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Publication Date

2024-10-01

## Results of the 2023-2024 Campus Travel Survey

October 2024 A Research Report from the National Center for Sustainable Transportation

Justin Darr, University of California, Davis





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#### Acknowledgments

This study was funded, partially or entirely, by a grant from the National Center for Sustainable Transportation (NCST), supported by the U.S. Department of Transportation (USDOT) through the University Transportation Centers program. The authors would like to thank the NCST and the USDOT for their support of university-based research in transportation, and especially for the funding provided in support of this project.



## Results of the 2023-2024 Campus Travel Survey

A National Center for Sustainable Transportation Research Report

October 2024

Justin Darr, Institute of Transportation Studies, University of California, Davis



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# Results of the 2023-24 Campus Travel Survey

Institute of Transportation Studies and Transportation Services

University of California, Davis

Prepared by Justin Darr Institute of Transportation Studies

Originally Published September 2024

**Revised October 2024** 

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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 (NCST), part of the Institute of Transportation Studies (ITS) at UC Davis. It collects a rich set of data about travel to the UC Davis campus, demographics, and attitudes toward travel.

The 2023-24 survey collected data from 4,087 people affiliated with UC Davis about their travel to campus during a single week in October 2023. It used a stratified random sampling method with the intent to gather a representative sample of the campus population. About 11.7% 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**

Physical travel to the UC Davis campus increased slightly in the year 2023-24 as compared to 2022-23 levels (Table 1). However, the proportion of people who physically traveled to campus on any given day remained lower than the pre-pandemic levels. On an average weekday, about 78.3% of people physically traveled to campus (approximately 37,700 people, including those living on campus). Among these, 34.9% biked to get there, 26.6% drove alone, 21.0% rode the bus, 10.4% walked, and 3.6% carpooled or got a ride (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.

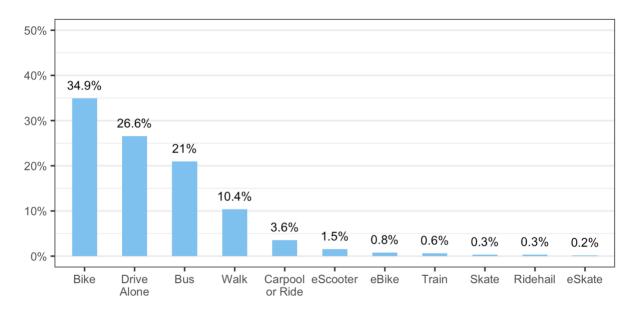


Figure 1 Overall Mode Share

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. About 46.9% reported bicycling as their primary means at least once during the week, which was the most popular mode. About 42.8% drove alone, 31.7% rode the bus, 17.9% walked, and 9.9% carpooled or got a ride. About 17.2% teleworked at least one day in the reference week (Figure 2).

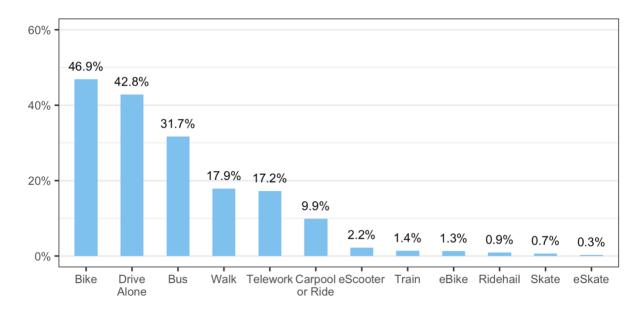


Figure 2 Used Mode at Least Once During Reference Week

#### Change in Mode Share, 2022-23 to 2023-24

One of the main purposes of the Campus Travel Survey is to collect comparable data each year 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 2022-23 survey. Table 1 shows the change in mode share between the 2022-23 and 2023-24 surveys.

#### Table 1 Percentage Change in Mode Share on an Average Weekday

			Of those who physically traveled to campus									
Survey Years	Physically Traveled	Bike	eBike	Walk	eScooter	eSkate	Skate	Drive alone	Carpool or ride	Bus	Train	Ridehail
2022-23, Overall	75.5%	36.7%	0.8%	9.5%	1.2%	0.2%	0.3%	28.7%	4.1%	17.6%	0.7%	0.3%
2023-24, Overall	78.3%	34.9%	0.8%	10.4%	1.5%	0.2%	0.3%	26.6%	3.6%	21.0%	0.6%	0.3%
Difference	2.8%	-1.8%	0.0%	0.9%	0.3%	0.0%	0.0%	-2.1%	-0.6%	3.3%	0.0%	0.0%

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

#### Familiarity with TS Programs

Several services that promote bicycling are well-known and highly utilized across the campus population. The ParkMobile service is the most highly used transportation service, with nearly 57.3% of respondents having used it (Figure 3).

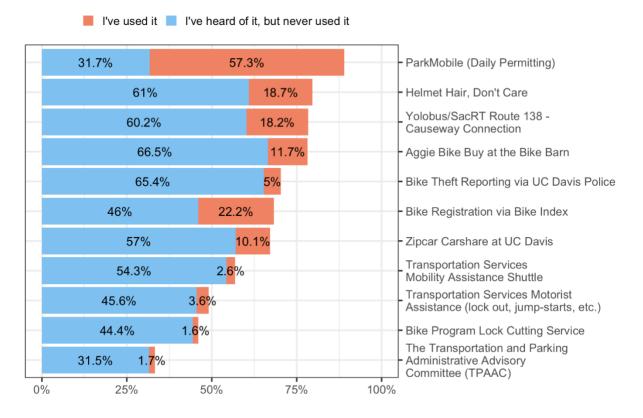


Figure 3 Familiarity with TS Programs

## Results of the 2023-24 Campus Travel Survey

Institute of Transportation Studies and Transportation Services

University of California, Davis

Prepared by Justin Darr Institute of Transportation Studies

Originally Published September 2024

Revised October 2024

## Background

In 2003 the University of California adopted the *UC Policy on Sustainable Practices*, which charges UC campus 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 have additional reasons to promote alternatives to driving. Some concerns include the 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 (NCST), part of the Institute of Transportation Studies (ITS) at UC Davis. Since 2007, the survey has been administered each fall by a graduate student at ITS. 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 years, the 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 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 seventeenth administration of the campus travel survey.

#### Survey Development and Administration

The content of this survey was based on the previous year's survey. Key questions relating to mode choice and residential location, among others, were retained. An ongoing attempt to refine question wording has meant that some variables are not directly comparable across years. See Appendix A: Survey Instrument, 2023-24 Campus Travel Survey for a full copy of the survey instrument. See Appendix B: Changes from the 2022-23 survey instrument for a summary of changes from the previous year.

The online survey was prepared and hosted using the Qualtrics Survey website (<u>www.qualtrics.com</u>). Staff at TS as well as faculty and students affiliated with ITS provided feedback on survey content and assisted with pre-testing of the online survey.

The 2023-24 survey was administered online in October and November 2023, distributed by email to a stratified random sample of 34,988 students, faculty, and staff out of an estimated total population of 48,195. See Table 2 for a summary of the random sample stratified by campus role.

#### Sample and 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 at 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 UC 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, TS provided incentives in the form of forty \$50 gift cards to participants of this 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 to not be contacted.

A total of 4,774 respondents at least started the survey (responding to the question about their role on campus), representing 13.6% of those invited. Of those who began the survey, 85.6% (4,087 respondents) completed the survey through the set of questions that asked respondents about their mode choice on each day of the reference week. Table 2 shows response rates for this year's survey compared to the previous year.

Table 3 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.

Role	Assumed Population	Number Invited	Actual Responses	Target Response Rate	2023-24 Actual Response Rate	2022-23 Actual Response Rate
Student	36,424	30,415	3,338	<b>7.0</b> %	<b>11.0</b> %	15.3%
Undergraduate	30,361	24,768	2,564	<b>5.9</b> %	10.4%	13.9%
Freshman	4,157	6,291	599	5.6%	9.5%	35.8%
Sophomore	6,562	4,515	617	8.0%	13.7%	14.6%
Junior	8,212	4,520	610	8.1%	13.5%	14.5%
Senior	11,430	9,442	738	3.9%	7.8%	9.2%
Graduate	6,063	5,647	774	<b>12.0</b> %	13.7%	<b>20.1</b> %
Master's	2,490	2,496	294	13.3%	11.8%	11.7%
PhD	3,573	3,151	480	11.0%	15.2%	52.2%
Employee	11,113	4,573	749	15.1%	16.4%	30.9%
Faculty	1,964	1,996	302	16.1%	15.1%	20.6%
Staff	9,149	2,577	447	14.3%	17.3%	45.2%
Overall	47,537	34,988	4,087	2,825	11.7%	17.7%
Overall percent	100.0%	73.6%	11.7%	8.1%	11.7%	17.7%

#### Table 2 Response Rates for 2023-24 versus 2022-23

#### Table 3 Number of Valid Responses by Role

Role	Assumed Population	Number Invited	Target	Valid Role	Mode and Gender	Geocoded
Student	36,424	30,415	2,134	3,833	3,338	3,175
Undergraduate	30,361	24,768	1,454	2,963	2,564	2,451
Freshman	4,157	6,291	352	712	599	594
Sophomore	6,562	4,515	363	709	617	598
Junior	8,212	4,520	367	690	610	570
Senior	11,430	9,442	372	852	738	689
Graduate	6,063	5,647	680	870	774	724
Master's	2,490	2,496	333	333	294	276
PhD	3,573	3,151	347	537	480	448
Employee	11,113	4,573	691	899	749	687
Faculty	1,964	1,996	322	347	302	261
Staff	9,149	2,577	369	552	447	426
Overall	47,537	34,988	2,825	4,732	4,087	3,862
Overall percent	100.0%	73.6%	8.1%	13.5%	11.0%	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 sociodemographics or other attributes that may matter for transportation choices. For this reason, we weight the sample by role group. As described above, we assign respondents to one of eight role groups based on their responses to *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 each role group so that the group's population in the sample is the same as their proportion in the overall projected population. As in previous surveys, the sample is disproportionately comprised of female respondents. In addition to weighting by role in the university, we correct for these differences in response rates among males and females in each role group so that the share of males and females in the weighted sample is equal to the share of males and females in each role group in the population.

Table 4 and Table 5 show the differences in gender distribution between the unweighted and weighted results.

Role	Male	Female	Unweighted Sample	<b>Projected Population</b>
Undergraduate	24.4%	75.6%	2,564	31,097
Graduate	33.6%	66.4%	774	5,985
Faculty	43.4%	56.6%	302	1,964
Staff	32.4%	67.6%	447	9,149

#### Table 4 Unweighted Gender Distribution of Respondents

#### Table 5 Weighted Gender Distribution of Respondents

Role	Male	Female	Weighted Sample	<b>Projected Population</b>
Undergraduate	42.0%	57.9%	2,638	31,097
Graduate	45.5%	54.4%	508	5,985
Faculty	61.8%	37.9%	167	1,964
Staff	47.0%	53.0%	776	9,149

#### **Confidence Intervals**

Table 6 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% confident that our estimates are within 1.5% 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 34.9% of the campus population bicycles to campus (Table 11), our margin of error indicates that – to the extent to which the survey results are unbiased – the true share of persons that bicycle to campus is between 33.4% and 36.4%.

Role	Sample Size	<b>Population Size</b>	Margin of Error	
Student	3,338	37,082	1.62%	
Undergraduate	2,564	31,097	1.85%	
Freshman	599	6,081	3.80%	
Sophomore	617	6,262	3.75%	
Junior	610	8,780	3.83%	
Senior	738	9,974	3.47%	
Graduate	774	5,985	3.29%	
Master's	294	2,440	5.36%	
PhD	480	3,545	4.16%	
Employee	749	11,113	3.46%	
Faculty	302	1,964	5.19%	
Staff	447	9,149	4.52%	
Overall	4,087	48,195	1.47%	

#### Table 6 Margins of Error, by Role Group

## 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 the numbers within the 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 Davis among all role groups).

#### Physical Travel to Campus

Table 7 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 83% to 87% of university affiliates physically traveled to campus on each day Monday through Thursday, with a low of 73 percent traveling to campus on Friday. Sophomores and juniors traveled to campus the most often, while staff traveled the least.

Role	Monday	Tuesday	Wed.	Thursday	Friday	No Days	Weighted sample	Projected population
Student	88.7%	90.3%	90.0%	90.3%	<b>79.2</b> %	<b>2.9</b> %	3,145	37,082
Undergrad.	<b>89.7</b> %	91.2%	91.0%	91.4%	<b>80.7</b> %	2.8%	2,637	31,097
Freshman	88.7%	87.1%	88.5%	86.2%	83.1%	6.6%	516	6,081
Sophomore	94.1%	93.9%	93.3%	96.0%	87.5%	1.3%	531	6,262
Junior	91.7%	92.8%	93.3%	92.4%	82.1%	1.8%	745	8,780
Senior	85.8%	90.6%	88.9%	90.8%	73.9%	2.4%	846	9,974
Graduate	83.6%	85.7%	<b>85.0</b> %	<b>84.9</b> %	71.2%	3.2%	508	5,985
Master's	83.5%	90.4%	84.8%	87.2%	64.6%	2.7%	207	2,440
PhD	83.8%	82.5%	85.2%	83.3%	75.7%	3.5%	301	3,545
Employee	65.4%	73.9%	73.6%	68.8%	54.4%	<b>6.9</b> %	942	11,113
Faculty	71.5%	74.4%	72.8%	73.3%	<b>56.1</b> %	5.3%	167	1,964
Staff	64.1%	73.8%	73.7%	67.9%	<b>54.0</b> %	7.3%	776	9,149
Overall	83.3%	86.6%	86.2%	85.4%	73.5%	3.8%	4,087	48,195
Weighted sample	3,406	3,537	3,523	3,490	3,003	156	4,087	NA
Projected population	40,169	41,715	41,546	41,151	35,412	1,841	NA	48,195

#### Table 7 Share Physically Traveling to Campus by Weekday

Results are based on responses to 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 8). Overall, those living in Davis were more likely to travel to campus than those living outside Davis (79% to 86% versus 67%). Still, the overall share of people traveling to campus remained lower than the pre-pandemic level.

Role	Overall	On campus	West Village	Off campus in Davis	Outside Davis	Weighted sample	Projected population
Student	83.7%	<b>79.1</b> %	86.4%	87.1%	<b>74.9</b> %	2,971	37,082
Undergraduate	84.5%	79.3%	86.5%	88.4%	<b>76.0</b> %	2,492	31,097
Freshman	78.0%	78.3%	76.5%	92.4%	65.7%	487	6,081
Sophomore	88.4%	81.1%	89.9%	89.9%	86.9%	502	6,262
Junior	87.1%	82.1%	85.1%	90.4%	78.2%	704	8,780
Senior	83.7%	81.8%	86.9%	85.4%	74.7%	799	9,974
Graduate	<b>79.2</b> %	77.7%	83.7%	<b>81.9</b> %	71.5%	480	5,985
Master's	77.7%	73.7%	79.6%	80.5%	72.9%	196	2,440
PhD	80.3%	80.8%	91.1%	82.7%	70.5%	284	3,545
Employee	<b>66.5</b> %	71.8%	100.0%	<b>72.9</b> %	<b>62.4</b> %	891	11,113
Faculty	<b>69.5</b> %	100.0%	0.0%	75.2%	<b>59.6</b> %	157	1,964
Staff	<b>65.9</b> %	<b>62.9</b> %	100.0%	<b>71.9</b> %	<b>62.8</b> %	733	9,149
Overall	<b>79.7</b> %	<b>79.0</b> %	86.5%	84.5%	67.3%	3,862	48,195
Weighted sample	3,078	568	366	1,543	601	3,862	NA
<b>Projected population</b>	38,415	7,093	4,567	19,250	7,505	NA	48,195

#### Table 8 Physical Travel to Campus by Residential Location

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

About 3.8% of the sample did not physically travel to campus on any day during the reference week, a decline from last year's 6.0%. These respondents were asked to give the reason they were away all week (Table 9). Employees were more likely to be away all week than students. Unlike last year, there is not a single reason for being away that stands out as more popular than the others. The share of respondents away all week due to telecommuting increased from 14.2% in 2022-23 to 18.8% in 2023-24.

Employees (but not students) who were away from campus some but not all 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 10). About 34.9% of employees did not travel to campus on an average weekday (Table 10). The most common reasons for being away from campus are working from home (telecommuting) and vacation, sickness, or personal leave.

#### Table 9 Share Away from Campus All Week and Reasons Given, by Role

				Of those awa	ay all week				
Role	Share away from campus all week	Didn't say	Study abroad or sabbatical	Telecommuting (working from home or another remote location)	Temporary appointment elsewhere	Vacation, sickness, or personal leave	Work or school- related travel or field work	Weighted sample	Projected population
Student	<b>2.9</b> %	74.2%	4.1%	8.4%	0.5%	<b>7.0</b> %	5.8%	91	1,073
Undergraduate	<b>2.8</b> %	<b>82.0</b> %	4.1%	3.6%	0.0%	6.4%	3.8%	75	884
Freshman	6.6%	79.5%	6.4%	1.9%	0.0%	6.4%	5.8%	34	400
Sophomore	1.3%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7	81
Junior	1.8%	86.6%	6.7%	0.0%	0.0%	0.0%	6.7%	14	161
Senior	2.4%	77.1%	0.0%	10.0%	0.0%	12.8%	0.0%	21	242
Graduate	3.2%	37.6%	4.0%	30.8%	2.9%	9.9%	14.7%	16	190
Master's	2.7%	39.9%	11.5%	37.2%	0.0%	11.5%	0.0%	6	67
PhD	3.5%	36.4%	0.0%	27.3%	4.5%	9.1%	22.7%	10	123
Employee	<b>6.9</b> %	<b>16.0</b> %	0.6%	33.4%	0.6%	29.5%	20.0%	65	768
Faculty	5.3%	4.2%	4.2%	35.1%	4.2%	8.4%	<b>44.0</b> %	9	104
Staff	7.3%	<b>17.9</b> %	0.0%	33.1%	0.0%	32.8%	<b>16.2</b> %	56	663
Overall	3.8%	49.9%	2.6%	18.8%	0.5%	16.4%	11.7%	156	1,841
Weighted sample	156	78	4	29	1	26	18	156	NA
<b>Projected population</b>	1,841	919	48	347	10	301	215	NA	1,841

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

#### Table 10 Share of Employees Not Traveling to Campus on an Average Weekday, and Reason

			Of those	not traveling to	o campus				
Role	Share away from campus on an average weekday	Telecommuting (working from home or another remote location)	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	Weighted sample	Projected population
Employee	34.9%	81.0%	2.8%	4.1%	6.8%	1.3%	4.1%	942	11,113
Faculty	32.4%	75.2%	8.7%	5.8%	4.3%	0.0%	6.0%	167	1,964
Staff	35.5%	80.0%	3.8%	4.4%	6.3%	1.0%	4.4%	776	9,149
Weighted sample	329	267	9	13	22	4	13	4,087	NA
Projected population	3,880	3,143	110	158	262	49	158	NA	48,195

Results are based on responses to 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 example, if someone bicycled one day of five days traveled to campus, their bike share for the week would be 20%. 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. 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 travel to campus from another location (e.g. a family member's residence), resulting in seemingly impossible or at least improbable 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.

Table 11 through Table 17 show the overall mode share among those physically traveling to campus on a given weekday. Table 11 shows mode share among the entire sample. Table 12 through Table 17 show mode share by residential location, as outlined below. The results suggest that mode splits vary substantially by residential location.

- Table 12 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 13 shows the mode share among those who live on campus, defined as the area south of Russell Boulevard, west of A Street, 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 14 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 15 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 bicycle than graduate students and faculty. Undergraduate students have high bus ridership rates (38.8%), whereas graduate students and employees in Davis who do not bicycle are more likely to commute by car.
- Table 16 shows the mode share for students and employees who live outside Davis (an estimated 11,159 people). Among those traveling from outside Davis, about 85.6% commute by car, 6.3% carpool or get a ride, and 4.5% ride the bus.
- Table 17 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 4 and Appendix A: Survey Instrument, 2023-24 Campus Travel Survey.

