Block: Add On - E-bike Questions - Owners

Start of Block: Add On - E-bike Questions - Familiarity

Q111 Do you know what an electric assist bicycle is? They are also known as "e-bikes".

- ○ Yes (1)
- ○ No (2)

Q112 Have you ever ridden an e-bike?

- Yes (1)
- No (2)

Q113 Have you ever thought about riding an e-bike to campus?

- Yes (1)
- No (2)

End of Block: Add On - E-bike Questions - Familiarity

Start of Block: Add On - E-Scooters & E-Skateboards

Display This Question:

If If What kind of skates, skateboard, or scooter did you use last week? Electric skateboard Is Selected

Or Or What kind of skates, skateboard, or scooter did you use last week? Electric scooter Is Selected

Or Q21 = Electric skateboard

Or Q21 = Electric scooter

Q114 We're interested in your electric skateboard or scooter!

Display This Question:

If If What kind of skates, skateboard, or scooter did you use last week? Electric skateboard Is Selected

Or Or What kind of skates, skateboard, or scooter did you use last week? Electric scooter Is Selected

Or Q21 = Electric skateboard

Or Q21 = Electric scooter

Q115 Select all the reasons you bought your electric skateboard or scooter.

- [ ] To travel faster (1)
- [ ] For convenience (10)
- [ ] Because it's fun (2)
- [ ] To sweat less (3)
- [ ] Because it's cool (13)
- [ ] I can keep it with me (11)
- [ ] Other: (9) _____

Display This Question:

If If What kind of skates, skateboard, or scooter did you use last week? Electric skateboard Is Selected

Or Or What kind of skates, skateboard, or scooter did you use last week? Electric scooter Is Selected

Or Q21 = Electric skateboard

Or Q21 = Electric scooter

Q116 If you didn't have an electric skateboard or electric scooter, how would you get to and around campus?

- ○ Walk (1)
- ○ Bike (2)
- ○ Non-electric skateboard (3)
- ○ Non-electric scooter (4)
- ○ Drive alone (5)
- ○ Carpool (6)
- ○ Motorcycle or Vespa-like scooter (7)
- ○ Bus (8)
- ○ Other: (9) _____

End of Block: Add On - E-Scooters & E-Skateboards

Start of Block: Section 13 - Demographics

Q117 A couple more questions about yourself. We use this information to help understand travel choices and how the people taking the survey might represent the UC Davis community as a whole. Your answers are confidential and will not be used for any other purposes.

Q118 In what year were you born?

▼ 1919 (1) ... 2003 (85)

Display This Question:

If Q2 = 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)

Display This Question:

If Q2 = Undergraduate student (including Post-baccalaureate)

And Q18 = Drive alone in a car (or other vehicle)

Or If

Q2 = Graduate student

And Q18 = Drive alone in a car (or other vehicle)

Q120 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)

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.

Q122 Would you be interested in participating in a pilot program where you are loaned an electric bike or electric scooter (your choice) to use for a month instead of purchasing a parking permit?

- ○ Yes – I am very interested (1)
- ○ Maybe – I need to know more (2)
- ○ No – I am not interested (3)

Q240 Would you be interested in participating in a UC Davis-led survey about the Davis Amtrak station?

- ○ Yes (1)
- ○ No (3)

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)

Display This Question:

If Q123 = Yes

Or Q124 = 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.

_____

_____

_____

_____

_____

End of Block: Section 14 - Prize Opt-In

Appendix B: Changes from the 2018-19 survey instrument

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

1. Housing and housing security (added)
2. Bike security and theft (omitted)
3. Accessory dwelling units and residential preference (omitted)

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: 2019-20 Campus Travel Survey

Dear UC Davis Student / Employee,

You are invited to participate in the 2019-2020 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 regularly travels to UC Davis for school or work.

Your response helps improve the campus!

UC Davis Transportation and Parking Services (TAPS) 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 TAPS programs to serve the campus community

Participating in this research survey takes about **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 housing and experience with housing affordability
- Your experience with campus transportation programs and infrastructure
- Some background information about you

In appreciation for your time, we're offering anyone who completes the survey entry into a drawing for **40 $50 Visa gift cards and two grand prizes of Amazon Fire tablets!**

To start the survey, click on the link below:
${l://SurveyLink?d=Take the Survey}

Or copy and paste the URL below into your internet browser:
${l://SurveyURL}

Thanks for your participation in this year's survey!

Sincerely,
Ralph J. Hexter
Provost and Executive Vice Chancellor

Follow the link to opt out of future emails:
${l://OptOutLink?d=Click here to unsubscribe}

Reminder recruitment email:
From: UCD Travel Survey <travelsurvey@ucdavis.edu>
To: <...@ucdavis.edu>
Subject: 2019-20 Campus Travel Survey

Dear UC Davis Student / Employee,

Last week we invited you to take the 2019-2020 Campus Travel Survey. We encourage you to complete the survey today. This annual survey provides valuable data about the travel preferences of the entire UC Davis community. Every response matters.