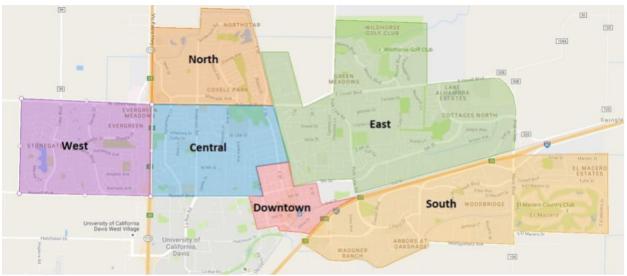


Figure 4 Neighborhoods in Davis

#### Table 11 Mode Share on an Average Weekday for Entire Sample

					Of those	who phys	sically tr	aveled to	campus					
Role	Physically traveled	Bike	eBike	Walk	eScooter	eSkate	Skate	Drive alone	Carpool or ride	Bus	Train	Ridehail	Weighted sample	Projected population
Student	82.2%	38.3%	<b>0.8</b> %	<b>12.1</b> %	1.7%	<b>0.2</b> %	<b>0.4</b> %	17.2%	3.2%	25.2%	<b>0.5</b> %	0.3%	3,145	37,082
Undergraduate	83.1%	37.6%	<b>0.8</b> %	<b>12.9</b> %	1.7%	<b>0.2</b> %	0.5%	14.5%	2.8%	28.3%	<b>0.5</b> %	0.3%	2,637	31,097
Freshman	77.8%	54.5%	0.0%	33.1%	0.3%	0.0%	0.9%	3.3%	1.9%	5.3%	0.5%	0.2%	516	6,081
Sophomore	87.3%	36.8%	0.5%	6.4%	3.0%	0.0%	0.1%	8.0%	2.5%	42.1%	0.1%	0.4%	531	6,262
Junior	85.1%	32.0%	0.8%	7.0%	2.1%	0.3%	0.3%	16.8%	3.2%	36.4%	0.7%	0.3%	745	8,780
Senior	81.9%	33.6%	1.4%	10.9%	1.2%	0.3%	0.6%	23.3%	3.1%	24.9%	0.5%	0.2%	846	9,974
Graduate	77.6%	42.2%	1.1%	7.6%	1.8%	<b>0.2</b> %	0.1%	32.2%	5.6%	<b>7.9</b> %	0.6%	0.6%	508	5,985
Master's	75.8%	38.1%	1.4%	8.9%	1.5%	0.4%	0.2%	32.4%	4.9%	10.8%	0.8%	0.5%	207	2,440
PhD	78.9%	44.9%	0.9%	6.8%	2.0%	0.1%	0.0%	32.1%	6.0%	6.0%	0.6%	0.6%	301	3,545
Employee	65.1%	20.5%	<b>0.5</b> %	3.0%	0.8%	0.0%	0.0%	<b>65.9</b> %	<b>5.0</b> %	3.2%	<b>1.0</b> %	0.1%	942	11,113
Faculty	67.6%	39.8%	1.8%	4.7%	1.3%	0.0%	0.0%	39.2%	5.5%	3.6%	3.5%	0.6%	167	1,964
Staff	64.5%	16.2%	0.2%	2.7%	0.7%	0.0%	0.0%	71.9%	4.9%	3.1%	0.4%	0.0%	776	9,149
Overall	78.3%	34.9%	<b>0.8</b> %	<b>10.4</b> %	1.5%	<b>0.2</b> %	0.3%	26.6%	3.6%	<b>21.0</b> %	0.6%	0.3%	4,087	48,195
Weighted sample	3,199	1,117	25	331	48	5	11	850	114	670	19	9	4,087	NA
Projected population	37,719	13,168	291	3,906	570	62	124	10,019	1,341	7,902	227	108	NA	48,195

					Of those	who phys	ically tra	aveled to	campus					
Role	Physically traveled	Bike	eBike	Walk	eScooter	eSkate	Skate	Drive alone	Carpool or ride	Bus	Train	Ridehail	Weighted sample	Projected population
Student	84.8%	<b>42.6</b> %	<b>1.0</b> %	<b>12.9</b> %	1.7%	<b>0.2</b> %	0.4%	<b>10.4</b> %	2.8%	27.5%	<b>0.1</b> %	0.4%	2,625	32,757
Undergraduate	85.5%	41.1%	<b>0.9</b> %	13.6%	1.6%	<b>0.2</b> %	<b>0.5</b> %	8.5%	2.4%	<b>30.8</b> %	<b>0.1</b> %	0.3%	2,236	27,902
Freshman	78.6%	56.7%	0.0%	34.5%	0.4%	0.0%	1.0%	0.4%	1.4%	5.1%	0.4%	0.2%	463	5,783
Sophomore	88.5%	37.9%	0.5%	6.7%	2.7%	0.0%	0.1%	5.2%	2.3%	44.0%	0.2%	0.5%	480	5,996
Junior	88.3%	35.6%	1.0%	6.7%	2.0%	0.4%	0.4%	10.2%	3.1%	40.3%	0.0%	0.4%	620	7,732
Senior	85.4%	39.0%	1.7%	11.9%	1.3%	0.2%	0.7%	14.4%	2.4%	28.1%	0.1%	0.3%	672	8,391
Graduate	<b>81.0</b> %	51.7%	1.4%	<b>9.0</b> %	2.1%	0.3%	<b>0.1</b> %	<b>21.9</b> %	5.3%	7.6%	<b>0.1</b> %	<b>0.7</b> %	389	4,855
Master's	78.8%	47.8%	1.8%	10.8%	1.9%	0.5%	0.1%	21.3%	4.1%	10.8%	0.1%	0.6%	156	1,951
PhD	82.5%	54.2%	1.2%	7.8%	2.3%	0.1%	0.0%	22.3%	6.0%	5.4%	0.0%	0.7%	233	2,904
Employee	<b>73.0</b> %	<b>48.2</b> %	1.3%	5.8%	<b>1.9</b> %	0.0%	0.0%	33.5%	<b>4.6</b> %	<b>4.6</b> %	0.0%	0.0%	343	4,280
Faculty	75.8%	60.1%	3.0%	7.6%	2.0%	0.0%	0.0%	21.3%	3.5%	2.5%	0.0%	0.0%	96	1,201
Staff	72.0%	43.4%	0.6%	5.0%	1.9%	0.0%	0.0%	38.6%	5.0%	5.5%	0.0%	0.0%	247	3,078
Overall	83.5%	43.2%	<b>1.0</b> %	12.2%	1.7%	<b>0.2</b> %	0.4%	12.7%	3.0%	25.2%	0.1%	0.3%	2,968	37,036
Weighted sample	2,477	1,070	25	302	43	4	10	315	74	623	3	8	2,968	NA
Projected population	30,910	13,353	310	3,772	530	50	123	3,932	922	7,779	35	103	NA	37,036

#### Table 12 Mode Share on an Average Weekday for Respondents Living Within Davis

					Of those	who phys	sically tr	aveled to	o campus					
Role	Physically traveled	Bike	eBike	Walk	eScooter	eSkate	Skate	Drive alone	Carpool or ride	Bus	Train	Ridehail	Weighted sample	Projected population
Student	<b>79.1</b> %	55.8%	0.3%	31.4%	0.8%	<b>0.1</b> %	<b>0.9</b> %	<b>2.0</b> %	1.3%	6.8%	0.4%	0.2%	711	8,871
Undergraduate	79.3%	<b>55.0</b> %	0.2%	32.9%	0.3%	0.0%	<b>1.0</b> %	1.6%	1.1%	7.4%	<b>0.4</b> %	0.2%	624	7,786
Freshman	78.3%	57.3%	0.0%	35.6%	0.2%	0.0%	1.0%	0.4%	1.0%	3.9%	0.5%	0.2%	441	5,508
Sophomore	81.1%	55.2%	0.0%	18.2%	0.0%	0.0%	0.0%	1.7%	1.5%	23.5%	0.0%	0.0%	78	972
Junior	82.1%	47.5%	0.0%	37.8%	0.0%	0.0%	0.0%	2.9%	1.5%	10.4%	0.0%	0.0%	47	581
Senior	81.8%	44.2%	2.4%	28.6%	1.9%	0.0%	2.6%	9.0%	1.1%	9.0%	0.9%	0.4%	58	725
Graduate	77.7%	61.8%	1.1%	<b>21.0</b> %	4.1%	<b>1.0</b> %	0.0%	5.1%	2.7%	2.6%	0.2%	0.4%	87	1,085
Master's	73.7%	53.2%	0.0%	23.4%	4.3%	2.3%	0.0%	7.6%	3.0%	4.7%	0.6%	0.9%	38	472
PhD	80.8%	67.8%	1.9%	19.4%	3.9%	0.0%	0.0%	3.4%	2.4%	1.2%	0.0%	0.0%	49	613
Employee	71.8%	<b>50.0</b> %	0.0%	38.6%	0.0%	0.0%	0.0%	0.0%	<b>8.7</b> %	2.7%	0.0%	0.0%	9	108
Faculty	100.0%	39.9%	0.0%	52.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.1%	0.0%	0.0%	2	26
Staff	62.9%	55.1%	0.0%	31.8%	0.0%	0.0%	0.0%	0.0%	13.1%	0.0%	0.0%	0.0%	7	82
Overall	<b>79.0</b> %	55.8%	0.3%	31.5%	0.8%	<b>0.1</b> %	<b>0.8</b> %	<b>2.0</b> %	1.4%	6.7%	<b>0.4</b> %	<b>0.2</b> %	720	8,979
Weighted sample	568	317	2	179	4	1	5	11	8	38	2	1	720	NA
Projected population	7,093	3,957	24	2,236	54	8	60	140	97	479	27	13	NA	8,979

#### Table 13 Mode Share on an Average Weekday for Respondents Living On-Campus

					Of those	who phys	ically tra	aveled to	campus					
Role	Physically traveled	Bike	eBike	Walk	eScooter	eSkate	Skate	Drive alone	Carpool or ride	Bus	Train	Ridehail	Weighted sample	Projected population
Student	86.4%	<b>42.6</b> %	2.1%	7.7%	2.5%	0.6%	0.5%	4.1%	<b>1.0</b> %	38.8%	0.2%	0.0%	421	5,252
Undergraduate	86.5%	42.2%	2.2%	7.5%	2.5%	0.6%	0.5%	<b>4.0</b> %	0.9%	39.3%	0.2%	0.0%	409	5,099
Freshman	76.5%	69.2%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.8%	0.0%	0.0%	11	132
Sophomore	89.9%	47.9%	0.2%	4.8%	2.7%	0.0%	0.0%	1.0%	1.0%	41.5%	1.0%	0.0%	77	957
Junior	85.1%	39.6%	2.7%	7.1%	2.2%	1.4%	0.7%	3.5%	1.2%	41.7%	0.0%	0.0%	171	2,131
Senior	86.9%	40.3%	2.8%	8.7%	3.0%	0.0%	0.7%	6.5%	0.7%	37.3%	0.0%	0.0%	151	1,879
Graduate	83.7%	<b>56.9</b> %	0.0%	<b>14.0</b> %	0.0%	0.0%	0.0%	8.5%	1.3%	19.3%	0.0%	0.0%	12	153
Master's	79.6%	66.4%	0.0%	0.0%	0.0%	0.0%	0.0%	6.2%	2.1%	25.3%	0.0%	0.0%	8	99
PhD	91.1%	41.6%	0.0%	36.5%	0.0%	0.0%	0.0%	12.2%	0.0%	9.7%	0.0%	0.0%	4	54
Employee	<b>100.0</b> %	<b>100.0</b> %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2	31
Faculty	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0	0
Staff	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2	31
Overall	86.5%	<b>43.0</b> %	2.1%	7.7%	2.4%	0.6%	0.5%	4.1%	<b>0.9</b> %	38.5%	0.2%	0.0%	423	5,283
Weighted sample	366	157	8	28	9	2	2	15	3	141	1	0	423	NA
Projected population	4,567	1,963	96	350	111	26	23	188	43	1,758	8	0	NA	5,283

Table 14 Mode Share on an Average Weekday for Respondents Living in West Village

					Of those	who phy	sically tr	aveled to	o campus					
Role	Physically traveled	Bike	eBike	Walk	eScooter	eSkate	Skate	Drive alone	Carpool or ride	Bus	Train	Ridehail	Weighted sample	Projected population
Student	87.1%	<b>36.9</b> %	0.9%	6.4%	1.9%	<b>0.1</b> %	0.2%	15.7%	4.0%	33.3%	0.0%	0.6%	1,493	18,633
Undergraduate	88.4%	34.3%	0.8%	6.6%	1.9%	0.1%	0.3%	13.2%	3.5%	38.8%	0.0%	0.5%	1,203	15,016
Freshman	92.4%	25.6%	0.0%	11.4%	5.9%	0.0%	0.0%	0.0%	15.0%	42.1%	0.0%	0.0%	11	143
Sophomore	89.9%	31.8%	0.7%	4.7%	3.3%	0.0%	0.1%	7.0%	2.8%	49.0%	0.0%	0.7%	326	4,066
Junior	90.4%	32.7%	0.4%	3.2%	2.2%	0.0%	0.3%	13.7%	4.0%	42.9%	0.0%	0.6%	402	5,021
Senior	85.4%	37.9%	1.2%	11.0%	0.6%	0.3%	0.4%	17.6%	3.2%	27.4%	0.0%	0.3%	464	5,787
Graduate	81.9%	48.6%	1.6%	5.3%	1.6%	<b>0.1</b> %	<b>0.1</b> %	27.3%	<b>6.2</b> %	8.4%	0.0%	0.8%	290	3,617
Master's	80.5%	44.8%	2.5%	7.7%	1.2%	0.0%	0.2%	26.7%	4.6%	11.7%	0.0%	0.5%	111	1,380
PhD	82.7%	50.9%	1.0%	4.0%	1.9%	0.1%	0.0%	27.6%	7.2%	6.5%	0.0%	0.9%	179	2,237
Employee	<b>72.9</b> %	47.7%	1.3%	<b>5.0</b> %	<b>2.0</b> %	0.0%	0.0%	34.7%	4.5%	4.7%	0.0%	0.0%	332	4,141
Faculty	75.2%	60.6%	3.0%	6.3%	2.1%	0.0%	0.0%	21.9%	3.6%	2.3%	0.0%	0.0%	94	1,175
Staff	71.9%	42.3%	0.6%	4.5%	2.0%	0.0%	0.0%	40.1%	4.9%	5.7%	0.0%	0.0%	238	2,965
Overall	84.5%	38.6%	<b>1.0</b> %	<b>6.2</b> %	<b>1.9</b> %	<b>0.1</b> %	<b>0.2</b> %	18.7%	4.1%	28.8%	0.0%	0.5%	1,825	22,774
Weighted sample	1,543	596	15	95	29	1	3	289	63	444	0	7	1,825	NA
Projected population	19,250	7,433	191	1,186	366	16	40	3,604	782	5,542	0	89	NA	22,774

Table 15 Mode Share on an Average Weekday for Respondents Living Off-Campus Within Davis

					Of thos	e who phy	sically t	raveled t	o campus					
Role	Physically traveled	Bike	eBike	Walk	eScooter	eSkate	Skate	Drive alone	Carpool or ride	Bus	Train	Ridehail	Weighted sample	Projected population
Student	74.9%	1.5%	0.0%	4.7%	0.6%	0.0%	0.0%	77.7%	7.6%	7.7%	0.2%	<b>0.1</b> %	347	4,325
Undergraduate	<b>76.0</b> %	<b>2.0</b> %	0.0%	5.7%	0.5%	0.0%	0.0%	<b>76.8</b> %	7.5%	7.5%	0.0%	0.1%	256	3,195
Freshman	65.7%	0.0%	0.0%	7.1%	0.0%	0.0%	0.0%	69.1%	14.3%	9.5%	0.0%	0.0%	24	298
Sophomore	86.9%	15.0%	0.0%	2.2%	0.0%	0.0%	0.0%	71.3%	8.0%	3.6%	0.0%	0.0%	21	266
Junior	78.2%	0.0%	0.0%	8.9%	0.3%	0.0%	0.0%	75.1%	5.2%	10.3%	0.0%	0.3%	84	1,048
Senior	74.7%	1.1%	0.0%	3.8%	0.8%	0.0%	0.0%	80.3%	7.9%	6.1%	0.0%	0.0%	127	1,583
Graduate	71.5%	0.0%	0.0%	1.6%	0.9%	0.0%	0.0%	<b>80.6</b> %	8.0%	8.2%	0.6%	0.0%	91	1,130
Master's	72.9%	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%	77.9%	8.3%	10.9%	1.1%	0.0%	39	489
PhD	70.5%	0.0%	0.0%	1.6%	1.6%	0.0%	0.0%	82.8%	7.7%	6.1%	0.3%	0.0%	51	641
Employee	<b>62.4</b> %	0.3%	0.0%	<b>0.4</b> %	0.0%	0.0%	0.0%	91.6%	5.4%	2.1%	0.2%	0.0%	548	6,833
Faculty	59.6%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	78.5%	9.9%	6.4%	1.6%	0.5%	61	763
Staff	62.8%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	93.1%	4.8%	1.6%	0.0%	0.0%	486	6,071
Overall	67.3%	0.8%	0.0%	2.2%	0.2%	0.0%	0.0%	85.6%	6.3%	4.5%	0.2%	0.1%	894	11,159
Weighted sample	601	5	0	13	1	0	0	515	38	27	1	0	894	NA
Projected population	7,505	63	0	167	18	0	0	6,424	476	340	12	4	NA	11,159

#### Table 16 Mode Share on an Average Weekday for Respondents Living Outside Davis

#### Table 17 Mode Share on an Average Weekday by Neighborhood in Davis

					Of those	e who phy	sically tr	aveled to	o campus					
Neighborhood	Physically traveled	Bike	eBike	Walk	eScooter	eSkate	Skate	Drive alone	Carpool or ride	Bus	Train	Ridehail	Weighted sample	Projected population
North	84.8%	32.9%	0.8%	2.5%	2.3%	0.0%	0.0%	13.2%	2.9%	45.2%	0.0%	0.3%	373	4,656
South	84.0%	25.7%	0.4%	3.0%	3.3%	0.0%	0.0%	32.8%	7.8%	26.1%	0.0%	0.9%	277	3,457
East	85.0%	40.7%	1.7%	2.3%	0.6%	0.1%	0.6%	22.1%	3.9%	27.2%	0.0%	0.7%	345	4,311
West	83.8%	36.0%	0.8%	2.9%	1.5%	0.0%	0.1%	21.6%	3.5%	33.3%	0.0%	0.3%	315	3,930
Central	84.3%	53.3%	1.7%	9.3%	2.5%	0.0%	0.1%	11.7%	3.5%	17.8%	0.0%	0.2%	327	4,076
Downtown	86.1%	45.0%	0.0%	33.4%	2.1%	0.9%	0.0%	5.7%	3.6%	8.3%	0.0%	1.0%	118	1,468
Overall Weighted	84.5%	38.6%	<b>1.0</b> %	<b>6.2</b> %	1.9%	0.1%	<b>0.2</b> %	18.7%	4.1%	28.8%	0.0%	0.5%	1,825	22,774
sample	1,543	596	15	95	29	1	3	289	63	444	0	7	1,825	NA
Projected population	19,250	7,433	191	1,186	366	16	40	3,604	782	5,542	0	89	NA	22,774

## Comparison of 2023-24 Mode Share with 2022-23

One of the main purposes of the Campus Travel Survey is to collect comparable data each year 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.

Table 18 shows mode share estimates for 2022-23 and 2023-24. Data for both years are weighted by role and gender. Mode share changed slightly as compared to the 2022-23 survey year. Walking, eScooter use, and bus use increased while bicycling, eSkate use, driving alone, carpooling or getting a ride, and train use decreased in 2023-24.

Role	Physically traveled	Bike	eBike	Walk	eScooter	eSkate	Skate	Drive alone	Carpool or ride	Bus	Train	Ridehail	Weighted sample	Projected population
						202	23-24							
Student	83.7%	38.3%	0.9%	12.1%	1.6%	0.2%	0.4%	17.4%	3.3%	25.4%	0.1%	0.3%	2,971	37,082
Undergraduate	84.5%	37.5%	0.8%	12.8%	1.5%	0.2%	0.5%	14.8%	2.9%	28.6%	0.1%	0.3%	2,492	31,097
Graduate	79.2%	42.9%	1.2%	7.7%	1.9%	0.2%	0.0%	31.9%	5.8%	7.7%	0.2%	0.5%	480	5,985
Employee	66.5%	20.6%	0.5%	2.7%	0.8%	0.0%	0.0%	67.0%	5.0%	3.2%	0.1%	0.0%	891	11,113
Outside Davis	67.3%	0.8%	0.0%	2.2%	0.2%	0.0%	0.0%	85.6%	6.3%	4.5%	0.2%	0.1%	894	11,159
Within Davis	83.5%	43.2%	1.0%	12.2%	1.7%	0.2%	0.4%	12.7%	3.0%	25.2%	0.1%	0.3%	2,968	37,036
Overall	<b>79.7</b> %	<b>34.9</b> %	<b>0.8</b> %	10.3%	1.4%	<b>0.1</b> %	<b>0.3</b> %	<b>27.0</b> %	3.6%	<b>21.1%</b>	<b>0.1</b> %	0.3%	3,862	48,195
						202	22-23							
Student	79.4%	40.8%	0.8%	10.9%	1.4%	0.2%	0.4%	20.0%	3.8%	20.9%	0.5%	0.3%	2,495	37,224
Undergraduate	79.8%	39.5%	0.9%	11.4%	1.5%	0.2%	0.4%	17.4%	3.6%	24.3%	0.5%	0.3%	2,014	30,046
Graduate	77.9%	46.4%	0.3%	8.4%	1.0%	0.3%	0.1%	31.2%	4.8%	6.5%	0.7%	0.3%	481	7,178
Employee	62.1%	19.0%	0.8%	3.5%	0.3%	0.0%	0.0%	66.3%	5.4%	3.2%	1.3%	0.1%	733	10,941
Outside Davis	64.6%	0.9%	0.0%	2.9%	0.3%	0.0%	0.0%	84.4%	5.2%	6.2%	0.1%	0.1%	607	10,206
Within Davis	80.5%	46.5%	1.0%	11.0%	1.3%	0.3%	0.4%	15.1%	3.2%	20.7%	0.1%	0.3%	2,258	37,959
Overall	75.5%	36.7%	<b>0.8</b> %	9.5%	1.2%	<b>0.2</b> %	<b>0.3</b> %	28.7%	4.1%	17.6%	<b>0.7</b> %	0.3%	3,228	48,165

Table 18 Comparison of Mode Shares, 2023-24 to 2022-23, Entire Sample

Results are based on responses to 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 19 shows the share of respondents who have a driver's license, can drive alone, can bicycle, or can use other micromobility options to campus for their commute.

Role	Driver's license	Access to a car	Access to a bike	Access to an eBike	Access to eScooter	Access to skates*	Weighted sample	Projected population
Students	80.3%	47.0%	67.6%	6.8%	8.3%	5.7%	2,971	37,082
Undergraduate	79.6%	42.8%	67.8%	6.9%	8.5%	5.9%	2,492	31,097
Freshman	63.3%	9.8%	77.9%	8.7%	9.3%	7.2%	487	6,081
Sophomore	73.3%	31.1%	74.9%	4.9%	7.4%	4.5%	502	6,262
Junior	88.4%	54.1%	63.8%	6.6%	8.6%	6.7%	704	8,780
Senior	85.7%	60.3%	60.7%	7.3%	8.5%	5.4%	799	9,974
Graduate	83.9%	68.8%	66.6%	6.2%	7.6%	4.5%	480	5,985
Master's	80.5%	64.1%	60.1%	7.2%	8.2%	5.1%	196	2,440
PhD	86.3%	72.0%	71.1%	5.6%	7.1%	4.1%	284	3,545
Employees	96.2%	91.1%	43.0%	7.9%	4.5%	2.5%	891	11,113
Faculty	98.7%	92.1%	61.7%	4.7%	4.0%	3.4%	157	1,964
Staff	95.6%	90.9%	39.0%	8.6%	4.6%	2.3%	733	9,149
Outside Davis	97.9%	93.7%	17.7%	3.7%	2.9%	1.9%	894	11,159
Within Davis	79.7%	46.1%	75.3%	8.0%	8.8%	5.9%	2,968	37,036
Overall	83.9%	57.1%	61.9%	7.0%	7.4%	5.0%	3,862	48,195
Weighted sample	3,242	2,207	2,392	272	287	192	3,862	NA
<b>Projected population</b>	40,455	27,539	29,851	3,391	3,584	2,393	NA	48,195

#### Table 19 Driver's License, Car, Bicycle, and Micromobility Access

Results are based on responses to 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.

\*Skates include skates, conventional skateboard, or kick scooter and electric skateboard (e-skateboard)

## Potential for Bicycling

We include a question to assess the potential mode share of bicycling. 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 20 shows the differences between the share of respondents who consider bicycling to campus an option and the share that bicycles to campus on an average weekday. About 86.5% of respondents living within 1 mile from the center of campus consider bicycling an option. A decrease is observed in the share of respondents who live further away from the center of campus (i.e. living off-campus in Davis) and still consider bicycling to campus as an option.

Residence	Share biking on an average weekday	Share who consider biking an option
Within 1 mile	49.4%	86.5%
1 to 2.9 miles	37.7%	82.6%
3 to 4.9 miles	19.1%	73.6%
5 to 9.9 miles	1.4%	28.9%
10 to 19.9 miles	0.1%	27.2%
20 miles or more	0.1%	16.2%
Overall	30.6%	<b>69.1</b> %

#### Table 20 Potential for Bicycling

Results are based on responses to Q18 (available modes to get to campus) and Q51 (daily travel). Data are weighted by role and gender for the 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 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 21.

Among those who carpooled at any point during the reference week, the average number of passengers was 2.48, including the driver. Most people dropped off on campus were the sole passenger with an average of 1.25 passengers dropped off per ride to campus, excluding the driver.

Role	Carpool Average Occupancy	Ride Average Occupancy	Weighted carpoolers	Weighted riders	Projected carpoolers	Projected riders
Undergraduate	2.62	1.27	248	173	3,090	2,157
Graduate	2.31	1.22	58	30	729	374
Faculty	2.09	1.27	13	5	166	57
Staff	2.03	1.06	49	23	617	281
Outside Davis	2.17	1.23	75	34	940	423
Within Davis	2.46	1.19	251	143	3,130	1,789
Overall	2.48	1.25	369	230	4,602	2,870

#### Table 21 Average Carpool Size

Vehicle occupancy is based on responses to Q60 (number of people in your carpool) and Q54 (number of people dropped off). Average occupancy is for those who carpooled or got a ride at least once. 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 22.

Role	Drive alone	Carpool	Ride	Total	<b>Projected population</b>
Student	5,401	236	420	6,058	37,082
Undergraduate	3,887	160	334	4,380	31,097
Freshman	151	7	68	226	6,081
Sophomore	441	39	38	519	6,262
Junior	1,314	61	105	1,480	8,780
Senior	1,980	57	123	2,160	9,974
Graduate	1,514	81	87	1,682	5,985
Master's	606	26	33	665	2,440
PhD	908	54	54	1,016	3,545
Employee	4,955	117	133	5,205	11,113
Faculty	551	27	20	598	1,964
Staff	4,404	90	113	4,607	9,149
Outside Davis	6,424	141	171	6,735	11,159
Within Davis	3,793	204	322	4,319	28,057
Overall	10,356	341	553	11,250	48,195

Table 22 Projected Vehicles Arriving on Campus on an Average Weekday, by Occupancy and Role

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 3.36 campus-wide, and 2.07 among non-student employees only (Table 23). This means that for every car coming to campus, there are an estimated 3.36 off-campus people coming to campus or telecommuting. This ratio is lower than it was in 2022-23.

Table 23 and Table 24 show 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.

Role	2014-15*	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Student	5.66	5.16	3.99	4.08	3.71	4.12	2.85	3.64	4.34	4.46
Undergraduate	6.33	5.90	4.31	4.46	4.13	4.37	3.16	4.06	4.77	5.05
Freshman	4.24	2.73	2.52	2.09	1.88	2.08	3.41	2.72	5.88	2.66
Sophomore	10.64	11.14	6.97	9.70	7.09	8.00	4.52	6.46	7.64	9.87
Junior	6.64	6.23	4.02	4.06	4.25	4.62	4.40	4.26	5.83	5.36
Senior	5.31	4.75	3.92	3.85	3.44	3.52	2.30	3.38	3.64	3.89
Graduate	3.99	3.44	3.11	3.11	2.75	3.43	2.16	2.75	3.28	2.94
Master's	3.04	3.11	3.07	2.81	2.49	3.30	1.92	2.86	3.70	2.87
PhD	4.78	3.77	3.13	3.43	2.95	3.53	2.27	2.64	2.95	2.98
Employee	1.61	1.83	1.55	1.60	1.63	1.59	1.31	2.16	2.13	2.07
Faculty	2.81	2.77	2.27	2.76	2.80	2.60	1.95	3.25	3.08	3.61
Staff	1.49	1.74	1.48	1.49	1.53	1.49	1.25	2.03	2.00	1.89
Non-student and student employees	2.57	2.61	2.25	2.32	2.16	2.21	1.63	2.64	2.79	2.86
Outside Davis	1.27	1.25	1.25	1.26	1.26	1.31	1.10	1.64	1.59	1.54
Within Davis	7.25	5.85	4.79	4.93	4.29	4.66	2.66	4.55	5.40	6.10
Overall	3.23	3.27	2.70	2.76	2.52	2.66	1.85	3.06	3.38	3.36

Table 23 Average Vehicle Ridership (AVR) 2014-15 through 2023-24, Off-Campus Only

Bold indicates the official AVR statistic reported by UC campuses. See "Appendix D: Calculation of Average Vehicle Ridership" for details on AVR calculations.

\*Based on an old method for estimating campus population.

Role	2014-15*	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Student	6.93	6.46	5.08	5.34	4.38	5.05	3.49	4.49	5.16	5.55
Undergraduate	7.92	7.61	5.71	6.09	4.98	5.55	4.01	5.22	5.77	6.37
Freshman	31.58	33.12	27.93	21.35	14.89	21.10	11.12	20.06	59.40	22.59
Sophomore	11.94	11.83	7.37	10.81	7.33	8.83	5.57	6.81	8.52	11.11
Junior	7.20	6.66	4.42	4.87	4.56	5.06	4.34	4.46	5.90	5.63
Senior	5.67	5.04	4.11	4.21	3.51	3.63	2.46	3.53	3.78	4.06
Graduate	4.40	3.77	3.29	3.42	2.96	3.66	2.31	2.95	3.71	3.42
Master's	3.35	3.34	3.20	3.10	2.68	3.46	2.01	3.04	4.10	3.33
PhD	5.28	4.18	3.36	3.77	3.17	3.81	2.44	2.87	3.40	3.47
Employee	1.61	1.83	1.55	1.61	1.62	1.59	1.32	2.17	2.13	2.08
Faculty	2.81	2.78	2.28	2.76	2.79	2.63	2.02	3.26	3.10	3.66
Staff	1.49	1.74	1.48	1.51	1.53	1.50	1.26	2.04	2.01	1.90
Non-student and student employees	2.70	2.72	2.35	2.49	2.22	2.29	1.68	2.77	2.94	3.04
Outside Davis	1.27	1.25	1.25	1.26	1.26	1.31	1.10	1.64	1.59	1.54
Within Davis	8.75	7.12	6.01	4.93	4.29	4.66	3.14	4.55	5.40	6.10
Overall	3.77	3.86	3.22	3.39	2.82	3.08	2.10	3.60	3.87	3.98

Table 24 Average Vehicle Ridership (AVR) 2014-15 through 2023-24, On- and Off-Campus

See "Appendix D: Calculation of Average Vehicle Ridership" for details on AVR calculations.

\*Based on an old method for estimating campus population.

## 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, etc.) are shown in Table 25.

Role	All- Electric	CNG	Conventional Hybrid	Gas or Diesel	Hydrogen Fuel Cell	Plug-in Hybrid Electric	Total
Student	56	1.7	131	1,000	2.3	24	1,214
Undergraduate	44	0.9	99	778	1.4	18	941
Freshman	4	0.0	12	65	0.0	1	82
Sophomore	5	0.0	13	137	1.4	1	158
Junior	21	0.0	28	251	0.0	8	308
Senior	13	0.9	46	325	0.0	9	394
Graduate	12	0.8	32	222	0.9	5	273
Master's	3	0.8	13	89	0.0	1	108
PhD	9	0.0	19	133	0.9	4	165
Employee	57	0.0	71	529	0.0	32	689
Faculty	13	0.0	14	59	0.0	8	95
Staff	44	0.0	57	469	0.0	23	594
Overall	113	1.7	203	1,529	2.3	55	1,903
<b>Overall Percent</b>	5.9%	0.1%	10.6%	80.3%	0.1%	2.9%	100.0%
<b>Projected population</b>	1,333	20	2,388	18,026	27	650	22,445

#### Table 25 Type of Vehicle Used During Reference Week

## **Transit Ridership**

If respondents indicated that they rode transit at any point on their way to campus during any day during the prior week, we asked them to indicate which transit service(s) they used ("Check all that apply"). Table 26 and Table 27 show the share of bus and train users who used each service at least once during the reference week.

Of the 1,015 respondents who indicated riding the bus in the past week, most reported using Unitrans at least once, followed distantly by use of the Causeway Connection (UCD/UCDMC Intercampus Shuttle) and Yolobus. Of the 46 respondents who indicated riding the train to campus in the past week, about 98.6% reported using Amtrak at least once.

Role	Unitrans	Yolobus	Causeway Connection (UCD/UCDMC Intercampus Shuttle)	Sacramento Regional Transit	UC Berkeley/Davis Shuttle	Weighted sample	Projected population
Undergraduate	95.6%	2.1%	1.4%	0.4%	0.6%	919	10,842
Graduate	78.3%	4.5%	17.2%	0.0%	0.0%	55	648
Faculty	37.7%	9.7%	52.6%	0.0%	0.0%	7	87
Staff	63.7%	13.4%	22.9%	0.0%	0.0%	34	398
Overall	93.3%	2.6%	3.2%	0.4%	0.5%	1,015	11,975

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

#### Table 27 Share Using Specific Train Services at Least Once During the Reference Week

	Of those r	iding the train to campus at least once		
Role	Amtrak	Sacramento Regional Transit	Weighted sample	<b>Projected population</b>
Undergraduate	100.0%	0.0%	20	234
Graduate	88.0%	12.0%	6	70
Faculty	100.0%	0.0%	11	132
Staff	100.0%	0.0%	9	105
Overall	98.6%	1.4%	46	540

Results are based on responses to Q62 (train used last week). Data are weighted by role and gender.

## **Origins and 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 in Table 28 suggest that 18.6% live on campus (an estimated 8,979 people), 11.0% live in West Village 5,283 people), 47.3% live off-campus in Davis (22,774 people), and 23.2% live outside of Davis (11,159 people). 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).

Role	On campus	West Village	Off campus in Davis	Outside Davis	Weighted sample	Projected population
Student	<b>23.9</b> %	14.2%	50.2%	11.7%	2,971	37,082
Undergraduate	<b>25.0</b> %	<b>16.4</b> %	48.3%	10.3%	2,492	31,097
Freshman	90.6%	2.2%	2.3%	4.9%	487	6,081
Sophomore	15.5%	15.3%	64.9%	4.3%	502	6,262
Junior	6.6%	24.3%	57.2%	11.9%	704	8,780
Senior	7.3%	18.8%	58.0%	15.9%	799	9,974
Graduate	18.1%	2.6%	60.4%	<b>18.9</b> %	480	5,985
Master's	19.3%	4.1%	56.6%	20.0%	196	2,440
PhD	17.3%	1.5%	63.1%	18.1%	284	3,545
Employee	<b>1.0</b> %	0.3%	37.3%	61.5%	891	11,113
Faculty	1.3%	0.0%	59.8%	38.8%	157	1,964
Staff	0.9%	0.3%	32.4%	66.4%	733	9,149
Overall	18.6%	<b>11.0</b> %	47.3%	23.2%	3,862	48,195
Weighted sample	720	423	1,825	894	3,862	NA
<b>Projected population</b>	8,979	5,283	22,774	11,159	NA	48,195

#### Table 28 Residential Location by Role Group

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

## **Distance to Campus**

To estimate vehicle miles traveled and carbon dioxide emissions from travel to campus, respondents were asked more detailed information about where they live, including the

latitude and longitude coordinates of their residence (*Q386*). This information was geocoded to the transportation network enabling a variety of spatial analyses (see Appendix E: Geocoding and Network Distances for details on the methodology).

We used the geocoded coordinates to estimate the distance that respondents travel daily (along a shortest-distance route) to get to campus (in particular, to or near the Silo). Table 29 summarizes distances traveled by role group, showing that employees tend to live farther from campus than students. The median distance traveled among students is 1.58 miles, versus 3.19 miles among faculty and 11.43 miles among staff (Table 29).

Role	Geocoded	Mean	Median	Minimum	Maximum	Weighted sample	Projected population
Student	95.1%	4.52	1.58	0.35	101.06	2,971	37,082
Undergraduate	95.6%	4.23	1.33	0.43	100.15	2,492	31,097
Freshman	99.2%	2.01	0.77	0.77	70.19	487	6,081
Sophomore	96.9%	2.43	1.76	0.55	46.32	502	6,262
Junior	93.4%	4.87	1.77	0.54	91.22	704	8,780
Senior	93.4%	6.14	1.72	0.43	100.15	799	9,974
Graduate	93.5%	6.02	2.12	0.35	101.06	480	5,985
Master's	93.9%	6.55	1.97	0.35	101.06	196	2,440
PhD	93.3%	5.65	2.20	0.58	87.70	284	3,545
Employee	91.7%	13.58	10.49	0.42	82.67	891	11,113
Faculty	86.4%	12.22	3.19	0.42	81.32	157	1,964
Staff	95.3%	13.87	11.43	0.71	82.67	733	9,149
Outside Davis	90.9%	22.88	17.64	1.39	101.06	894	11,159
Within Davis	93.8%	2.00	1.90	0.35	48.00	2,248	28,057
Overall	94.5%	6.61	1.87	0.35	101.06	3,862	48,195
Weighted sample	3,649	NA	NA	NA	NA	NA	NA

#### Table 29 Average Distance in Miles from Residence to Campus of Those Geocoded

Distances are calculated as the shortest network distance between the respondents' geocoded residence to a point on campus near the Silo. Data are weighted by role and gender for the cases that were 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 is in Table 30.

Role	Main Campus	West Campus Area (west of SR 113)	South Campus (south of I- 80)	Off- Campus but in Davis	Weighted Sample	Projected Population
Graduate	86.5%	7.3%	3.6%	2.7%	508	5,985
Master's	88.7%	4.6%	4.2%	2.4%	207	2,440
PhD	85.0%	9.0%	3.2%	2.9%	301	3,545
Employee	83.5%	6.3%	3.6%	6.7%	942	11,113
Faculty	95.4%	2.6%	0.4%	1.6%	167	1,964
Staff	80.9%	7.1%	4.2%	7.7%	776	9,149
Overall	1,216	96	51	76	1,450	17,098
Weighted sample	1,216	96	51	76	1,450	NA
<b>Projected population</b>	14,343	1,126	605	894	NA	17,098

#### Table 30 Destination on Campus, Among Employees and Graduate Students

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

## Vehicle Miles Traveled and 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 shortest path by distance 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 consider side trips that respondents might make on their way to or from campus (e.g. stopping at the store, picking up children, or visiting friends), diversions from the shortest distance 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% of her miles as bike miles and 80% of her miles as driving miles. Summed across all respondents, this figure represents the number of miles traveled by each mode on an average weekday.

## Annual VMT and 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 bicycled* = (*distance from campus* × 2) ×

(share of days bicycled during reference week)  $\times$  [(36 weeks  $\times$  5 days/week) + (weeks traveled to campus during the summer  $\times$ 

*days/week traveled during summer*)]. 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 drive 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 the vehicle occupancy. We assume that travel by walking, bicycling, skating, riding an eBike, or riding an eScooter contributes no PMT. Vehicle occupancy for carpooling and getting a ride varies for each respondent, as reported in questions *Q60* and *Q54* for those carpooling/vanpooling or getting a ride, respectively. If a respondent lives 10 miles from campus and traveled in a 3-person carpool all five weekdays, her average daily PMT would be  $(10 \text{ miles} \times 2)/3 = 6.67 \text{ miles}$ . 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 Greenhouse Gas Emissions). 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 93.3% of all bus riders use Unitrans. According to Unitrans' figures from 2023, Unitrans had an average of about 8.51 passengers per mile.<sup>1</sup> Thus, for someone who lives 10 miles from campus and traveled by bus all five weekdays, average bus PMT per day is  $(10 \text{ miles} \times 2)/8.51 \approx 2.35 \text{ person miles}.$ 

We estimate train occupancy based on annual ridership data from Amtrak's Capitol Corridor, since this service provides nearly all of train rides to campus. According to figures in the Capitol Corridor Annual Business Plan, the Capitol Corridor had an average of 122 passengers per train mile in FY 2022-23.<sup>2</sup> 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  $(100 \ miles \times 2)/122 \approx 1.64 \ person \ miles$ .

Our estimates for person miles traveled by mode and role are shown in Table 31 and Table 32.

Role	Total Daily PMT	Daily PMT per person	Total Annual PMT	Annual PMT per person	Share of total PMT	Share of population	Projected population
No travel No vehicle	0	0.0	0	0.0	0.0%	20.3%	9,780
(bike, eBike, walk, or skate)	0	0.0	0	0.0	0.0%	38.2%	18,388
Personal vehicles	319,137	27.2	66,992,976	5,699.7	98.1%	24.4%	11,754
Drive alone	304,299	29.4	64,046,147	6,184.5	93.6%	21.5%	10,356
Carpool or ride	14,838	10.6	2,946,830	2,107.9	4.6%	2.9%	1,398
Bus	6,086	0.7	1,197,697	147.5	1.9%	16.9%	8,118
Train	13	0.3	2,348	49.4	0.0%	0.1%	48
Total	325,236	6.8	68,193,021	1,418.1	<b>100.0</b> %	100.0%	48,088

#### Table 31 Person-Miles-Traveled (PMT) Daily and Annually, by Mode

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

Role	Total Daily PMT	Daily PMT per person	Total Annual PMT	Annual PMT per person	Share of total PMT	Share of Population	Projected population
Student	160,293	4.3	31,166,755	840.5	49.2%	76.9%	37,082
Undergraduate	122,828	3.9	23,745,258	763.6	37.7%	64.5%	31,097
Freshman	8,332	1.4	1,505,943	247.6	2.6%	12.6%	6,081
Sophomore	10,058	1.6	1,938,015	309.5	3.1%	13.0%	6,262
Junior	41,600	4.7	7,984,705	909.4	12.8%	18.2%	8,780
Senior	62,838	6.3	12,316,594	1,234.9	19.3%	20.7%	9,974
Graduate	37,466	6.3	7,421,498	1,240.0	11.5%	12.4%	5,985
Master's	17,170	7.0	3,230,403	1,323.9	5.3%	5.1%	2,440
PhD	20,295	5.7	4,191,095	1,182.3	6.2%	7.4%	3,545
Employee	165,536	14.9	37,143,685	3,342.4	50.8%	23.1%	11,113
Faculty	19,022	9.7	3,781,978	1,925.7	5.8%	4.1%	1,964
Staff	146,514	16.0	33,361,707	3,646.5	45.0%	19.0%	9,149
Outside Davis	299,485	26.8	62,810,000	5,628.6	91.9%	23.2%	11,159
Within Davis	26,344	0.7	5,500,440	148.5	8.1%	76.8%	37,036
On Campus	432	0.0	84,318	9.4	0.1%	18.6%	8,979
West Village	1,128	0.2	219,184	41.5	0.3%	11.0%	5,283
Off Campus	24,784	1.1	5,196,938	228.2	7.6%	47.3%	22,774
Overall	325,829	6.8	68,310,441	1,417.4	100.0%	100.0%	48,195

## Table 32 Person-Miles-Traveled (PMT), Daily and Annually, by Role Group

PMT are calculated as described in the text and annual estimates assume that campus operated the entire academic year. Data are weighted by role and gender for the 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. 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 93.3% 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.

Using these assumptions, we estimate the greenhouse gas emissions generated by travel to campus. These estimates are summarized in Table 33 through Table 36.

Table 33 Daily Pounds of CO<sub>2</sub>e Emitted by Mode and Role on an Average Weekday

Role	Drive alone	Carpool	Ride	Bus	Train	Ridehail	Total	Average lbs per person	Share of total CO2e	Share of population	Projected population
Student	144,406	3,692	5,560	26,441	242	523	180,864	4.88	51.8%	76.9%	37,082
Undergraduate	110,088	2,271	4,820	22,491	18	384	140,071	4.50	40.1%	64.5%	31,097
Freshman	6,762	136	1,182	1,149	9	12	9,250	1.52	2.6%	12.6%	6,081
Sophomore	8,102	182	502	4,780	7	104	13,677	2.18	3.9%	13.0%	6,262
Junior	37,321	726	1,226	9,656	0	185	49,116	5.59	14.1%	18.2%	8,780
Senior	57,902	1,226	1,910	6,905	2	82	68,029	6.82	19.5%	20.7%	9,974
Graduate	34,318	1,421	740	3,950	224	139	40,792	6.82	11.7%	12.4%	5,985
Master's	15,806	491	329	2,561	161	30	19,380	7.94	5.6%	5.1%	2,440
PhD	18,512	929	411	1,389	63	109	21,412	6.04	6.1%	7.4%	3,545
Employee	158,570	3,886	1,636	3,899	220	68	168,279	15.14	48.2%	23.1%	11,113
Faculty	16,958	1,140	567	1,237	220	68	20,190	10.28	5.8%	4.1%	1,964
Staff	141,612	2,745	1,069	2,663	0	0	148,088	16.19	42.4%	19.0%	9,149
Outside Davis	283,530	6,480	5,642	15,060	444	122	311,278	27.89	89.2%	23.2%	11,159
Within Davis	19,445	1,098	1,553	15,281	19	468	37,865	1.02	10.8%	76.8%	37,036
On Campus	214	21	86	375	12	20	729	0.08	0.2%	18.6%	8,979
West Village	498	22	52	2,285	7	0	2,865	0.54	0.8%	11.0%	5,283
Off Campus	18,733	1,055	1,415	12,620	0	448	34,271	1.50	9.8%	47.3%	22,774
Overall	302,975	7,578	7,196	30,340	463	591	349,142	7.24	100.0%	100.0%	48,195

## Table 34 Annual Tons of CO\_2e Emitted by Mode and Role

Role	Drive alone	Carpool	Ride	Bus	Train	Ridehail	Total	Average tons per person	Share of total CO2e	Share of population	Projected population
Student	16,375	419	630	2,998	27	59	20,510	0.55	51.8%	76.9%	37,082
Undergraduate	12,484	258	547	2,550	2	43	15,884	0.51	<b>40.1</b> %	<b>64.5</b> %	31,097
Freshman	767	15	134	130	1	1	1,049	0.17	2.6%	12.6%	6,081
Sophomore	919	21	57	542	1	12	1,551	0.25	3.9%	13.0%	6,262
Junior	4,232	82	139	1,095	0	21	5,570	0.63	14.1%	18.2%	8,780
Senior	6,566	139	217	783	0	9	7,714	0.77	19.5%	20.7%	9,974
Graduate	3,892	161	84	448	25	16	4,626	0.77	11.7%	12.4%	5,985
Master's	1,792	56	37	290	18	3	2,198	0.90	5.6%	5.1%	2,440
PhD	2,099	105	47	157	7	12	2,428	0.68	6.1%	7.4%	3,545
Employee	17,982	441	185	442	25	8	19,083	1.72	48.2%	23.1%	11,113
Faculty	1,923	129	64	140	25	8	2,290	1.17	5.8%	4.1%	1,964
Staff	16,059	311	121	302	0	0	16,793	1.84	42.4%	19.0%	9,149
Outside Davis	32,152	735	640	1,708	50	14	35,298	3.16	89.2%	23.2%	11,159
Within Davis	2,205	124	176	1,733	2	53	4,294	0.12	10.8%	76.8%	37,036
On Campus	24	2	10	43	1	2	83	0.01	0.2%	18.6%	8,979
West Village	57	2	6	259	1	0	325	0.06	0.8%	11.0%	5,283
Off Campus	2,124	120	160	1,431	0	51	3,886	0.17	9.8%	47.3%	22,774
Overall	34,357	859	816	3,441	52	67	39,592	0.82	100.0%	100.0%	48,195