To start the survey, click on the link below:
${l://SurveyLink?d=Take the Survey}

Or copy and paste the URL below into your internet browser:
${l://SurveyURL}

Participating in this research **survey takes about 15 minutes**. 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.

In appreciation for your time, we're offering anyone who completes the survey entry into a drawing for **40 $50 Visa gift cards and two grand prizes of Amazon Fire tablets!**

UC Davis Transportation and Parking Services (TAPS) 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 TAPS programs to serve the campus community

Thanks for your participantion!

Sincerely,
Ralph J. Hexter
Provost and Executive Vice Chancellor

Follow the link to opt out of future emails:
${l://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:

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

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 2019-20, Percent Invited

Role	2019-20		Percent Invited				
	Assumed Population	Number Invited	2019-20	2018-19	2017-18	2016-17	2015-16
Student	**38,071**	**13,621**	**36%**	**41%**	**45%**	**60%**	**63%**
Undergraduate	**31,085**	**10,441**	**34%**	**37%**	**40%**	**57%**	**59%**
Freshman	6,156	1,574	26%	42%	43%	81%	58%
Sophomore	5,865	3,610	62%	52%	50%	64%	77%
Junior	8,473	2,165	26%	27%	33%	50%	48%
Senior	10,591	3,092	29%	33%	34%	50%	59%
Graduate	**6,986**	**3,180**	**46%**	**60%**	**69%**	**77%**	**80%**
Master's	2,796	2,113	76%	100%	93%	100%	100%
PhD	4,190	1,067	25%	33%	45%	58%	63%
Employee	**16,426**	**3,473**	**21%**	**16%**	**28%**	**30%**	**61%**
Faculty	2,392	1,273	53%	46%	118%	100%	100%
Staff	14,034	2,200	16%	11%	12%	19%	48%
Overall percent	**100%**	**–**	**31%**	**33%**	**41%**	**53%**	**62%**
Overall number	**54,497**	**17,094**	**–**	**17,888**	**19,796**	**24,029**	**27,429**

Table G- 2. Sampling Plan for 2015-16 through 2019-20, Response Rates

Role	2019-20			Actual Response Rate				
	Assumed Population	Number Invited	Target Response	2019-20	2018-19	2017-18	2016-17	2015-16
Student	**38,071**	**13,621**	**16%**	**17%**	**22%**	**19%**	**15%**	**10%**
Undergraduate	**31,085**	**10,441**	**14%**	**17%**	**20%**	**18%**	**14%**	**9%**
Freshman	6,156	1,574	23%	27%	28%	18%	14%	11%
Sophomore	5,865	3,610	10%	15%	15%	18%	15%	10%
Junior	8,473	2,165	17%	15%	22%	21%	16%	10%
Senior	10,591	3,092	12%	15%	17%	15%	12%	6%
Graduate	**6,986**	**3,180**	**22%**	**19%**	**27%**	**21%**	**18%**	**14%**
Master's	2,796	2,113	16%	16%	21%	16%	13%	10%
PhD	4,190	1,067	33%	25%	38%	31%	25%	16%
Employee	**16,426**	**3,473**	**20%**	**22%**	**25%**	**33%**	**33%**	**12%**
Faculty	2,392	1,273	26%	21%	31%	38%	31%	13%
Staff	14,034	2,200	17%	22%	22%	28%	35%	11%
Overall percent	**100%**	**31%**	**17%**	**18%**	**22%**	**20%**	**17%**	**10%**
Overall number	**54,497**	**17,094**	**2,857**	**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 = 3,098 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 2,996 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**	3,977	294	0.769	13.527	226	293	0.746	13.573	219
	Man	2,179	134	0.924	16.261	124	133	0.901	16.383	120
Sophomore	**Woman**	3,771	392	0.547	9.620	214	380	0.546	9.924	207
	Man	2,094	141	0.844	14.851	119	137	0.840	15.285	115
Junior	**Woman**	4,957	243	1.160	20.399	282	238	1.145	20.828	273
	Man	3,516	85	2.351	41.365	200	83	2.329	42.361	193
Senior	**Woman**	6,206	331	1.066	18.749	353	323	1.056	19.214	341
	Man	4,385	134	1.860	32.724	249	131	1.840	33.473	241
Master's	**Woman**	1,560	217	0.409	7.189	89	210	0.408	7.429	86
	Man	1,236	116	0.606	10.655	70	108	0.629	11.444	68
PhD	**Woman**	2,284	167	0.777	13.677	130	161	0.780	14.186	126
	Man	1,906	97	1.117	19.649	108	96	1.091	19.854	105
Faculty	**Woman**	995	123	0.460	8.089	57	117	0.468	8.504	55
	Man	1,397	140	0.567	9.979	79	132	0.582	10.583	77
Staff	**Woman**	8,056	315	1.454	25.575	458	295	1.501	27.308	443
	Man	5,978	169	2.011	35.373	340	159	2.067	37.597	329
Overall	**–**	54,497	3,098	0	17.591	3,098	2,996	0	18.190	2,996

[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).