Role	Drive alone	Carpool	Ride	Bus	Train	Ridehail	Total	Average lbs per person	Share of total CO2e	Share of population	Projected population
Student	144,406	3,692	5,560	11,885	242	523	166,307	4.48	49.8%	76.9%	37,082
Undergraduate	110,088	2,271	4,820	8,584	18	384	126,164	4.06	37.8%	64.5%	31,097
Freshman	6,762	136	1,182	895	9	12	8,996	1.48	2.7%	12.6%	6,081
Sophomore	8,102	182	502	424	7	104	9,321	1.49	2.8%	13.0%	6,262
Junior	37,321	726	1,226	4,532	0	185	43,991	5.01	13.2%	18.2%	8,780
Senior	57,902	1,226	1,910	2,733	2	82	63,856	6.40	19.1%	20.7%	9,974
Graduate	34,318	1,421	740	3,301	224	139	40,143	6.71	<b>12.0</b> %	12.4%	5,985
Master's	15,806	491	329	2,215	161	30	19,034	7.80	5.7%	5.1%	2,440
PhD	18,512	929	411	1,086	63	109	21,109	5.95	6.3%	7.4%	3,545
Employee	158,570	3,886	1,636	3,488	220	68	167,867	15.11	<b>50.2</b> %	23.1%	11,113
Faculty	16,958	1,140	567	1,188	220	68	20,141	10.26	6.0%	4.1%	1,964
Staff	141,612	2,745	1,069	2,300	0	0	147,726	16.15	44.2%	19.0%	9,149
Outside Davis	283,530	6,480	5,642	14,851	444	122	311,069	27.88	93.1%	23.2%	11,159
Within Davis	19,445	1,098	1,553	522	19	468	23,106	0.62	6.9%	76.8%	37,036
On Campus	214	21	86	33	12	20	387	0.04	0.1%	18.6%	8,979
West Village	498	22	52	52	7	0	631	0.12	0.2%	11.0%	5,283
Off Campus	18,733	1,055	1,415	437	0	448	22,088	0.97	6.6%	47.3%	22,774
Overall	302,975	7,578	7,196	15,373	463	591	334,175	6.93	100.0%	100.0%	48,195

## Table 35 Daily Pounds of CO<sub>2</sub>e Emitted by Mode and Role on an Average Weekday (Not Including Unitrans)

## Table 36 Annual Tons of CO $_2$ e Emitted by Mode and Role (Not Including Unitrans)

Role	Drive alone	Carpool	Ride	Bus	Train	Ridehail	Total	Average tons per person	Share of total CO2e	Share of population	Projected population
Student	16,375	419	630	1,348	27	59	18,859	0.51	49.8%	76.9%	37,082
Undergraduate	12,484	258	547	973	2	43	14,307	0.46	37.8%	64.5%	31,097
Freshman	767	15	134	101	1	1	1,020	0.17	2.7%	12.6%	6,081
Sophomore	919	21	57	48	1	12	1,057	0.17	2.8%	13.0%	6,262
Junior	4,232	82	139	514	0	21	4,989	0.57	13.2%	18.2%	8,780
Senior	6,566	139	217	310	0	9	7,241	0.73	19.1%	20.7%	9,974
Graduate	3,892	161	84	374	25	16	4,552	0.76	12.0%	12.4%	5,985
Master's	1,792	56	37	251	18	3	2,158	0.88	5.7%	5.1%	2,440
PhD	2,099	105	47	123	7	12	2,394	0.68	6.3%	7.4%	3,545
Employee	17,982	441	185	396	25	8	19,036	1.71	<b>50.2</b> %	23.1%	11,113
Faculty	1,923	129	64	135	25	8	2,284	1.16	6.0%	4.1%	1,964
Staff	16,059	311	121	261	0	0	16,752	1.83	44.2%	19.0%	9,149
Outside Davis	32,152	735	640	1,684	50	14	35,275	3.16	93.1%	23.2%	11,159
Within Davis	2,205	124	176	59	2	53	2,620	0.07	6.9%	76.8%	37,036
On Campus	24	2	10	4	1	2	44	0.00	0.1%	18.6%	8,979
West Village	57	2	6	6	1	0	72	0.01	0.2%	11.0%	5,283
Off Campus	2,124	120	160	50	0	51	2,505	0.11	6.6%	47.3%	22,774
Overall	34,357	859	816	1,743	52	67	37,895	0.79	100.0%	100.0%	48,195

## Awareness of TS Programs

We presented respondents with a list of campus transportation services and asked them to indicate their familiarity with them. Table 37 summarizes the responses for each service, and Table 38 compares responses for the past nine years for those services that appeared on each of the surveys.

#### Table 37 Awareness of Transportation Programs and Services

Program	l've used it	l've heard of it, but never used it	l've never heard of it
Aggie Bike Buy at the Bike Barn	11.7%	66.5%	21.8%
Transportation Services Motorist Assistance (lock out, jump-starts, etc.)	3.6%	45.6%	50.9%
Yolobus/SacRT Route 138 - Causeway Connection	18.2%	60.2%	21.6%
Zipcar Carshare at UC Davis	10.1%	57.0%	32.9%
Helmet Hair, Don't Care	18.7%	61.0%	20.4%
Bike Program Lock Cutting Service	1.6%	44.4%	53.9%
Bike Theft Reporting via UC Davis Police	5.0%	65.4%	29.6%
ParkMobile (Daily Permitting)	57.3%	31.7%	11.0%
Transportation Services Mobility Assistance Shuttle	2.6%	54.3%	43.1%
Bike Registration via Bike Index	22.2%	46.0%	31.7%
The Transportation and Parking Administrative Advisory Committee (TPAAC)	1.7%	31.5%	66.8%

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

Table 38 Percent Who Have Heard of or Used Transportation Programs and Services, 2015-16 to 2023-24

Program	Change 2022-23 to 2023-24	2023-24	2022-23	2021-22	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16
Aggie Bike Buy at the Bike Barn	-0.1%	78.2%	78.3%	36.6%	43.6%	40.2%	39.0%	43.0%	44.0%	43.0%
Zipcar Carshare at UC Davis	-2.0%	67.1%	69.2%	66.7%	76.3%	76.2%	73.0%	74.0%	77.0%	79.0%
Transportation Services Motorist Assistance (lock out, jump-starts, etc.)	0.5%	49.1%	48.7%	21.0%	29.8%	26.4%	25.0%	32.0%	32.0%	54.0%
Bike Program Lock Cutting Service	0.4%	46.1%	45.7%	52.6%	52.9%	66.7%	65.0%	65.0%	69.0%	66.0%
Transportation Services Mobility Assistance Shuttle	2.8%	56.9%	54.1%	40.2%	37.5%	26.4%	25.0%	32.0%	32.0%	54.0%
Bike Registration via Bike Index	3.8%	68.3%	64.5%	73.4%	57.2%	70.9%	71.0%	74.0%	76.0%	79.0%
Bike Theft Reporting via UC Davis Police	-0.7%	70.4%	71.1%	58.4%	59.2%	57.9%	NA	NA	NA	NA
ParkMobile (Daily Permitting)	-1.4%	89.0%	90.4%	80.2%	NA	NA	NA	NA	NA	NA
Yolobus/SacRT Route 138 - Causeway Connection	1.7%	78.4%	76.7%	NA						
Helmet Hair, Don't Care	5.2%	79.6%	74.4%	NA						
The Transportation and Parking Administrative Advisory Committee (TPAAC)	-0.5%	33.2%	33.7%	NA						
Zimride carpool matching service	NA	NA	NA	18.6%	NA	27.0%	25.0%	28.0%	27.0%	31.0%
In-vehicle parking meters (Easy Park)	NA	NA	NA	35.2%	NA	39.8%	40.0%	47.0%	45.0%	44.0%
GoClub Transit Subsidy	NA	NA	NA	29.5%	37.3%	26.6%	27.0%	NA	NA	NA
Bike tire air stations and repair stations around campus	NA	NA	NA	79.8%	84.8%	85.6%	83.0%	87.0%	88.0%	91.0%
Bicycle Education and Enforcement Program (BEEP) and bike safety video	NA	NA	NA	36.9%	32.7%	29.4%	31.0%	32.0%	35.0%	34.0%

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

# Acknowledgements

UC Davis Transportation Services (TS) and the Institute of Transportation Studies (ITS) at the University of California, Davis, provided financial support for this project with helpful oversight from Ramon Zavala and Susan Handy, respectively.

Thanks to Calvin Thigpen and Justin Perona for writing the initial R scripts to streamline the analysis of survey data and creation of tables for this report and future reports. Thanks to Rob Saper for help with the housing affordability component of this survey.

Thanks to Aakansha Jain for the 2022-23 and 2021-22 surveys; Oliver Craven for geocoding the data for 2022-23 and 2021-22 surveys; to Ryan G. Miller for supporting administration for the 2021-22 survey as well as administering and writing the report for the 2020-21 survey; to Amy Lee for the 2018-19 and 2019-20 surveys; to Albee Wei for the 2017-18 survey; to Drew Heckathorn for the 2016-17 survey; to Eric Gudz for the 2015-16 survey with help from Drew Heckathorn and Calvin Thigpen; to Calvin Thigpen for the 2014-15 survey; Natalie Popovich for the 2013-14 survey, as well as for creating helpful documents for future survey administrators; Brigitte Driller for the 2012-13 survey; to Josh Miller for the 2010-11 and 2011-12 surveys; to Kristin Lovejoy for administering and writing the reports for the 2008-09 and 2009-10 surveys; and to Chris Congleton for spearheading the survey as an annual data-collection effort in 2006-07.

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# Appendices

## Appendix A: Survey Instrument, 2023-24 Campus Travel Survey

Below is the full text of the survey instrument, shown without the formatting that appeared online for 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.

# 2023-2024 UC Davis Campus Travel Survey

#### Start of Block: Welcome Page

Q1 Welcome to the 2023-2024 Campus Travel Survey! You are invited to participate in the 2023-2024 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 works or studies at UC Davis.

#### Your feedback helps improve the campus!

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

- Identify trends in the way that people get to campus from year to year
- Better understand the factors that encourage biking to campus
- Prioritize infrastructure improvements on campus
- Develop new TS programs to serve the campus community
- Estimate greenhouse gas emissions for travel to the campus

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

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

- Your role at UC Davis
- Your travel to and from campus
- Your experience with campus transportation programs
- Your safety and security when traveling on campus
- Your housing and experience with housing affordability
- Some background information about you

To reward you for your time and input, you will be entered into a drawing for **forty \$50 CoHo or UC Davis Bookstore gift cards.** 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! **Justin Darr**, PhD Candidate, Institute of Transportation Studies (jwdarr@ucdavis.edu) **Susan Handy**, Professor, Institute of Transportation Studies (slhandy@ucdavis.edu)

End of Block: Welcome Page

Start of Block: Section 1 - Role

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

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

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

Q3 What is your current faculty status?

Ladder rank (senate) (1)

Non-ladder rank (federation) (2)

O Unsure (3)

Display This Question:

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

Q4 What year are you?
O Freshman (1)
O Sophomore (2)
O Junior (3)
O Senior (4)
◯ Fifth-year senior (5)
O Post-baccalaureate (6)
○ Visiting / exchange student (7)
Other: (8)
Display This Question:
If What year are you? = Sophomore
Or What year are you? = Junior
Or What year are you? = Senior
Or What year are you? = Fifth-year senior
Or What year are you? = Post-baccalaureate

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

O Yes (	(1)	)
---------	-----	---

O No (2)

Display This Question:

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

Q6 What type of graduate program are you in?

Display This Question:

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

#### Q7 What is your campus role?

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

Display This Question:

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

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

O Yes (1)

O No (2)

#### Display This Question:

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

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

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

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

#### Q307 During a typical week, for how many days do you work for most of the day at:

	1 day (7)	2 days (6)	3 days (3)	4 days (4)	5 days (5)
A UC Davis office, lab, or other facility (1)	0	0	0	0	0
Home (2)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
A non-UC Davis remote work location other than my home (3)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

Display This Question:

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

Q9 Where is your primary UC Davis office, lab, or other facility?

O 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)

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

Outside of Davis (5)

Display This Question:

If Where is your primary UC Davis office, lab, or other facility? = Outside of Davis

Q10 Where outside of Davis is your primary office, lab, or other facility?

- O Bodega Marine Laboratory (Bodega and/or Point Reyes) (1)
- Executive MBA Program (San Ramon) (2)
- Fish Conservation and Culture Laboratory (FCCL) (Byron) (3)
- Imperial Valley Desert Research Center (El Centro) (4)
- Jepson Prairie (Dixon area) (5)
- Lawrence Livermore National Laboratory (Livermore) (6)
- O McClellan Nuclear Research Center (Sacramento) (7)
- O McLaughlin Reserve (8)
- Oakville Research Station (Napa Valley) (9)
- O Quail Ridge (10)
- O Stebbins Reserve (11)
- Tahoe Environmental Research Center (Incline Village and/or Tahoe City) (12)
- Taller Arte del Nuevo Amanecer (Woodland) (13)
- O UC Davis San Diego Veterinary Clinic (San Diego) (14)
- Veterinary Medicine Teaching & Research Center (VMTRC) CAHFS (Tulare) (15)
- VMTRC CAHFS (San Bernardino) (16)
- VMTRC CAHFS (Turlock) (17)
- O Veterinary Medicine Templeton Farms (Templeton near San Luis Obispo) (18)

 Wolfskill Experimental Orchard/National Clonal Germplasm Repository (Winters) (19)

🔘 Russell Rand	ch (20)		
Other: (21)		 	
Display This Ouestion:			

If If Where outside of Davis is your primary office, lab, or other facility? q://QID10/SelectedChoicesCount Is Greater Than 0

Q309 Please select the primary mode of transportation you usually use to get to this UC Davis office, lab or other facility.

- Walk (or wheelchair) (4)
- C Electric-assist bike (e-bike) (5)
- O Bike (6)
- Stand up electric scooter (e-scooter) (7)
- Electric skateboard (e-skateboard) (8)
- $\bigcirc$  Skates, conventional skateboard, or kick scooter (9)
- $\bigcirc$  Drive alone in a car (or other vehicle) (10)

Carpool and/or vanpool with others going to this UC Davis office, lab or other facility (11)

- $\bigcirc$  Get dropped off by a friend or family (the driver continues on elsewhere) (12)
- Upt, Uber, or other ride-hailing service (13)
- O Motorcycle or Vespa-like scooter (14)
- O Bus and/or shuttle (15)
- Train and/or light rail (16)
- Other: (17)\_\_\_\_\_

#### Display This Question:

If Please select the primary mode of transportation you usually use to get to this UC Davis office,... = Drive alone in a car (or other vehicle)

Or Please select the primary mode of transportation you usually use to get to this UC Davis office,... = Carpool and/or vanpool with others going to this UC Davis office, lab or other facility

Or Please select the primary mode of transportation you usually use to get to this UC Davis office,... = Get dropped off by a friend or family (the driver continues on elsewhere)

Or Please select the primary mode of transportation you usually use to get to this UC Davis office,... = Motorcycle or Vespa-like scooter

Carry Forward All Choices - Displayed & Hidden from "Which type of vehicle did you use to get to campus last week?"

X÷

Q349 Which type of vehicle do you usually use to get to this UC Davis office, lab or other facility?

• Gasoline or diesel vehicle (1)

 $\bigcirc$  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)

O Biofuel vehicle (6)

O Hydrogen fuel cell vehicle (7)

#### Display This Question:

If Where is your primary UC Davis office, lab, or other facility? = Outside of Davis

Q310 What is your approximate round-trip commute distance in miles to this location? (Take one-way distance and multiply it by 2).

Skip To: Q11 If Condition: What is your approximate ro... Is Displayed. Skip To: Thank you for taking this shortened v....

Display This Question:

If Where is your primary UC Davis office, lab, or other facility? = Outside of Davis

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

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

Display This Question:

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

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

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

End of Block: Section 1 - Role

Start of Block: Section 2a - General Background Information

Q13 Next, we have a few questions about you.

-----

Q15 Do you currently have a driver's license?

• Yes, a California driver's license (1)

 $\bigcirc$  Yes, a non-California (but from the United States) driver's license (2)

• Yes, a driver's license issued by another country (3)

O No (4)

	Yes (1)	No (2)
Walking (1)	$\bigcirc$	$\bigcirc$
Bicycling (2)	$\bigcirc$	$\bigcirc$
Driving (3)	$\bigcirc$	$\bigcirc$
Using public transit (4)	$\bigcirc$	$\bigcirc$
Page Break		

## Q16 Do you have any physical conditions that prevent you from...

Q17 How do you describe yourself?

	O Female (2)
	○ Male (7)
	O Non-binary / third gender (6)
	O Gender non-conforming (9)
	O Prefer to self-describe (10)
	O Prefer not to say (8)
Pa	ge 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)
Electric-assist bike (e-bike) (23)
Bike (3)
Stand up electric scooter (e-scooter) (24)
Electric skateboard (e-skateboard) (25)
Skates, conventional skateboard, or kick 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 We are interested in your available means of transportation. Select all options that are availabl = Bike
Or We are interested in your available means of transportation. Select all options that are availabl = Skates, conventional skateboard, or kick scooter
Or We are interested in your available means of transportation. Select all options that are availabl = Carpool and/or vanpool with others going to campus
Or We are interested in your available means of transportation. Select all options that are availabl = Bus and/or shuttle
Or We are interested in your available means of transportation. Select all options that are availabl =

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

Display This Question:

Train and/or light rail

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

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

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

Bike that I own (1)
Bike that I borrow or rent long term (4)
E-bike that I own (5)
E-bike that I borrow or rent long term (6)
Bike share (e.g. SPIN) (3)

Display This Question:

If We are interested in your available means of transportation. Select all options that are availabl... = Stand up electric scooter (e-scooter) Q387 What kind of e-scooter is available to you? Select all that apply.

E-scooter that I own (1)
E-scooter that I borrow or rent long term (4)
E-scooter share (e.g. SPIN) (3)

Display This Question:

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

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

	Roller skates or rollerblades (1)
	Conventional skateboard (2)
	Kick scooter (non-electric) (4)
Display This Qu	estion:
	terested in your available means of transportation. Select all options that are availabl = vanpool with others going to campus
Q22 Do you h	nave access to a carpool, vanpool, or both?
	Carpool (1)
	Vanpool (2)

### Display This Question:

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

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

	Unitrans (1)
	Yolobus (2)
	Sacramento Regional Transit (4)
	UC Berkeley/Davis Shuttle (5)
	Causeway Connection (UCD/UCDMC Intercampus Shuttle) (7)
	FlixBus (8)
	Other: (6)
Display This Of	
Display This Qu	

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

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

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

Display This Question:

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

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

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

Display This Choice:
If What is your primary role at UC Davis? = Undergraduate student (including Post-baccalaureate)
$\bigcirc$ Yes - with my student ID card (4)
O Yes - Monthly ticket (1)
O Yes - Multi-ride ticket (e.g. 10-rides) (2)
O Yes - Other: (5)
O 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?
$\bigcirc$ 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)

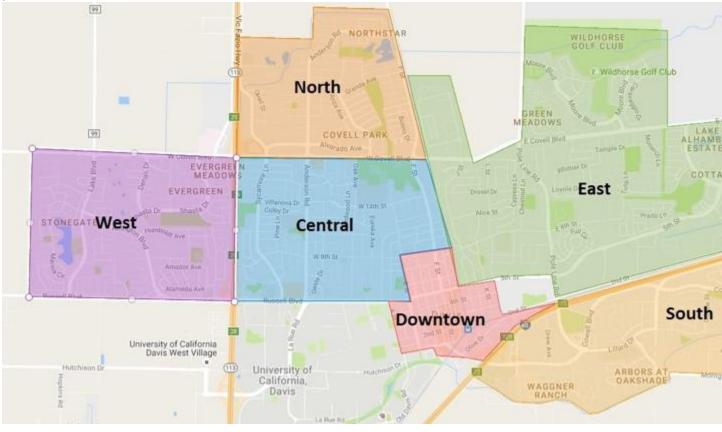
 $\bigcirc$  Off-campus elsewhere in the city of Davis (3)

 $\bigcirc$  Outside of Davis (4)

## Page Break

If Where do you live now? = 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

### JS

Q386 Where do you live now? Please answer for where you live when you are traveling to campus on a regular basis.

Type in your home address to have Google Maps suggest a location, or click/tap to place a pin on the map.

You may also type in a location near to where you live, your neighborhood, or your city, or place the pin in the general area.

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.

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 6) through Sunday (November 12).

If you use a day planner or Google or Outlook 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 6 – November 12) 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.

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

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

If Did you go somewhere on campus any day last week (November 6 – November 12) for school or work? ... = Yes, I traveled to campus destinations for school or work last week

Q38 On which days last week (November 6 – November 12) 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 Did you go somewhere on campus any day last week (November 6 – November 12) for school or work? ... = No, I did not travel to campus destinations for school or work last week

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

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

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

And And On which days last week (November 6 – November 12) 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... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 6 – November 12) 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... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Or If

What is your primary role at UC Davis? = Staff

And And On which days last week (November 6 – November 12) 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... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 6 – November 12) 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... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Or If

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

And And On which days last week (November 6 – November 12) 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… q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 6 – November 12) 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... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Or If

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

And And On which days last week (November 6 – November 12) 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... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 6 – November 12) 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... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Or If

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

And And On which days last week (November 6 – November 12) 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... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 6 – November 12) 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... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Or If

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

And And On which days last week (November 6 – November 12) 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... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 6 – November 12) 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... 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.

Display This Choice:
If Welcome to the 2022-23 Campus Travel Survey! Not Displayed
Display This Answer:
If Welcome to the 2022-23 Campus Travel Survey! Not Displayed
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Display This Answer:
If Welcome to the 2022-23 Campus Travel Survey! Not Displayed
Display This Choice:
If On which days last week (November 6 – November 12) did you go somewhere on campus? If you wen :o != Monday
Display This Choice:
If Welcome to the 2022-23 Campus Travel Survey! Not Displayed
Display This Choice:
If On which days last week (November 6 – November 12) did you go somewhere on campus? If you wen ro != Tuesday
Display This Choice:
If Welcome to the 2022-23 Campus Travel Survey! Not Displayed
Display This Choice:
If On which days last week (November 6 – November 12) did you go somewhere on campus? If you wen ro != Wednesday
Display This Choice:
If Welcome to the 2022-23 Campus Travel Survey! Not Displayed
Display This Choice:
If On which days last week (November 6 – November 12) did you go somewhere on campus? If you wen ro != Thursday
Display This Choice:
If Welcome to the 2022-23 Campus Travel Survey! Not Displayed
Display This Choice:
If On which days last week (November 6 – November 12) did you go somewhere on campus? If you wen ro != Friday

Display This Choice:

If Welcome to the 2022-23 Campus Travel Survey! Not Displayed

7 7 7 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	ispl ay his rer: f f celc Telec me mmut to g he (work 22 g fror 23 home anoth rav el locatio urv ) (6) ey! lon lay 1)	in ome to to 2022 or -23 or Cam er pus te Trav on el	Work or schoo l- relate d travel (e.g. meeti ng, confer ence, field work) (7)	Displa y This Answe r: If Welco me to the 2022- 23 Camp us Travel Survey ! Not Displa yed Wedn esday (3)	Regul arly sche dule d day off (8)	Displ ay This Ans wer: I f Welc ome to the 2022 -23 Cam pus Trave l Surv ey! Not Displ ayed Thur sday (4)	Vaca tion, sick ness , or pers onal leav e (9)	Displ ay This Ans wer: I f Welc ome to the 2022 -23 Cam pus Trav el Surv el Surv el Surv el Surv el Surv ej! Not Displ ayed Surv (5)	Day off as part of a compr essed work week (e.g. 9/80 sched ule) (10)	Ot he r (1 1)
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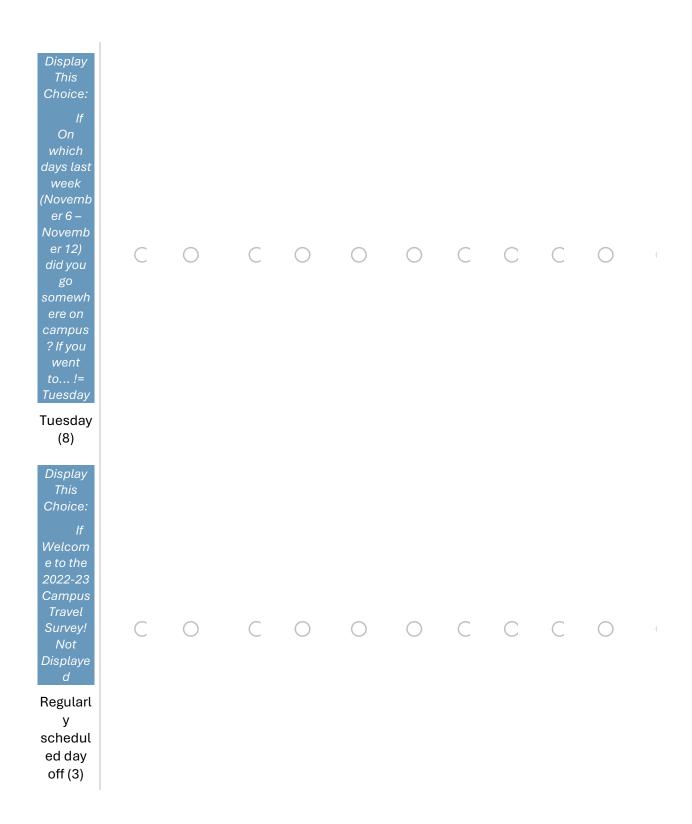
## Display 2022-23 Campus Displaye С O C O O CС С $\bigcirc$ Teleco mmutin g (workin g from home or another remote location ) (1) Display

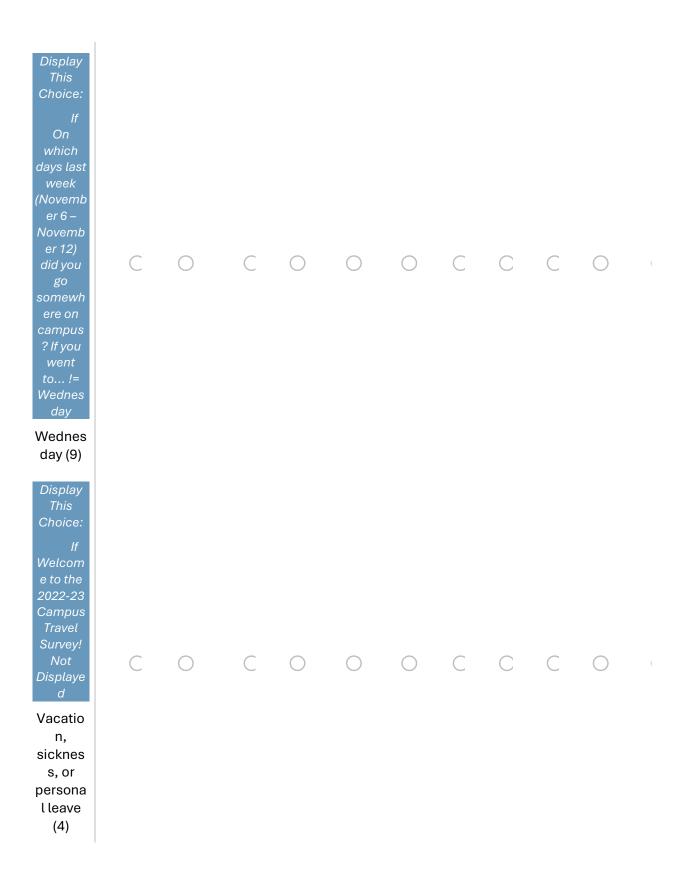
This Choice: If On which days last week (Novemb er 6 – Novemb er 12) did you go somewh ere on campus ? If you went to... != Monday

С

Monday (7) 75

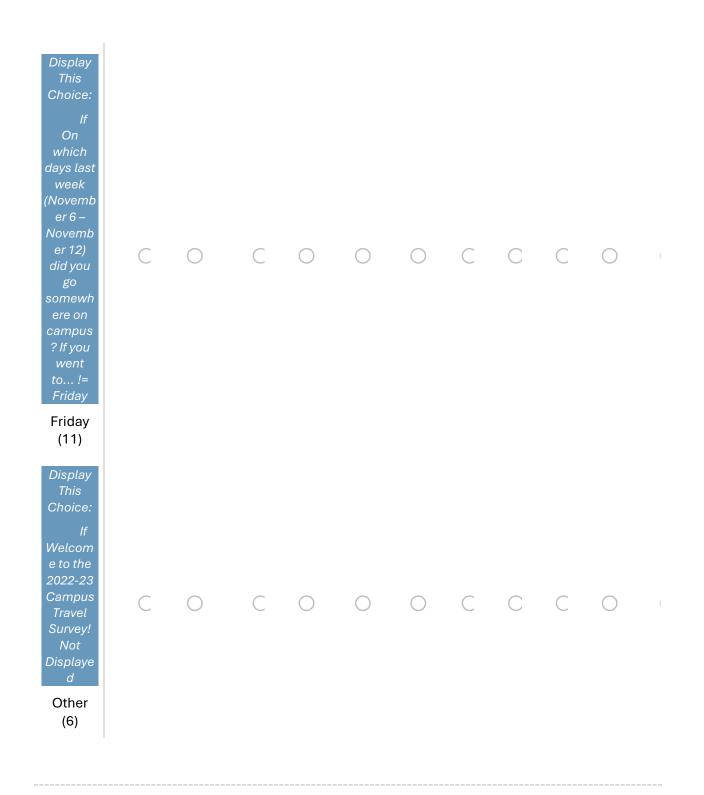
## Display 2022-23 Campus Work or schoolrelated travel (e.g. meeting , confere nce, field work) (2)







Display This Choice: If Welcom e to the 2022-23 Campus Travel Survey! Not Displaye d											
Day off as part of a compre ssed work week (i.e. 4/40, 9/80, or 3/36 schedul e) (5)	С	0	С	0	0	0	С	С	С	0	1



If Did you go somewhere on campus any day last week (November 6 – November 12) for school or work? ... = No, I did not travel to campus destinations for school or work last week

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

O Yes (1)

🔾 No (2)

Skip To: Q42 If Do you expect to resume regular travel to campus for school or work this academic year? = No

Display This Question:

If Do you expect to resume regular travel to campus for school or work this academic year? = 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 Thank you for taking this shortened version of the Campus Travel Survey. Since you do not intend... 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)

 $\bigcirc$  2 days per week (3)

- O 3 days per week (4)
- $\bigcirc$  4 days per week (5)
- $\bigcirc$  5 days per week (6)
- $\bigcirc$  6 days per week (7)
- $\bigcirc$  7 days per week (8)

Page Break

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

 $X \rightarrow$ 

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)
- Electric-assist bike (e-bike) (2)
- OBike (3)
- Stand up electric scooter (e-scooter) (4)
- Electric skateboard (e-skateboard) (5)
- $\bigcirc$  Skates, conventional skateboard, or kick scooter (6)
- $\bigcirc$  Drive alone in a car (or other vehicle) (7)
- $\bigcirc$  Carpool and/or vanpool with others going to campus (8)
- $\bigcirc$  Get dropped off by a friend or family (the driver continues on elsewhere) (9)
- $\bigcirc$  Lyft, Uber, or other ride-hailing service (10)
- O Motorcycle or Vespa-like scooter (11)
- O Bus and/or shuttle (12)
- Train and/or light rail (13)
- Other: (14)

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). Bus and/or shuttle Is Selected

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

 $X \dashv$ 

Q45 Which bus do you **usually use to get to campus**? (If you used more than one, please select the service used for the greater distance of your trip.)

O Unitrans (1)

🔿 Yolobus (2)

Sacramento Regional Transit (3)

UC Berkeley/Davis Shuttle (4)

Causeway Connection (UCD/UCDMC Intercampus Shuttle) (5)

O FlixBus (6)

Other: (7)

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

- Walk (or wheelchair) (1)
- O Electric-assist bike (e-bike) (15)
- O Bike (3)
- Stand up electric scooter (e-scooter) (16)
- C Electric skateboard (e-skateboard) (17)
- Skates, conventional skateboard, or kick scooter (2)
- $\bigcirc$  Drive alone in a car (or other vehicle) (6)

O Carpool (7)

- $\bigcirc$  Get a dropped off by a friend or family (8)
- Lyft, Uber, or other ride-hailing service (12)
- O Motorcycle or Vespa-like scooter (5)

O Bus or shuttle (9)

Other: (10)\_\_\_\_\_

Page Break

If What is your primary role at UC Davis? = 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 6 – November 12) 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... 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 6 – November 12) 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... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

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

 $X \rightarrow$ 

#### Q50 First think back to the entire week (Monday, November 6 - Sunday, November

**12).** 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)
Electric-assist bike (e-bike) (2)
Bike (3)
Stand up electric scooter (e-scooter) (4)
Electric skateboard (e-skateboard) (5)
Skates, conventional skateboard, or kick scooter (6)
Drive alone in a car (or other vehicle) (7)
Carpool and/or vanpool with others going to campus (8)
Get dropped off by a friend or family (the driver continues on elsewhere) (9)
Lyft, Uber, or other ride-hailing service (10)
Motorcycle or Vespa-like scooter (11)
Bus and/or shuttle (12)
Train and/or light rail (13)
Other: (14)

#### Display This Question:

If If On which days last week (November 6 – November 12) 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... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

Carry Forward Selected Choices - Entered Text from "First think back to the entire week (Monday, November 6 - Sunday, November 12). 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. "

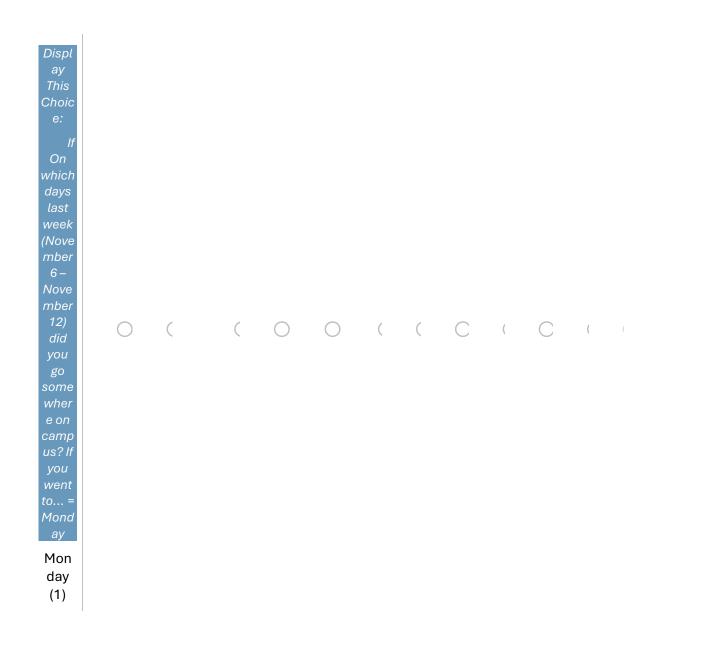
 $X \rightarrow$ 

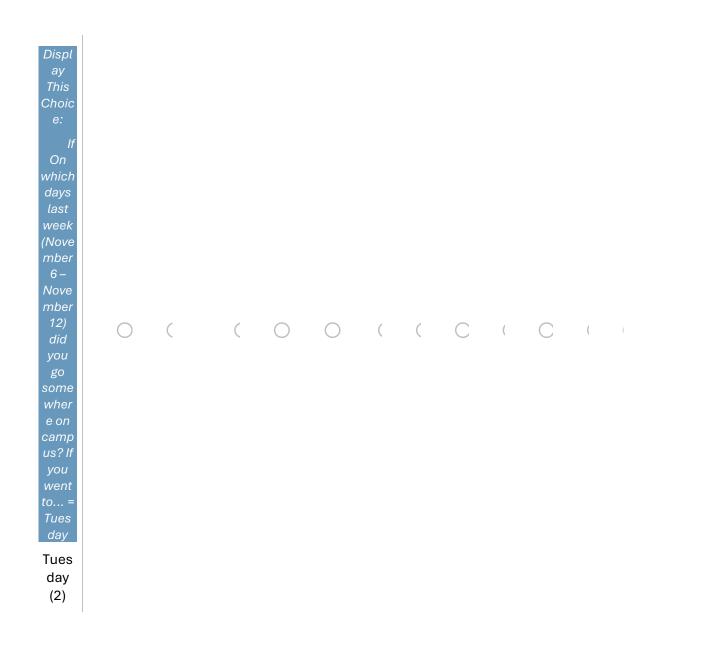
Q51 **Next, consider each day specifically.** Please select how you got to your first campus destination each day. (If you used more than one mode of transportation, select whatever you did for **most of the distance**.)

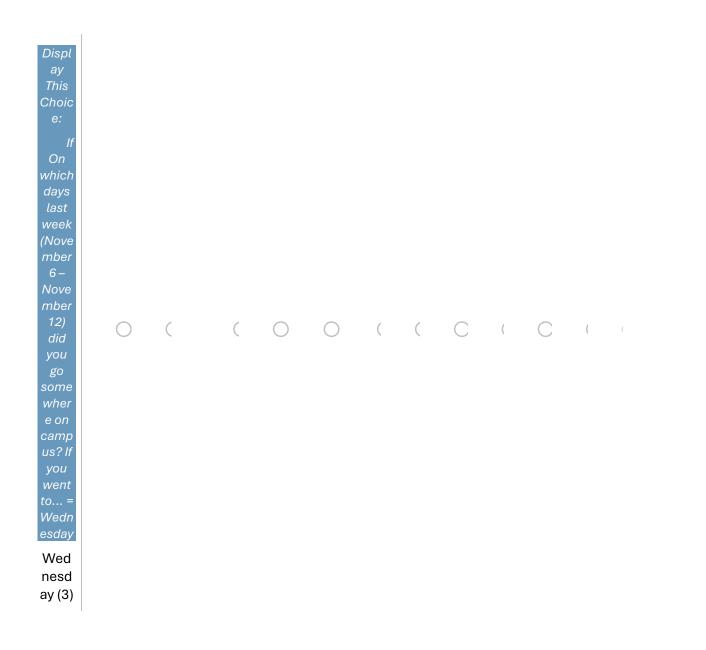
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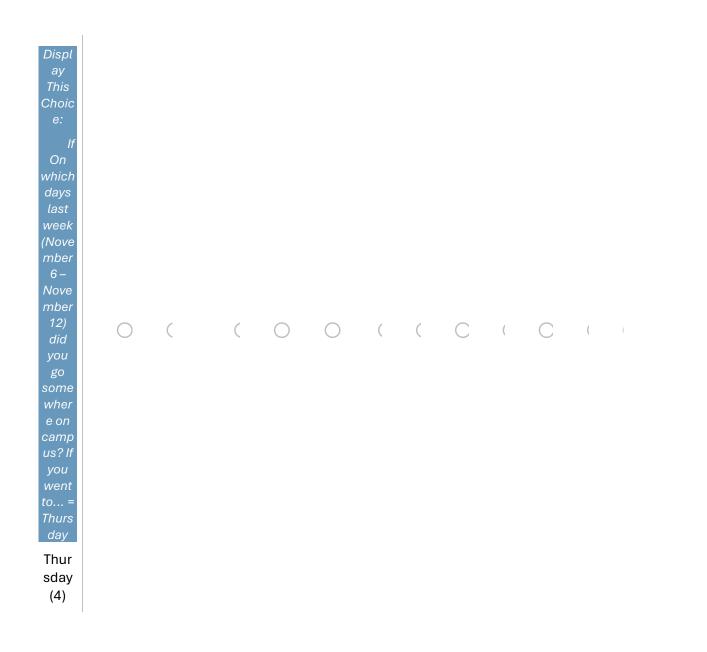
Display This Choice:
If On which days last week (November 6 – November 12) did you go somewhere on campus? If you went to = Monday
Display This Choice:
If On which days last week (November 6 – November 12) did you go somewhere on campus? If you went to = Tuesday
Display This Choice:
If On which days last week (November 6 – November 12) did you go somewhere on campus? If you went to = Wednesday
Display This Choice:
If On which days last week (November 6 – November 12) did you go somewhere on campus? If you went to = Thursday
Display This Choice:
If On which days last week (November 6 – November 12) did you go somewhere on campus? If you went to = Friday
Display This Choice:
If On which days last week (November 6 – November 12) did you go somewhere on campus? If you went to = Saturday
Display This Choice:
If On which days last week (November 6 – November 12) did you go somewhere on campus? If you went to = Sunday

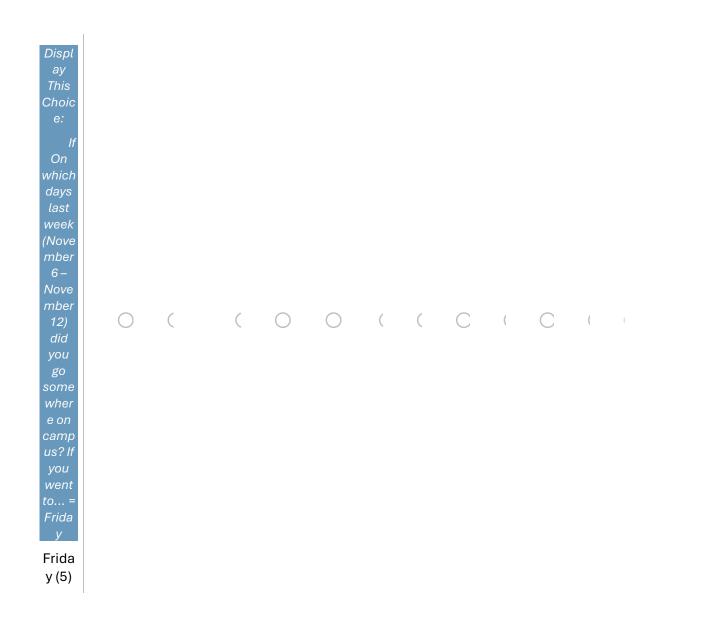
Ele ctri c- Walk ass B (or ist k whee bik e lchai e (3 r) (1) (e- ) bik e) (2)	up ele Elect ctri ric sco skate sco boar ote d(e- r skate (e- boar sco d)(5)	Dri Skate ve s, alo conv ne entio in a nal car skate (or board oth , or er kick veh scoot icle er (6) ) (7)	Car po Get ol drop an ped d/o off r by a van frien po d or ol famil wit y h (the oth drive ers r goi conti ng nues to on ca else mp wher us e) (9) (8)	Lyf t, Ub er, or ot her rid e- hai lin g ser vic e (10 )	Moto rcycl e or Vesp a- like scoo ter (11)	Bu s an d/ or sh utt le (12 )	Tr ain d/ or lig ht rai l (1 3)	Ot he r: (1 4)
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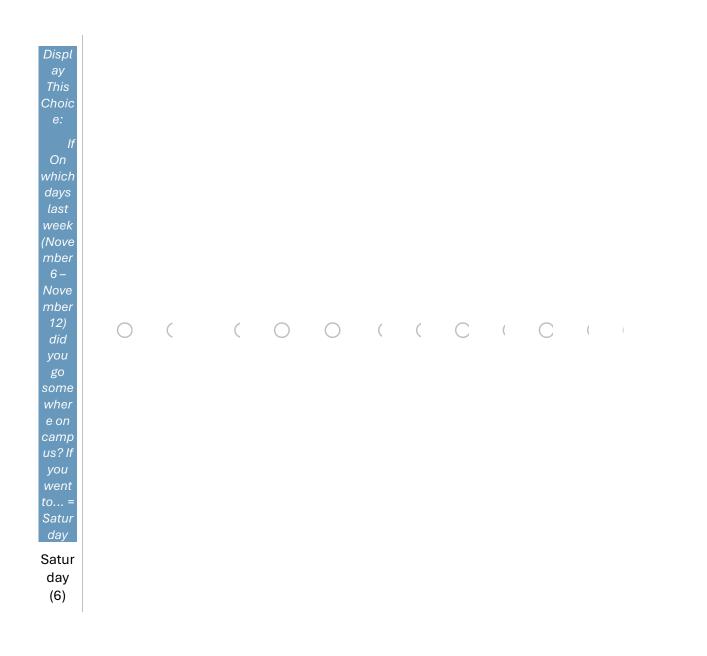


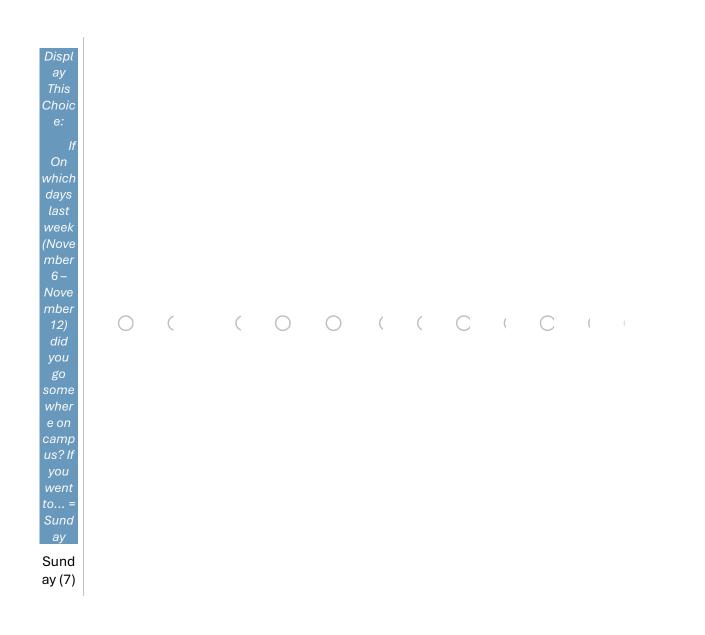












End of Block: Section 6 - Travel to Campus - Modes used last week

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

If If First think back to the entire week (Monday, November 6 - Sunday, November 12). & nbsp; Please tell us all the different means of transportation you used at some point on your way to sch... Bike Is Selected

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

Or Or First think back to the entire week (Monday, November 6 - Sunday, November 12). & nbsp; Please tell us all the different means of transportation you used at some point on your way to sch... Electric-assist bike (e-bike) Is Selected

Or Next, consider each day specifically. Please select how you got to your first campus destination... [ Electric-assist bike (e-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 "What kind of bike is available to you? Select all that apply."

 $X^{\perp}$ 

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

	Bike that I own (1)
	Bike that I borrow or rent long term (2)
	E-bike that I own (3)
	E-bike that I borrow or rent long term (4)
	Bike share (e.g. SPIN) (5)

Display This Question: If If First think back to the entire week (Monday, November 6 - Sunday, November 12). & nbsp; Please tell us all the different means of transportation you used at some point on your way to sch... Stand up electric scooter (e-scooter) Is Selected Or Next, consider each day specifically. Please select how you got to your first campus destination... [ Stand up electric scooter (e-scooter)] (Count) > 0 And If If What kind of e-scooter is available to you? Select all that apply. q://QID661/SelectedChoicesCount Is Greater Than 1 Carry Forward Selected Choices from "What kind of e-scooter is available to you? Select all that apply."

## Q400 What kind of stand up electric scooter (e-scooter) did you use last week?

	E-scooter that I own (1)
	E-scooter that I borrow of
$\frown$	

r that I borrow or rent long term (2)

E-scooter share (e.g. SPIN) (3)

### Display This Question:

If If First think back to the entire week (Monday, November 6 - Sunday, November 12). & nbsp; Please tell us all the different means of transportation you used at some point on your way to sch... Skates, conventional skateboard, or kick scooter Is Selected

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

And If

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

available to you? Select all that apply."

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

	Roller skates or rollerblades (1)	
	Conventional skateboard (2)	
	Kick scooter (non-electric) (3)	
Display This Question:		

If If First think back to the entire week (Monday, November 6 - Sunday, November 12). 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 Next, consider each day specifically. Please select how you got to your first campus destination... [ Get dropped off by a friend or family (the driver continues on elsewhere)] (Count) > 0

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

1 (just you) (1)

- $\bigcirc$  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)

If If First think back to the entire week (Monday, November 6 - Sunday, November 12). 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 6 - Sunday, November 12). & nbsp; 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 6 - Sunday, November 12). & nbsp; 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 6 - Sunday, November 12). & nbsp; 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)

O Biofuel vehicle (6)

O Hydrogen fuel cell vehicle (7)

Page Break -

If If First think back to the entire week (Monday, November 6 - Sunday, November 12). & nbsp; 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 6 - Sunday, November 12). & nbsp; 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 6 - Sunday, November 12). & nbsp; 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

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

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

On-campus (1)

Off-campus (2)

Display This Question:

If When you drive to Davis for school or work, do you usually park on-campus or off-campus? = Offcampus Q58 How do you usually get from your parked car to campus?

- Walk (or wheelchair) (8)
- Electric-assist bike (e-bike) (16)
- O Bike (9)
- Stand up electric scooter (e-scooter) (17)
- Electric skateboard (e-skateboard) (18)
- O Skates, conventional skateboard, or kick scooter (11)
- Get dropped off by a friend or family (12)
- O Bus or shuttle (13)
- Upt, Uber, or other ride hailing service (14)
- Other: (15) \_\_\_\_\_

## Display This Question:

If If First think back to the entire week (Monday, November 6 - Sunday, November 12). & nbsp; 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 Next, consider each day specifically. Please select how you got to your first campus destination... [ Carpool and/or vanpool with others going to campus] (Count) > 0

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

O Carpool (1)

🔿 Vanpool (2)

If If First think back to the entire week (Monday, November 6 - Sunday, November 12). 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 Next, consider each day specifically. Please select how you got to your first campus destination... [ Carpool and/or vanpool with others going to campus] (Count) > 0

Q60 During the times when you 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)

- $\bigcirc$  4 people (3)
- $\bigcirc$  5 people (4)
- 6 people (5)
- $\bigcirc$  7 people (6)
- $\bigcirc$  8 people (7)
- 9 people (8)
- 10 people (9)
- 11 people (10)
- 12 or more people (11)

If If First think back to the entire week (Monday, November 6 - Sunday, November 12). & nbsp; 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 Next, consider each day specifically. Please select how you got to your first campus destination... = Bus and/or shuttle

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

 $X \dashv$ 

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.

O Unitrans (1)

O Yolobus (2)

Sacramento Regional Transit (3)

UC Berkeley/Davis Shuttle (4)

Causeway Connection (UCD/UCDMC Intercampus Shuttle) (5)

O FlixBus (6)

Other: (7)

## Display This Question:

If If 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 Is Selected

## Q385 Which Unitrans line did you use on your way to campus last week?

▼ A Line (1) Z Line (18)

Page Break

If If First think back to the entire week (Monday, November 6 - Sunday, November 12). & nbsp; 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 Next, consider each day specifically. Please select how you got to your first campus destination... [ Train and/or light rail] (Count) > 0

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

 $X^{\perp}$ 

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)

O BART (2)

Sacramento Regional Transit (3)

## Display This Question:

If If First think back to the entire week (Monday, November 6 - Sunday, November 12). 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 Or First think back to the entire week (Monday, November 6 - Sunday, November 12). & nbsp; 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 Q301 Which travel mode did you use to get *from your residence* to the bus stop or train station?

- Walk (or wheelchair) (1)
- Electric-assist bike (e-bike) (3)

Bike (2)

Stand up electric scooter (e-scooter) (11)

Electric skateboard (e-skateboard) (12)

O Skates, conventional skateboard, or kick scooter (4)

 $\bigcirc$  Drive alone in a car (or other vehicle) (5)

Get dropped off by a friend or family member (the driver continues on elsewhere)(7)

 $\bigcirc$  Lyft, Uber, or other ridehailing service (8)

O Motorcycle or Vespa-like scooter (9)

Other (write-in) (10) \_\_\_\_\_

## Display This Question:

If If First think back to the entire week (Monday, November 6 - Sunday, November 12). & nbsp; 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 Or First think back to the entire week (Monday, November 6 - Sunday, November 12). & nbsp; 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 Q303 Which travel mode did you use to get from the bus stop or train station **to your usual destination on campus**?

- Walk (or wheelchair) (1)
- Electric-assist bike (e-bike) (3)

O Bike (2)

Stand up electric scooter (e-scooter) (11)

Electric skateboard (e-skateboard) (12)

 $\bigcirc$  Skates, conventional skateboard, or kick scooter (4)

 $\bigcirc$  Drive alone in a car (or other vehicle) (5)

Get dropped off by a friend or family member (the driver continues on elsewhere)(7)

 $\bigcirc$  Lyft, Uber, or other ridehailing service (8)

O Motorcycle or Vespa-like scooter (9)

Other (write-in) (10) \_\_\_\_\_

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 16 - September 24, 2023.

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.)

O None (15)

All summer / 14 weeks (June 16 - September 24) (1)

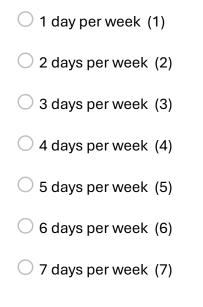
○ 13 weeks (2)

- 12 weeks (3)
- 11 weeks (4)
- 10 weeks (5)
- 9 weeks (6)
- 8 weeks (7)
- 7 weeks (8)
- $\bigcirc$  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)

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

Display This Question:

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



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

Start of Block: Add On: Safety and Crashes

Q384 Transportation services would like to know more about your safety while traveling on campus.

Q382 Since the start of 2023 Fall Quarter, have you been hit by any of the following while you were walking on campus?

Electric-assist bike (e-bike) (1)

O Bike (2)

- Stand up electric scooter (e-scooter) (3)
- Electric skateboard (e-skateboard) (4)
- Skates, conventional skateboard, or kick scooter (5)
- $\bigcirc$  No, I have not been hit by any of the listed modes while walking (6)

Page Break

Q347 Did you work or study at UC Davis during the 2022-23 academic year?

Yes (1)

O No (2)

Display This Question:

If Did you work or study at UC Davis during the 2022-23 academic year? = Yes

Q348 These next questions are about bicycling, scooting, and skating to get to and/or around the UC Davis campus during the last academic year. Think back to ALL of the last year from the beginning of Fall Quarter 2022 through the end of Summer Session 2023. Do not consider travel you did that was unrelated to getting to, from, and/or around campus.

Display This Question:

If Did you work or study at UC Davis during the 2022-23 academic year? = Yes

Q326 Did you use any of the following modes to get to, from, and/or around the UC Davis campus at least once last year?

	Yes (1)	No (2)
Electric-assist bike (e-bike) (4)	0	$\bigcirc$
Bike (5)	0	$\bigcirc$
Stand up electric scooter (e- scooter) (6)	0	$\bigcirc$
Electric skateboard (e- skateboard) (10)	0	$\bigcirc$
Skates, conventional skateboard, or kick scooter (7)	0	$\bigcirc$

If Did you use any of the following modes to get to, from, and/or around the UC Davis campus at leas... = Electric-assist bike (e-bike) [ Yes ]

Q328 How often did you ride an e-bike to get to, from, and/or around the UC Davis campus last year?

 $\bigcirc$  Daily or nearly daily (1)

○ 3-6 Days per week (2)

 $\bigcirc$  1-2 Days per week (3)

1-3 Days per month (4)

 $\bigcirc$  Less than once per month (5)

Display This Question:

If Did you use any of the following modes to get to, from, and/or around the UC Davis campus at leas... = Electric-assist bike (e-bike) [ Yes ] Q332 During this period did you experience a fall or crash with an injury while using your ebike?

	On campus (1)	Off campus, on my way between home and campus (2)
🚫 No (1)		
Yes, a fall or crash but I had no injuries (2)		
Yes, an injury but I did not need medical attention (4)		
Yes, an injury and I had to visit an urgent care or emergency room without being admitted (5)		
Yes, an injury and I was admitted to a hospital (6)		

## Display This Question:

If During this period did you experience a fall or crash with an injury while using your e-bike? [Yes, a fall or crash but I had no injuries ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your e-bike? [Yes, an injury but I did not need medical attention ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your e-bike? [Yes, an injury and I had to visit an urgent care or emergency room without being admitted ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your e-bike? [Yes, an injury and I was admitted to a hospital ] (Recode) Is Not Empty

Q336 Thinking back to the last fall or crash you had while using your e-bike last year, what type of fall or crash was it?

$\bigcirc$ A slip or swerve resulting in a fall (1)
$\bigcirc$ Collision with an object (curb, tree, pole, bollard etc.) or animal (2)
$\bigcirc$ Collision with a bicyclist (3)
$\bigcirc$ Collision with someone on skates, skateboard, or scooter (7)
$\bigcirc$ Collision with a pedestrian (4)
$\bigcirc$ Collision with a motor vehicle (5)
Display This Question:
If Thinking back to the last fall or crash you had while using your e-bike last year, what type of f = Collision with a bicyclist
Q350 You mentioned that you had a collision with a bicyclist. What kind of bike was it?
Electric-assist bike (e-bike) (1)
O Bike (2)
O Unsure (4)
Display This Question:

If Thinking back to the last fall or crash you had while using your e-bike last year, what type of f... = Collision with someone on skates, skateboard, or scooter Q351 You mentioned that you had collision with someone on skates, skateboard, or scooter. What kind of skates, skateboard, or scooter was it?

$\bigcirc$ Roller skates or rollerblades (1)
O Electric skateboard (e-skateboard) (3)
O Conventional skateboard (2)
$\bigcirc$ Stand up electric scooter (e-scooter) (
○ Kick scooter (non-electric) (4)

O Unsure (6)

## Display This Question:

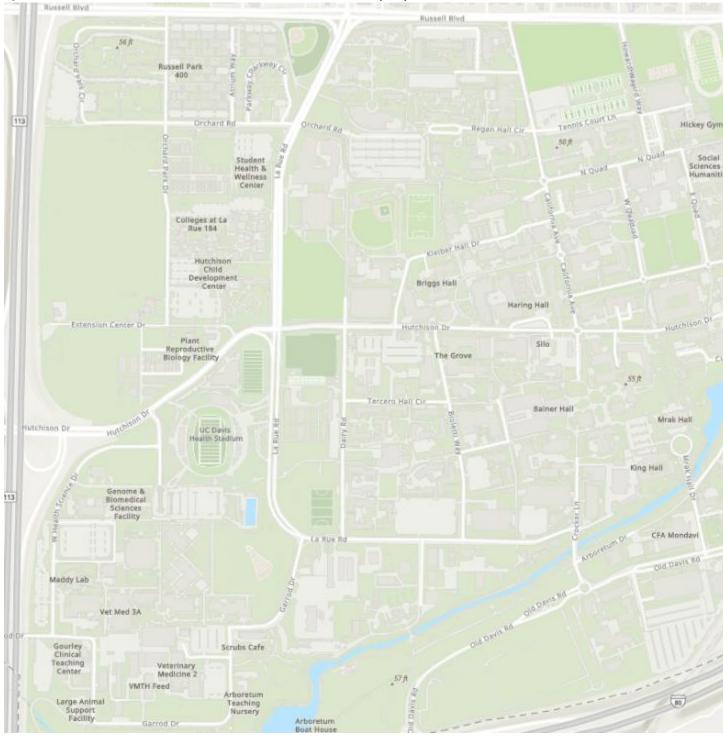
If During this period did you experience a fall or crash with an injury while using your e-bike? = Yes, a fall or crash but I had no injuries [On campus]

(5)

Or During this period did you experience a fall or crash with an injury while using your e-bike? = Yes, an injury but I did not need medical attention [ On campus ]

Or During this period did you experience a fall or crash with an injury while using your e-bike? = Yes, an injury and I had to visit an urgent care or emergency room without being admitted [ On campus ]

Or During this period did you experience a fall or crash with an injury while using your e-bike? = Yes, an injury and I was admitted to a hospital [ On campus ]



# Q337 Where did the last fall or crash occur? Please drop a pin for the location.

If During this period did you experience a fall or crash with an injury while using your e-bike? [Yes, a fall or crash but I had no injuries ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your e-bike? [Yes, an injury but I did not need medical attention ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your e-bike? [Yes, an injury and I had to visit an urgent care or emergency room without being admitted ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your e-bike? [Yes, an injury and I was admitted to a hospital ] (Recode) Is Not Empty

# Q338 Did you or someone else notify the authorities (Police, Fire, or TAPS) of your fall or crash from your e-bike?

○ Yes (1)

O No (2)

O Not sure (3)

## Display This Question:

If Did you or someone else notify the authorities (Police, Fire, or TAPS) of your fall or crash from... = No

## Q366 What prevented you from notifying the authorities?

Page Break

If Did you use any of the following modes to get to, from, and/or around the UC Davis campus at leas... = Bike [ Yes ]

Q329 How often did you ride a bike to get to, from, and/or around the UC Davis campus last year?

 $\bigcirc$  Daily or nearly daily (1) ○ 3-6 Days per week (2)  $\bigcirc$  1-2 Days per week (3) 1-3 Days per month (4)  $\bigcirc$  Less than once per month (5) Display This Question:

If Did you use any of the following modes to get to, from, and/or around the UC Davis campus at leas... = Bike [ Yes ]

Q333 During this period did you experience a fall or crash with an injury while using your bike?

	On campus (1)	Off campus, on my way between home and campus (2)
🚫 No (1)		
Yes, a fall or crash but I had no injuries (2)		
Yes, an injury but I did not need medical attention (4)		
Yes, an injury and I had to visit an urgent care or emergency room without being admitted (5)		
Yes, an injury and I was admitted to a hospital (6)		

## Display This Question:

If During this period did you experience a fall or crash with an injury while using your bike? [Yes, a fall or crash but I had no injuries ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your bike? [Yes, an injury but I did not need medical attention ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your bike? [Yes, an injury and I had to visit an urgent care or emergency room without being admitted ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your bike? [Yes, an injury and I was admitted to a hospital ] (Recode) Is Not Empty

Q352 Thinking back to the last fall or crash you had while using your bike last year, what type of fall or crash was it?

$\bigcirc$ A slip or swerve resulting in a fall (8)
$\bigcirc$ Collision with an object (curb, tree, pole, bollard etc.) or animal (9)
$\bigcirc$ Collision with a bicyclist (10)
$\bigcirc$ Collision with someone on skates, skateboard, or scooter (11)
$\bigcirc$ Collision with a pedestrian (12)
$\bigcirc$ Collision with a motor vehicle (13)
Display This Question:
If Thinking back to the last fall or crash you had while using your bike last year, what type of fal = Collision with a bicyclist
Q355 You mentioned that you had a collision with a bicyclist. What kind of bike was it?
Electric-assist bike (e-bike) (1)
O Bike (2)
O Unsure (4)
Display This Question:

If Thinking back to the last fall or crash you had while using your bike last year, what type of fal... = Collision with someone on skates, skateboard, or scooter Q356 You mentioned that you had a collision with someone on skates, skateboard, or scooter. What kind of skates, skateboard, or scooter was it?

$\bigcirc$ Roller skates or rollerblades (1)
$\bigcirc$ Electric skateboard (e-skateboard) (3)
O Conventional skateboard (2)
O Stand up electric scooter (e-scooter) (5)
O Kick scooter (non-electric) (4)

O Unsure (6)

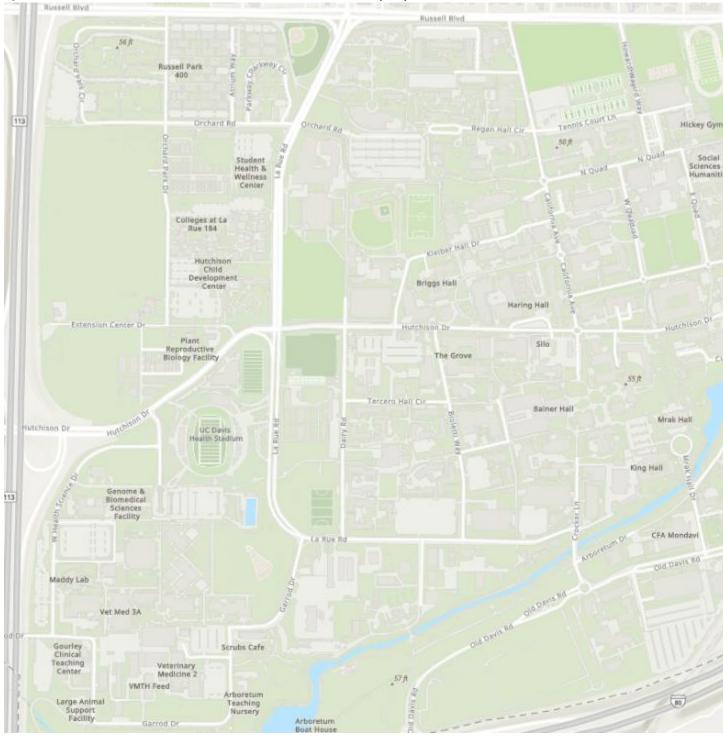
## Display This Question:

If During this period did you experience a fall or crash with an injury while using your bike? = Yes, a fall or crash but I had no injuries [On campus]

Or During this period did you experience a fall or crash with an injury while using your bike? = Yes, an injury but I did not need medical attention [ On campus ]

Or During this period did you experience a fall or crash with an injury while using your bike? = Yes, an injury and I had to visit an urgent care or emergency room without being admitted [ On campus ]

Or During this period did you experience a fall or crash with an injury while using your bike? = Yes, an injury and I was admitted to a hospital [ On campus ]



# Q357 Where did the last fall or crash occur? Please drop a pin for the location.

If During this period did you experience a fall or crash with an injury while using your bike? [Yes, a fall or crash but I had no injuries ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your bike? [Yes, an injury but I did not need medical attention ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your bike? [Yes, an injury and I had to visit an urgent care or emergency room without being admitted ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your bike? [Yes, an injury and I was admitted to a hospital ] (Recode) Is Not Empty

# Q339 Did you or someone else notify the authorities (Police, Fire, or TAPS) of your fall or crash from your bike?

○ Yes (1)

O No (2)

O Not sure (3)

## Display This Question:

If Did you or someone else notify the authorities (Police, Fire, or TAPS) of your fall or crash from... = No

## Q367 What prevented you from notifying the authorities?

Page Break

If Did you use any of the following modes to get to, from, and/or around the UC Davis campus at leas... = Stand up electric scooter (e-scooter) [ Yes ]

Q330 How often did you use an e-scooter to get to, from, and/or around the UC Davis campus last year?

 $\bigcirc$  Daily or nearly daily (1)

○ 3-6 Days per week (2)

○ 1-2 Days per week (3)

1-3 Days per month (4)

 $\bigcirc$  Less than once per month (5)

Display This Question:

If Did you use any of the following modes to get to, from, and/or around the UC Davis campus at leas... = Stand up electric scooter (e-scooter) [ Yes ] Q334 During this period did you experience a fall or crash with an injury while using your e-scooter?

	On campus (1)	Off campus, on my way between home and campus (2)
🚫 No (1)		
Yes, a fall or crash but I had no injuries (2)		
Yes, an injury but I did not need medical treatment (4)		
Yes, an injury and I had to visit an urgent care or emergency room without being admitted (5)		
Yes, an injury and I was admitted to a hospital (6)		

## Display This Question:

If During this period did you experience a fall or crash with an injury while using your e-scooter? [Yes, a fall or crash but I had no injuries ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your e-scooter? [Yes, an injury but I did not need medical treatment ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your e-scooter? [Yes, an injury and I had to visit an urgent care or emergency room without being admitted ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your e-scooter? [ Yes, an injury and I was admitted to a hospital ] (Recode) Is Not Empty

Q353 Thinking back to the last fall or crash you had while using your e-scooter last year, what type of fall or crash was it?

$\bigcirc$ A slip or swerve resulting in a fall (8)
$\bigcirc$ Collision with an object (curb, tree, pole, bollard etc.) or animal (9)
$\bigcirc$ Collision with a bicyclist (10)
$\bigcirc$ Collision with someone on skates, skateboard, or scooter (11)
$\bigcirc$ Collision with a pedestrian (12)
$\bigcirc$ Collision with a motor vehicle (13)
Display This Question: If Thinking back to the last fall or crash you had while using your e-scooter last year, what type o =
Collision with a bicyclist
Q358 You mentioned that you had a collision with a bicyclist. What kind of bike was it?
Electric-assist bike (e-bike) (1)
O Bike (2)
O Unsure (4)
Display This Question:

If Thinking back to the last fall or crash you had while using your e-scooter last year, what type o… = Collision with someone on skates, skateboard, or scooter

Q359 You mentioned that you had a collision with someone on skates, skateboard, or scooter. What kind of skates, skateboard, or scooter was it?

$\bigcirc$ Roller skates or rollerblades (1)
$\bigcirc$ Electric skateboard (e-skateboard) (3)
O Conventional skateboard (2)
$\bigcirc$ Stand up electric scooter (e-scooter) (5)
○ Kick scooter (non-electric) (4)

O Unsure (6)

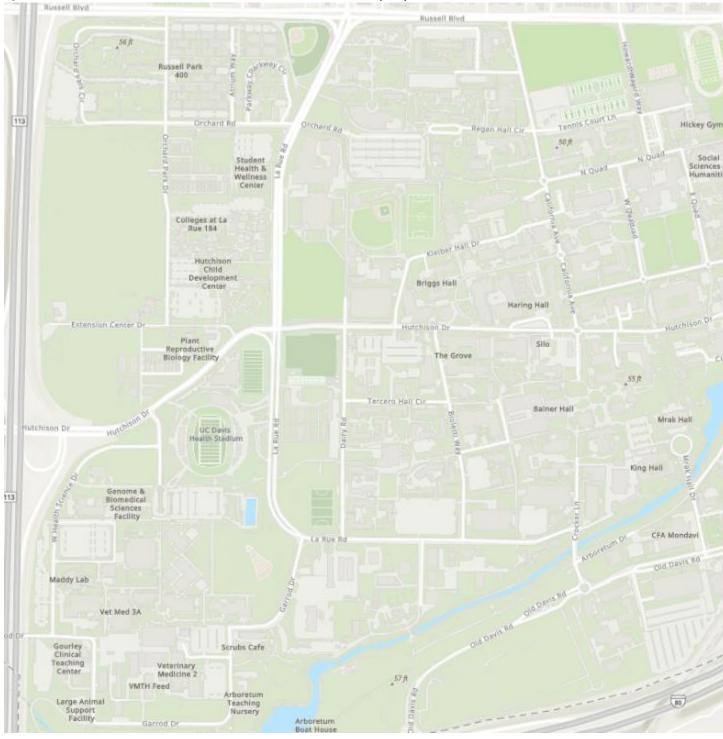
## Display This Question:

If During this period did you experience a fall or crash with an injury while using your e-scooter? = Yes, a fall or crash but I had no injuries [ On campus ]

Or During this period did you experience a fall or crash with an injury while using your e-scooter? = Yes, an injury but I did not need medical treatment [ On campus ]

Or During this period did you experience a fall or crash with an injury while using your e-scooter? = Yes, an injury and I had to visit an urgent care or emergency room without being admitted [ On campus ]

Or During this period did you experience a fall or crash with an injury while using your e-scooter? = Yes, an injury and I was admitted to a hospital [ On campus ]



# Q360 Where did the last fall or crash occur? Please drop a pin for the location.

If During this period did you experience a fall or crash with an injury while using your e-scooter? [ Yes, a	
fall or crash but I had no injuries ] (Recode) Is Not Empty	

Or During this period did you experience a fall or crash with an injury while using your e-scooter? [Yes, an injury but I did not need medical treatment ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your e-scooter? [ Yes, an injury and I had to visit an urgent care or emergency room without being admitted ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your e-scooter? [ Yes, an injury and I was admitted to a hospital ] (Recode) Is Not Empty

# Q340 Did you or someone else notify the authorities (Police, Fire, or TAPS) of your fall or crash from your e-scooter?

○ Yes (1)

O No (2)

O Not sure (3)

#### Display This Question:

If Did you or someone else notify the authorities (Police, Fire, or TAPS) of your fall or crash from... = No

## Q368 What prevented you from notifying the authorities?

Page Break

If Did you use any of the following modes to get to, from, and/or around the UC Davis campus at leas... = Electric skateboard (e-skateboard) [ Yes ]

Q372 How often did you use electric skateboard to get to, from, and/or around the UC Davis campus last year?

 $\bigcirc$  Daily or nearly daily (1)

○ 3-6 Days per week (2)

 $\bigcirc$  1-2 Days per week (3)

1-3 Days per month (4)

 $\bigcirc$  Less than once per month (5)

Display This Question:

If Did you use any of the following modes to get to, from, and/or around the UC Davis campus at leas... = Electric skateboard (e-skateboard) [ Yes ] Q373 During this period did you experience a fall or crash with an injury while using your electric skateboard?

	On campus (1)	Off campus, on my way between home and campus (2)
🚫 No (1)		
Yes, a fall or crash but I had no injuries (2)		
Yes, an injury but I did not need medical treatment (4)		
Yes, an injury and I had to visit an urgent care or emergency room without being admitted (5)		
Yes, an injury and I was admitted to a hospital (6)		

#### Display This Question:

If During this period did you experience a fall or crash with an injury while using your electric sk... [Yes, a fall or crash but I had no injuries ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your electric sk... [Yes, an injury but I did not need medical treatment ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your electric sk... [Yes, an injury and I had to visit an urgent care or emergency room without being admitted ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your electric sk... [ Yes, an injury and I was admitted to a hospital ] (Recode) Is Not Empty

Q375 Thinking back to the last fall or crash you had while using your electric skateboard last year, what type of fall or crash was it?

$\bigcirc$ A slip or swerve resulting in a fall (8)
$\bigcirc$ Collision with an object (curb, tree, pole, bollard etc.) or animal (9)
$\bigcirc$ Collision with a bicyclist (10)
$\bigcirc$ Collision with someone on skates, skateboard, or scooter (11)
$\bigcirc$ Collision with a pedestrian (12)
$\bigcirc$ Collision with a motor vehicle (13)
Display This Question: If Thinking back to the last fall or crash you had while using your electric skateboard last year, w = Collision with a bicyclist
Q376 You mentioned that you had a collision with a bicyclist. What kind of bike was it?
O Electric-assist bike (e-bike) (1)
O Bike (2)
O Unsure (4)
Display This Question:

If Thinking back to the last fall or crash you had while using your electric skateboard last year, w... = Collision with someone on skates, skateboard, or scooter

Q377 You mentioned that you had a collision with someone on skates, skateboard, or scooter. What kind of skates, skateboard, or scooter was it?

$\bigcirc$ Roller skates or rollerblades (1)
O Electric skateboard (e-skateboard) (3)
O Conventional skateboard (2)
$\bigcirc$ Stand up electric scooter (e-scooter) (
○ Kick scooter (non-electric) (4)

O Unsure (6)

#### Display This Question:

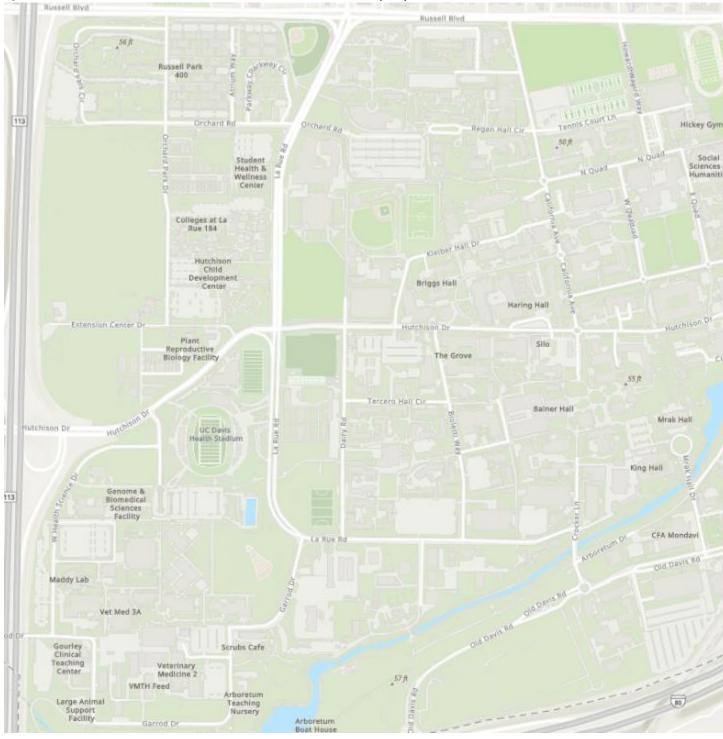
If During this period did you experience a fall or crash with an injury while using your electric sk... = Yes, a fall or crash but I had no injuries [ On campus ]

(5)

Or During this period did you experience a fall or crash with an injury while using your electric sk... = Yes, an injury but I did not need medical treatment [ On campus ]

Or During this period did you experience a fall or crash with an injury while using your electric sk... = Yes, an injury and I had to visit an urgent care or emergency room without being admitted [ On campus ]

Or During this period did you experience a fall or crash with an injury while using your electric sk... = Yes, an injury and I was admitted to a hospital [ On campus ]



# Q378 Where did the last fall or crash occur? Please drop a pin for the location.

If During this period did you experience a fall or crash with an injury while using your electric sk... [Yes, a fall or crash but I had no injuries ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your electric sk... [Yes, an injury but I did not need medical treatment ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your electric sk... [Yes, an injury and I had to visit an urgent care or emergency room without being admitted ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your electric sk... [Yes, an injury and I was admitted to a hospital ] (Recode) Is Not Empty

# Q379 Did you or someone else notify the authorities (Police, Fire, or TAPS) of your fall or crash from your electric skateboard?

Yes (1)

O No (2)

O Not sure (3)

#### Display This Question:

If Did you or someone else notify the authorities (Police, Fire, or TAPS) of your fall or crash from... = No

### Q380 What prevented you from notifying the authorities?

Page Break

If Did you use any of the following modes to get to, from, and/or around the UC Davis campus at leas... = Skates, conventional skateboard, or kick scooter [ Yes ]

Q331 How often did you use skates, conventional skateboard, or kick scooter to get to, from, and/or around the UC Davis campus last year?

 $\bigcirc$  Daily or nearly daily (1)

○ 3-6 Days per week (2)

1-2 Days per week (3)

1-3 Days per month (4)

 $\bigcirc$  Less than once per month (5)

Display This Question:

If Did you use any of the following modes to get to, from, and/or around the UC Davis campus at leas... = Skates, conventional skateboard, or kick scooter [ Yes ] Q335 During this period did you experience a fall or crash with an injury while using your skates, conventional skateboard, or kick scooter?

	On campus (1)	Off campus, on my way between home and campus (2)
🚫 No (1)		
Yes, a fall or crash but I had no injuries (2)		
Yes, an injury but I did not need medical treatment (4)		
Yes, an injury and I had to visit an urgent care or emergency room without being admitted (5)		
Yes, an injury and I was admitted to a hospital (6)		

#### Display This Question:

If During this period did you experience a fall or crash with an injury while using your skates, con... [ Yes, a fall or crash but I had no injuries ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your skates, con... [Yes, an injury but I did not need medical treatment ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your skates, con... [Yes, an injury and I had to visit an urgent care or emergency room without being admitted ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your skates, con... [ Yes, an injury and I was admitted to a hospital ] (Recode) Is Not Empty Q354 Thinking back to the last fall or crash you had while using your skates, conventional skateboard, or kick scooter last year, what type of fall or crash was it?

$\bigcirc$ A slip or swerve resulting in a fall (8)
$\bigcirc$ Collision with an object (curb, tree, pole, bollard etc.) or animal (9)
$\bigcirc$ Collision with a bicyclist (10)
$\bigcirc$ Collision with someone on skates, skateboard, or scooter (11)
$\bigcirc$ Collision with a pedestrian (12)
$\bigcirc$ Collision with a motor vehicle (13)
Display This Question:
If Thinking back to the last fall or crash you had while using your skates, conventional skateboard, = Collision with a bicyclist
Q362 You mentioned that you had a collision with a bicyclist. What kind of bike was it?
Q362 You mentioned that you had a collision with a bicyclist. What kind of bike was it?
C Electric-assist bike (e-bike) (1)
<ul> <li>Electric-assist bike (e-bike) (1)</li> <li>Bike (2)</li> </ul>

If Thinking back to the last fall or crash you had while using your skates, conventional skateboard,... = Collision with someone on skates, skateboard, or scooter Q363 You mentioned that you had a collision with someone on skates, skateboard, or scooter. What kind of skates, skateboard, or scooter was it?

$\bigcirc$ Roller skates or rollerblades (1)
$\bigcirc$ Electric skateboard (e-skateboard) (3)
O Conventional skateboard (2)
$\bigcirc$ Stand up electric scooter (e-scooter) (5)
$\bigcirc$ Kick scooter (non-electric) (4)

O Unsure (6)

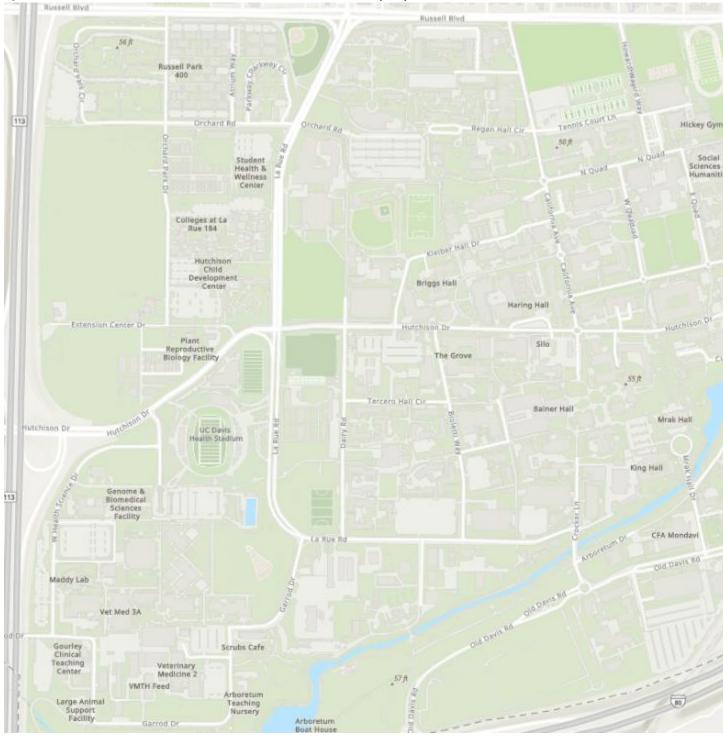
#### Display This Question:

If During this period did you experience a fall or crash with an injury while using your skates, con... = Yes, a fall or crash but I had no injuries [ On campus ]

Or During this period did you experience a fall or crash with an injury while using your skates, con... = Yes, an injury but I did not need medical treatment [ On campus ]

Or During this period did you experience a fall or crash with an injury while using your skates, con... = Yes, an injury and I had to visit an urgent care or emergency room without being admitted [ On campus ]

Or During this period did you experience a fall or crash with an injury while using your skates, con... = Yes, an injury and I was admitted to a hospital [ On campus ]



# Q361 Where did the last fall or crash occur? Please drop a pin for the location.

If During this period did you experience a fall or crash with an injury while using your skates, con... [Yes, a fall or crash but I had no injuries ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your skates, con... [Yes, an injury but I did not need medical treatment ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your skates, con... [Yes, an injury and I had to visit an urgent care or emergency room without being admitted ] (Recode) Is Not Empty

Or During this period did you experience a fall or crash with an injury while using your skates, con... [Yes, an injury and I was admitted to a hospital ] (Recode) Is Not Empty

Q341 Did you or someone else notify the authorities (Police, Fire, or TAPS) of your fall or crash from your skates, conventional skateboard, or kick scooter?

O Yes (1)

O No (2)

O Not sure (3)

#### Display This Question:

If Did you or someone else notify the authorities (Police, Fire, or TAPS) of your fall or crash from... = No

#### Q369 What prevented you from notifying the authorities?

End of Block: Add On: Safety and Crashes

Start of Block: Add On: Bike Theft

Display This Question:

If Did you work or study at UC Davis during the 2022-23 academic year? = Yes

And If

Did you use any of the following modes to get to, from, and/or around the UC Davis campus at leas... = Electric-assist bike (e-bike) [ Yes ]

Or Did you use any of the following modes to get to, from, and/or around the UC Davis campus at leas... = Bike [ Yes ] Q311 The next set of questions are about bicycle theft or vandalism on the the UC Davis campus during the last academic year. Think back to ALL of the last year from the beginning of Fall Quarter 2022 through the end of Summer Session 2023.

\_\_\_\_\_

#### Display This Question:

If Did you work or study at UC Davis during the 2022-23 academic year? = Yes

And If

Did you use any of the following modes to get to, from, and/or around the UC Davis campus at leas... = Electric-assist bike (e-bike) [ Yes ]

Or Did you use any of the following modes to get to, from, and/or around the UC Davis campus at leas... = Bike [Yes ]

Q312 Were you the victim of bicycle theft or vandalism on the UC Davis campus during this period? If you experienced multiple incidents of bike theft or vandalism on campus in the past year, please check all that apply.

• Yes, my entire bike was stolen (1)

○ Yes, but only parts of my bike were stolen (seat, wheel, accessories) (2)

O My bike was vandalized (damaged but not stolen) (3)

No, I had a bike on campus in the past year but did not experience a theft or vandalism (4)

O Not applicable: I did not have a bike on campus in the last year (5)

Display This Question:

If Were you the victim of bicycle theft or vandalism on the UC Davis campus during this period? If y... = Yes, my entire bike was stolen

Q313 At the time your bike was stolen, was it locked?

$\bigcirc$ Yes, locked outdoors (1)
$\bigcirc$ No, unlocked outdoors (2)
$\bigcirc$ Indoors, but not locked with a bike lock (3)
$\bigcirc$ Indoors and locked with a bike lock (4)
Other: (5)

Display This Question:

If At the time your bike was stolen, was it locked? = Yes, locked outdoors Or At the time your bike was stolen, was it locked? = Indoors and locked with a bike lock

## Q370 What was your bike locked to when it was stolen?

 $\bigcirc$  A bike rack (1)

 $\bigcirc$  A pole, railing, tree, or other fixed object (2)

 $\bigcirc$  To itself only (3)

#### Display This Question:

If At the time your bike was stolen, was it locked? = Yes, locked outdoors

Or At the time your bike was stolen, was it locked? = Indoors and locked with a bike lock

Q314 What type of lock were you using as your primary security measure at the time your bike was stolen? Check all that apply.

A cable lock (1)
A chain lock (2)
AU-lock (3)
Another type of lock: (4)

#### Display This Question:

If Were you the victim of bicycle theft or vandalism on the UC Davis campus during this period? If y... = Yes, my entire bike was stolen

Or Were you the victim of bicycle theft or vandalism on the UC Davis campus during this period? If y... = Yes, but only parts of my bike were stolen (seat, wheel, accessories)

Or Were you the victim of bicycle theft or vandalism on the UC Davis campus during this period? If y... = My bike was vandalized (damaged but not stolen)

Q316 Did you notify the authorities (Police, Fire, or TAPS) of the theft or vandalism?

O Yes (1)

O No (2)

 $\bigcirc$  Not sure (3)

End of Block: Add On: Bike Theft

Start of Block: Section 9 - Campus transportation programs

Q66 Transportation Services offers a wide variety of programs for people traveling to campus.

have you used of have you h	l've used it (1)	l've heard of it, but never used it (2)	l've never heard of it (3)
Aggie Bike Buy at the Bike Barn (2)	0	0	0
Transportation Services Motorist Assistance (lock out, jump-starts, etc.) (8)	$\bigcirc$	0	0
Transportation Services Mobility Assistance Shuttle (11)	$\bigcirc$	0	$\bigcirc$
ParkMobile/AggiePark/Amp Park (10)	$\bigcirc$	$\bigcirc$	$\bigcirc$
Zipcar Carshare at UC Davis (5)	$\bigcirc$	$\bigcirc$	$\bigcirc$
Yolobus/SacRT Route 138 - Causeway Connection (3)	$\bigcirc$	$\bigcirc$	$\bigcirc$
Bike Program Lock-Cutting Service (4)	$\bigcirc$	0	$\bigcirc$
Bike Registration via Bike Index (7)	$\bigcirc$	$\bigcirc$	$\bigcirc$
Helmet Hair, Don't Care (9)	$\bigcirc$	$\bigcirc$	$\bigcirc$
Bike Theft Reporting via UC Davis Police (14)	$\bigcirc$	0	$\bigcirc$
The Transportation and Parking Administrative Advisory Committee (TPAAC) (12)	$\bigcirc$	0 0	
Lit Not Hit (16)	$\bigcirc$	0	$\bigcirc$
SPIN bike-share and scooter-share service (17)	$\bigcirc$	0	$\bigcirc$

Have you used or have you heard of any of the following campus programs?

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 conditions and 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 Where do you live now? = Off-campus elsewhere in the city of Davis And Where do you live now? = Outside of Davis

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)	
O Not sure (4)	
Page Break	

	Very Unsatisfied (1)	Somewhat Unsatisfied (2)	Neutral (5)	Somewhat Satisfied (6)	Very Satisfied (7)
Characteristics of the residence itself (1)	0	0	$\bigcirc$	$\bigcirc$	0
Location of your residence within your neighborhood (2)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Characteristics of the neighborhood itself (3)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
Location of your city in the region (5)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	0

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

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

🔿 I wouldn't be able to	(1)
	· · /

$\frown$						
$\odot$ I'	d pay with	money in r	ny checking	or savings	account	(2)

 $\bigcirc$  I'd borrow from family or friends and pay them back (4)

 $\bigcirc$  Family or friends would pay it for me (6)

 $\bigcirc$  I'd pay with a credit card and repay later (7)

$\bigcirc$ Other: (8)	 	 	

### Page Break -----

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

x

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

	Cost of housing (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)

If Where do you live now? = Outside of Davis

And And Which factors influenced your decision to live outside of Davis? Select all that apply. q://QID455/SelectedChoicesCount Is Greater Than 0

Carry Forward Selected Choices from "Which factors influenced your decision to live outside of Davis? Select all that apply."

 $X \dashv$ 

Q259 Of all the factors that influenced your decision to live outside of Davis, please rank the importance of each:

	Not at all important (6)	Slightly important (7)	Moderately important (8)	Very important (9)	Extremely important (10)
Cost of housing (x1)	0	$\bigcirc$	$\bigcirc$	0	$\bigcirc$
Commute time for another person in my household (x3)	0	0	0	0	$\bigcirc$
Public transportation access (x4)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Availability of housing (x14)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Housing options or choice (x5)	0	$\bigcirc$	$\bigcirc$	0	$\bigcirc$
Proximity to family or friends (x19)	0	$\bigcirc$	$\bigcirc$	0	$\bigcirc$
Proximity to shops, restaurants, services, etc. (x7)	0	$\bigcirc$	$\bigcirc$	0	$\bigcirc$
Variety or quality of shops, restaurants, services, etc. (x16)	0	0	0	0	$\bigcirc$
Safe neighborhoods (x20)	0	$\bigcirc$	$\bigcirc$	0	$\bigcirc$
School choice (x9)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Proximity to parks or nature (x10)	0	$\bigcirc$	$\bigcirc$	0	$\bigcirc$

bikeable neighborhoods (x11)	$\bigcirc$	$\bigcirc$	0	0	$\bigcirc$
Ease of driving places (x12)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Quiet neighborhoods (x13)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

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)
Moved because of raised rent or mortgage (10)
Regularly skipped meals to pay for living expenses (7)
None of these happened to me (9)

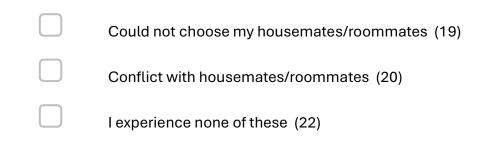
[2\$]

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)
Current ("couch s	Stayed temporarily with a friend or acquaintance while looking for housing urfed") (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)



End of Block: Section 10 - Housing

Start of Block: Add On - Attitudes

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)	0	$\bigcirc$	0	0	0
Travel time is generally wasted time. (Q53_1)	$\bigcirc$	$\bigcirc$	0	$\bigcirc$	$\bigcirc$
l like riding a bike. (Q53_2)	$\bigcirc$	$\bigcirc$	0	$\bigcirc$	$\bigcirc$
Concerns about climate change affect the choices I make about my daily travel. (Q53_3)	$\bigcirc$	$\bigcirc$	0	0	0
l feel safe traveling to campus (Q93_36)	0	0	0	$\bigcirc$	0
l like driving. (Q53_5)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
l need a car to do many of the things I like to do. (Q53_6)	0	$\bigcirc$	0	$\bigcirc$	0
My schedule makes it hard or impossible for me to use public transit. (Q53_8)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	0

l feel safe biking on campus. (Q53_10)	$\bigcirc$	$\bigcirc$	0	0	$\bigcirc$
My commute is expensive. (Q53_35)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
l like using public transit. (Q53_11)	$\bigcirc$	$\bigcirc$	$\bigcirc$	0	0
l often need to use my own vehicle to travel to different sites during the day. (Q53_12)	$\bigcirc$	$\bigcirc$	$\bigcirc$	0	$\bigcirc$
l already bicycle as often as I can. (Q53_14)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
l try to limit my driving as much as possible. (Q53_15)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
l often miss out on social or leisure activities because l don't have a way to get there. (Q93_37)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Getting around is easier than ever with my smartphone. (Q53_17)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

I need to dress professionally for my job. (Q53_18)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Page Break —					

Display This Question:
If If Which bus do you usually use to get to campus? (If you used more than one, please select the service used for the greater distance of your trip.) Unitrans Is Selected
And If
We'd like to ask about your opinions with respect to transportation. There are no right or wrong = Traveling to campus stresses me out. [ Strongly agree ]
Or We'd like to ask about your opinions with respect to transportation. There are no right or wrong = Traveling to campus stresses me out. [ Somewhat agree ]
24
Q94 What do you find most stressful about using Unitrans to get to campus?
$\bigcirc$ Uncertainty about my bus picking me up on time (1)
$\bigcirc$ Uncertainty about my bus arriving to campus on time (2)
$\bigcirc$ How full the bus will be when it gets to my stop (3)
$\bigcirc$ Harassment while riding the bus (4)
$\bigcirc$ Lack of knowledge about bus schedules or routes (7)
$\bigcirc$ Paying the fare / Showing my pass (9)
O Other: (6)
Display This Question:
If What is your primary role at UC Davis? = Undergraduate student (including Post-baccalaureate)

And If

If Which bus do you usually use to get to campus? (If you used more than one, please select the service used for the greater distance of your trip.) 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)

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)

 $\bigcirc$  I can ride a bike, but I am not very confident doing so (2)

 $\bigcirc$  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?

O Uncomfortable and I wouldn't ride on it (1)

O Uncomfortable but I would ride on it (2)

O Comfortable (3)

End of Block: Add On - Attitudes

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

Display This Question:

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

And If

What kind of bike is available to you? Select all that apply. = E-bike that I own

Or What kind of bike is available to you? Select all that apply. = E-bike that I borrow or rent long term

### Q108 We are interested in your e-bike!

Display This Question:

If We are interested in your e-bike! Displayed

Q401 Do you have to pedal your e-bike?

○ Yes (1)								
O No (2)								
Display This Question:								
If We are interested in your e-bike! Displayed								
Q403 Does your e-bike have a throttle?								
○ Yes (1)								
O No (2)								
Display This Question:								
If We are interested in your e-bike! Displayed								
Q407 Does your e-bike have a speedometer?								
○ Yes (1)								
O No (2)								
Display This Question:								
If We are interested in your e-bike! Displayed								
<b>.</b>								
Q402 What speed is your e-bike capable of wi	th assi 0	stand 5	2e? 10	15	20	25	30	35
Maximum speed in miles per hour (mph) ()				_				

Display This Question:

If We are interested in your e-bike! Displayed

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

 $X \rightarrow$ 

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

$\frown$			141
$\bigcirc$	Walk	(or wheelchair)	(1)

- Electric-assist bike (e-bike) (2)
- OBike (3)
- Stand up electric scooter (e-scooter) (4)
- Electric skateboard (e-skateboard) (5)
- $\bigcirc$  Skates, conventional skateboard, or kick scooter (6)
- $\bigcirc$  Drive alone in a car (or other vehicle) (7)
- Carpool and/or vanpool with others going to campus (8)
- $\bigcirc$  Get dropped off by a friend or family (the driver continues on elsewhere) (9)
- Upt, Uber, or other ride-hailing service (10)
- O Motorcycle or Vespa-like scooter (11)
- O Bus and/or shuttle (12)
- Train and/or light rail (13)
- Other: (14)\_\_\_\_\_

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)

Display This Question:

If How would you rate your ability to ride a bike? In particular, we are interested in whether you k... != I cannot ride a bike at all because I do not know how

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

○ Yes (1)

O No (2)

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

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

Display This Question:

If We are interested in your available means of transportation. Select all options that are availabl... = Stand up electric scooter (e-scooter)

And If

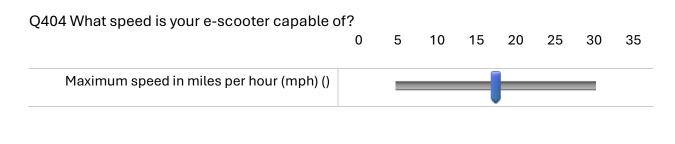
What kind of e-scooter is available to you? Select all that apply. = E-scooter that I own

Or What kind of e-scooter is available to you? Select all that apply. = E-scooter that I borrow or rent long erm

Q114 We are interested in your e-scooter!

Display This Question:

If We are interested in your e-scooter! Displayed



#### Display This Question:

If We are interested in your e-scooter! Displayed

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

 $X \rightarrow$ 

Q116 If you didn't have an e-scooter, how would you get to campus on the days you normally ride your e-scooter?

- $\bigcirc$  Walk (or wheelchair) (1)
- Electric-assist bike (e-bike) (2)
- OBike (3)
- Stand up electric scooter (e-scooter) (4)
- Electric skateboard (e-skateboard) (5)
- $\bigcirc$  Skates, conventional skateboard, or kick scooter (6)
- $\bigcirc$  Drive alone in a car (or other vehicle) (7)
- Carpool and/or vanpool with others going to campus (8)
- $\bigcirc$  Get dropped off by a friend or family (the driver continues on elsewhere) (9)
- Lyft, Uber, or other ride-hailing service (10)
- O Motorcycle or Vespa-like scooter (11)
- O Bus and/or shuttle (12)
- Train and/or light rail (13)
- Other: (14)\_\_\_\_\_

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

Start of Block: Add On - SPIN

Q388 Have you heard about or used the SPIN service in Davis?

$\bigcirc$ I have not heard about it $\circ$	(1)
--	-----

 $\bigcirc$  I have heard about it, but I do not have the app (2)

○ I have the app, but I have not used it (4)

 $\bigcirc$  I have used it (5)

#### Display This Question:

If Have you heard about or used the SPIN service in Davis? = I have the app, but I have not used it

Q395 Why have you not yet used SPIN in Davis? Check all that apply.

l have my own bike, e-bike, or e-scooter (1)
l do not know how to ride a bike, e-bike, or e-scooter (2)
I do not feel comfortable riding a bike, e-bike, or e-scooter (3)
SPIN is too expensive (4)
SPIN bikes or scooters are not available when and where I need them $(5)$
Other: (6)

#### Display This Question:

If Have you heard about or used the SPIN service in Davis? = I have heard about it, but I do not have the app

Q396 Why have you not downloaded the SPIN app? Check all that apply.

	I do not plan to (1)
	I have not gotten around to it (2)
	I am not sure how to (3)
	I do not have a smartphone (4)
	l have my own bike, e-bike, or e-scooter (5)
	l do not know how to ride a bike, e-bike, or e-scooter (6)
	I do not feel comfortable riding a bike, e-bike, or e-scooter (7)
	SPIN is too expensive (8)
	SPIN bikes or scooters are not available when and where I need them $(9)$
	Other: (10)
Display This Qu	estion:
If Have you	heard about or used the SPIN service in Davis? = I have used it
Q397 What ra	ate do you pay when using SPIN in Davis?
◯ Stand	ard rate (1)

$\bigcirc$	Reduced fare	(SPIN Access)	(2
_			1-

- SPIN pass (3)
- $\bigcirc$  Quarterly pass (4)
- O I am not sure (5)

Display This Question:

If Have you heard about or used the SPIN service in Davis? = I have used it

Q398 Which of the following SPIN devices have you used in Davis?

Only e-bikes (1)

 $\bigcirc$  Only e-scooters (2)

 $\bigcirc$  Both e-bikes and e-scooters (3)

Display This Question:

If Have you heard about or used the SPIN service in Davis? = I have used it

Q399 How have you used SPIN in Davis? Check all that apply.

To travel between home and campus (1)
To travel to and from other locations off campus (3)
To travel to and from the train station (4)
To get around campus (2)
To travel to and from a bus stop (5)
Just for fun or exercise (6)

Display This Question:

If Have you heard about or used the SPIN service in Davis? = I have used it

Q394 In the last seven days, how many times did you use SPIN in Davis?

0 (1)
1 - 4 (2)
5 - 9 (3)
10 - 14 (4)
15 - 19 (5)
20 - 24 (6)
25 + (7)

End of Block: Add On - SPIN

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?

▼ 1921 (3) ... 2007 (104)

Display This Question:

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

Q119 What is your highest level of education completed?

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


Q243 Which categories describe you? Select all that apply.

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

Display This Question:

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

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

Or If

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

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

Q120 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.

Q123 As mentioned at the start of the survey, we are offering a chance to win forty \$50 CoHo or UC Davis Bookstore gift cards 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)

Disp	olay This Question:
Yes	If As mentioned at the start of the survey, we are offering a chance to win forty \$50 CoHo or UC Dav =
	Or May we contact you should we have any questions regarding your survey responses? = Yes
*	

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

O 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 2022-23 survey instrument

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

- 1. General Background Information (altered): Self-described gender has been updated.
- 2. Background Information about Residence (altered): New question asks where respondent lives, prompting respondents to locate their residence on a Google Maps interface to get an approximate latitude longitude coordinate. This question replaces questions asking respondents for the nearest intersection to their residence and the city of their residence.
- 3. Travel to campus Days traveled last week (altered): No longer inquire about secondary residence outside of Davis.
- 4. Travel to campus More details about mode last week (altered)
- 5. Housing (altered)
- 6. EV Charging (omitted)
- 7. E-bike Questions Owners (altered)
- 8. E-Scooters & E-Skateboards (omitted)
- 9. E-Scooter Questions (added)
- 10. SPIN (added)

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: Campus Travel Survey <<u>travelsurvey@ucdavis.edu</u>> To: <...@ucdavis.edu> Subject: 2023-24 Campus Travel Survey

Dear UC Davis Students/Faculty/Staff,

You are invited to participate in the 2023-2024 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 works or studies at UC Davis.

### Your feedback helps improve the campus!

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

- Identify trends in the way that people get to campus from year to year
- Better understand the factors that encourage biking to campus
- Prioritize infrastructure improvements on campus
- Develop new TS programs to serve the campus community
- Estimate greenhouse gas emissions for travel to the campus

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

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

- Your role at UC Davis
- Your travel to and from campus
- Your experience with campus transportation programs
- Your safety and security when traveling on campus
- Your housing and experience with housing affordability
- 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 CoHo or UC Davis Bookstore gift cards!** 

### Follow this link to the Survey:

Take the Survey

Thanks for your participation in this year's survey!

Sincerely, Mary Croughan Provost and Executive Vice Chancellor

Follow the link to opt out of future emails: <u>Click here to unsubscribe</u>

## Reminder Recruitment Email

Dear UC Davis Students/Faculty/Staff,

We recently invited you to take the 2023-2024 UC Davis Campus Travel Survey. If you finished the survey, thank you! Your responses have been recorded, and you can disregard the rest of this message.

If not, we encourage you to complete the survey today. This annual survey provides valuable data about the travel preferences of the entire UC Davis community, and the more who participate, the better the data. Every response matters.

### Your feedback helps improve the campus!

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

- Identify trends in the way that people get to campus from year to year
- Better understand the factors that encourage biking to campus
- Prioritize infrastructure improvements on campus
- Develop new TS programs to serve the campus community
- Estimate greenhouse gas emissions for travel to the campus

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

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

- Your role at UC Davis
- Your travel to and from campus
- Your experience with campus transportation programs
- Your safety and security when traveling on campus
- Your housing and experience with housing affordability
- 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 CoHo or UC Davis Bookstore gift cards!** 

### Follow this link to the Survey:

Take the Survey

Thank you for your participation in this year's survey!

Sincerely, Mary Croughan Provost and Executive Vice Chancellor

Follow the link to opt out of future emails: <u>Click here to unsubscribe</u>

# Appendix D: Calculation of Average Vehicle Ridership (AVR)

Average vehicle ridership (AVR) is a ratio of the number of person-arrivals to privatevehicle-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."<sup>3</sup> We attempt to adhere to the AQMD formula, although our overall survey methodology deviates to some extent from that prescribed by the AQMD.<sup>4</sup> 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).

We use the following formula:

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

With:

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

*Employee telecommuting days* = a count of respondents telecommuting on Monday, plus those doing so on Tuesday, etc. through Friday. These are based on responses to Q37, Q39, and Q40 for any respondents who traveled some days and telecommuted other days. But for respondents who indicated <u>no</u> 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 compressed work week (CWW) day off, plus those who did so for Tuesday, Wednesday, etc. through Friday (using responses to *Q37* and *Q40*).

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<sup>&</sup>lt;sup>3</sup> 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).

<sup>&</sup>lt;sup>4</sup> For instance, the AQMD specifies that response to the survey must be 90% response rate, whereas we rely on surveying only a sample and weighting the responses.

*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, 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 (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. 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 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 (Q55).

In all cases, the estimated number of arrivals for the entire campus community is a projection. We weight (and expand) the sample responses by role and gender based on the valid responses to *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 (*Q8*) to allow us to estimate AVR including student employees.

# Appendix E: Geocoding and Network Distances

Starting with this year's survey, we have changed how we collect respondents' home locations, geocode them to the network, and calculate distances traveled to campus. In prior years, we relied on the ESRI Streetmap USA dataset for all the geocoding and network route assignments. Respondents would provide the street names of the nearest intersection to their home and the name of the city, and researchers would manually geocode this location to the network. This year, we replaced this method with a new question, asking respondents to place a pin of their approximate home location on an interactive Google Maps window displayed within the question. This would return a latitude and longitude coordinate pair for us to use, which is more convenient and accurate than attempting to manually locate a residence from a street name and city name.

## Geocoding residential locations

With the Google Maps API<sup>5</sup> embedded within the survey, respondents were able to provide us with an approximate location of their residence by either placing a pin on the map or by typing in their address. The responses for this question provided by Qualtrics is the latitude and longitude point for this location. Using the Python programming language and the OSMnx<sup>6</sup> library, these points representing respondents' residences were snapped to a network graph representing the transportation street network.

### Network distance

OSMnx allows for the calculation of the shortest path by mode along the transportation network retrieved from OpenStreetMap<sup>7</sup>. Each residence point was categorized into three modes based on the respondents' mode so that OSMnx would use the appropriate network features for finding the shortest path. These modes were grouped by how similar they would be to the three shortest path modes offered by OSMnx: walking, biking, and driving. Walk mode simply included the mode "Walk (or wheelchair)". Bike mode included "Bike", "Stand up electric scooter (e-scooter)", "Electric-assist bike (e-bike)", and "Skates, conventional skateboard, or kick scooter". Drive mode included "Drive alone in a car (or other vehicle)", "Bus and/or shuttle", "Carpool and/or vanpool with others going to campus", "Get dropped off by a friend or family (the driver continues on elsewhere)", "Motorcycle or Vespa-like scooter", and "Lyft, Uber, or other ride-hailing service".

<sup>&</sup>lt;sup>5</sup> Google Maps Platform (2024). Google for Developers.

https://developers.google.com/maps

<sup>&</sup>lt;sup>6</sup> Boeing, G. 2024. "Modeling and Analyzing Urban Networks and Amenities with OSMnx." Working paper. URL: https://geoffboeing.com/publications/osmnx-paper/ <sup>7</sup> OpenStreetMap (2024). *OpenStreetMap*. OpenStreetMap Foundation. URL:

https://www.openstreetmap.org/

Points were plotted on an interactive map to determine a bounding box that would cover the vast majority of points by each of the three modes: bike, drive, and walk. This was done for the three modes separately, due to each mode utilizing a different subset of the network. For example, if we need the shortest path driving from a residence in Woodland to campus, only the driving network should be included, and bike paths and sidewalks would not be included. Those who walk or bike to campus live much closer to campus, so it is not necessary to download as large of a network as it is for driving. A smaller network reduces computation time for the shortest path algorithm.

The location on campus used for the shortest path calculation differs depending on the mode (bike, drive, or walk) due to differences in the respective networks on campus. Driving trips could not be pathed to the usual destination point used on the UC Davis campus at the corner of Hutchinson Drive and California Avenue, near the Silo, so a nearby point located at the corner of Hutchinson Drive and Dairy Road was used for driving trips. Biking and walking trips kept the approximate location used in previous surveys at the corner of Hutchinson Drive and California Avenue for driving trips.

### Comparability with results from previous surveys

Because we are using a new procedure for geocoding and calculating network distances that differs from prior years, our results are not directly comparable to prior survey years. The locations of residences are likely more accurate in this survey compared to previous surveys. However, the most significant change is the calculation of the shortest path this year compared to prior years, that relied on the calculation of the path with the shortest travel time. OSMnx provides reliable measurements of the travel distance utilizing OpenStreetMap. Travel time, however, would need to be calculated using an estimate of travel speed and distance, which may not be as reliable. To keep the survey results consistent with prior years, on-campus respondents were assigned a distance of 0.77 miles as an estimate of the average distance from residential locations within the "on campus" area to campus destinations. Additionally, West Village residents were assigned a distance of 1.3 miles equal to the calculated distance from the center of West Village to the Silo (traveling along Hutchinson Drive).

## 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 *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 39 Sampling Plan for 2018-19 through 2023-24, Percent Invited

	2023-24 Percent Invited								
Role	Assumed Population	Actual Population	Number Invited	2023-24	2022-23	2021-22	2020-21	2019-20	2018-19
Student	36,424	37,082	30,415	<b>82</b> %	<b>42</b> %	45%	45%	36%	41%
Undergraduate	30,361	31,097	24,768	<b>80</b> %	<b>40</b> %	<b>40</b> %	<b>41</b> %	34%	37%
Freshman	4,157	6,081	6,291	103%	20%	15%	25%	26%	42%
Sophomore	6,562	6,262	4,515	72%	48%	58%	66%	62%	52%
Junior	8,212	8,780	4,520	51%	37%	38%	44%	26%	27%
Senior	11,430	9,974	9,442	95%	45%	49%	36%	29%	33%
Graduate	6,063	5,985	5,647	<b>94</b> %	<b>51</b> %	<b>65</b> %	65%	<b>46</b> %	<b>60</b> %
Master's	2,490	2,440	2,496	102%	82%	94%	100%	76%	100%
PhD	3,573	3,545	3,151	89%	21%	35%	43%	25%	33%
Employee	11,113	11,113	4,573	41%	25%	<b>26</b> %	<b>26</b> %	<b>21</b> %	<b>16</b> %
Faculty	1,964	1,964	1,996	102%	86%	100%	95%	53%	46%
Staff	9,149	9,149	2,577	28%	13%	13%	16%	16%	11%
<b>Overall Percent</b>	100%	100%	-	74%	38%	<b>41</b> %	<b>40</b> %	31%	33%
Overall	47,537	48,195	34,988	-	-	20,169	21,290	17,095	17,888

	2023-24				Actual Response Rate					
Role	Assumed Population	Actual Population	Number Invited 30,415 24,768	2023-24 11% 10%	2022-23 15% 14%	2021-22 20% 17%	2020-21 19% 18%	2019-20 17% 17%	2018-19 22% 20%	
Student	36,424	37,082								
Undergraduate	30,361	31,097								
Freshman	4,157	6,081	6,291	10%	36%	42%	41%	27%	28%	
Sophomore	6,562	6,262	4,515	14%	15%	18%	16%	15%	15%	
Junior	8,212	8,780	4,520	13%	15%	18%	17%	15%	22%	
Senior	11,430	9,974	9,442	8%	9%	12%	12%	15%	17%	
Graduate	6,063	5,985	5,647	14%	<b>20</b> %	<b>26</b> %	<b>22</b> %	<b>19</b> %	<b>27</b> %	
Master's	2,490	2,440	2,496	12%	12%	17%	15%	16%	21%	
PhD	3,573	3,545	3,151	15%	52%	51%	33%	25%	38%	
Employee	11,113	11,113	4,573	16%	31%	<b>30</b> %	<b>29</b> %	22%	25%	
Faculty	1,964	1,964	1,996	15%	21%	25%	20%	21%	31%	
Staff	9,149	9,149	2,577	17%	45%	37%	37%	22%	22%	
Overall Percent	100%	100%	-	12%	18%	<b>21</b> %	21%	18%	22%	
Overall	47,537	48,195	34,988	-	3,228	4,265	4,506	3,098	4,014	

## Table 40 Sampling Plan for 2018-2019 through 2023-24, Response Rates

## 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

$$W_i = \frac{\binom{N_i}{N}}{\binom{n_i}{n}}$$

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

$$E_i = \frac{N_i}{n_i}$$

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 = 4,087 valid responses to 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 3,862 cases successfully geocoded (see Appendix E: Geocoding and Network Distances). Both sets of weights are shown in Table 41.

			Factors by Role, Gender, and Mode <sup>a</sup>				Factors by Role, Gender, Mode, and Geocoding <sup>b</sup>				
Role	Gender	Population (N)	Valid Responses (n)	Weight Factor $\binom{N_i/N}{n_i/n}$	Expansion Factor $(N_i/n_i)$	Weighted Sample Size	Valid Responses (n)	Weight Factor $\binom{N_i/N}{n_i/n}$	Expansion Factor $(N_i/n_i)$	Weighted Sample Size	
Freshman	Female	3,520	455	0.656	7.736	299	453	0.623	7.770	282	
	Male	2,561	144	1.508	17.785	217	141	1.455	18.163	205	
Sophomore	Female	3,706	459	0.685	8.074	314	443	0.670	8.366	297	
	Male	2,556	158	1.372	16.177	217	155	1.321	16.490	205	
Junior	Female	4,901	454	0.915	10.795	416	421	0.933	11.641	393	
	Male	3,879	156	2.109	24.865	329	149	2.086	26.034	311	
Senior	Female	5,893	570	0.877	10.339	500	528	0.894	11.161	472	
	Male	4,081	168	2.060	24.292	346	161	2.031	25.348	327	
Master's	Female	1,437	188	0.648	7.644	122	176	0.654	8.165	115	
	Male	1,003	106	0.802	9.462	85	100	0.804	10.030	80	
PhD	Female	1,820	326	0.473	5.583	154	305	0.478	5.967	146	
	Male	1,725	154	0.950	11.201	146	143	0.967	12.063	138	
Faculty	Female	747	171	0.370	4.368	63	143	0.419	5.224	60	
	Male	1,217	131	0.788	9.290	103	118	0.826	10.314	98	
Staff	Female	4,849	302	1.362	16.056	411	288	1.349	16.837	389	
	Male	4,300	145	2.515	29.655	365	138	2.497	31.159	345	
Overall	-	48,195	4,087	0.000	11.792	4,087	3,862	0.000	12.479	3,862	

## Table 41 Weight Factors Applied by Role, Gender, Mode, and Geocoding

<sup>a</sup> Based on valid responses to Q2 (campus role), Q17 (gender).

<sup>b</sup> Based on valid responses to Q2 (campus role), Q17 (gender), and successful geocoding of residential locations.