2022-2023 Campus Travel Survey Summary of Safety and Bike Theft Questions

June 2023

A Research Report from the National Center for Sustainable Transportation

Aakansha Jain, University of California, Davis

National Center for Sustainable Transportation

ITS UCDAVIS Institute of Transportation Studies

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NCST

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NCST

2022-23 Campus Travel Survey

Summary of Safety and Bike Theft Questions

Institute of Transportation Studies

and

Transportation Services

University of California, Davis

Prepared by

Aakansha Jain

Institute of Transportation Studies

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BACKGROUND

This report presents some of the key results from the two new blocks of questions included in the 2022-23 Campus Travel Survey. The first block includes questions to assess the safety of pedestrians, bicyclists, and other micro-mobility users. The second block ask respondents questions about incidents related to bike theft and vandalism on campus.

To assess pedestrian safety on campus respondents were asked if they had been hit while walking on campus since the beginning of fall quarter 2022 and if so to select the mode they were hit by. The set of questions related to fall and crash of bike and micro-mobility users was shown only to respondents who indicated that they were associated with UC Davis during the 2021-22 academic year. The report presents results of questions related to safety of bike and micro-mobility users, including questions on type of fall or crash related incidents, and reasons for their fall or crash while using a particular mode. Respondents were also asked to indicate the location of fall or crash on the campus.

The block on bike theft asked respondents if they were the victims of bike theft or vandalism during the year 2021-22. The questions were designed to better understand the situations under which the bike was stolen, whether it was locked indoors or outdoors, type of object the bike was locked to, and the type of lock used.

FINDINGS

Pedestrian Safety

The 2022-23 Campus Travel Survey include a question to assess the safety of pedestrians on campus. Respondents were asked if they had been hit while walking on campus since the beginning of fall quarter 2022 and if so to select the mode they were hit by (Table 1). An estimated 4,743 people were hit while walking on campus during the period. The mode representing the highest share for all role groups was bikes followed by e-scooters.

Table 1. Share of pedestrians hit by different modes while walking on campus

Role	Modes hit by					Weighted Sample	Projected Population
	Bike	Electric skateboard (e-skateboard)	Electric-assist bike (e-bike)	Skates, conventional skateboard, or kick scooter	Stand up electric scooter (e-scooter)		
Undergraduate Student	84.8%	3.4%	2.5%	2.5%	6.8%	243	3624
Graduate Student	94.6%	0%	0%	4.4%	1.1%	42	620
Faculty	88.6%	0%	5.2%	0%	6.2%	9	140
Staff	89.1%	0%	0%	0%	10.9%	24	360
Weighted Sample	275	8	7	8	20	3,228	NA
Projected Population	4104	124	99	117	299	NA	48,165

Results are based on responses to questions Q2 (primary role) and Q382 (hit by modes while walking on campus since the beginning of 2022 Fall Quarter). Data are weighted by role and gender.

Bike and other Micro-mobility Users Safety

To better understand the reasons for fall and crash related incidents among bike and micro-mobility users the survey asked respondents who were associated with UC Davis during the 2021-22 academic year to indicate which of these modes they used and if they experienced any kind of fall or crash during that year.

Table 2 shows the sampled and projected respondents who used the listed modes at least once during 2021-22 academic year.

Table 2. Number of people using each mode at least once during 2021-22 academic year

Used mode at least once in 2021-22	Weighted Sample	Projected Population
Bike	1190	17753
Electric-assist bike (e-bike)	51	763
Electric skateboard (e-skateboard)	20	302
Skates, conventional skateboard, or kick scooter	81	1210
Stand up electric scooter (e-scooter)	71	1065

Results are based on responses to question Q326 (modes used to get to, from, and/or around the UC Davis campus at least once during last year). Data are weighted by role and gender.

Tables 3 to 7 show the share of respondents by different type of fall or crash across modes. An estimated 3,405 people who biked at least once had a fall or crash on campus in the previous year. On average 56 percent of those who experienced a fall or crash while biking did not experience an injury while 34 percent had an injury but did not need any medical attention (Table 3). Among those who had a fall or crash on campus, 55.3 percent did not experience any injury while only 1.8 percent were admitted to a hospital. The share of hospital admissions was higher for those who had a crash off-campus (4.5 percent).

Table 3. Type of fall or crash among those who used bike at least once in 2021-22

Type of Fall or Crash	Of those who used bike			Weighted Sample	Projected Population
	On Campus	Off Campus	Both On-Campus and Off-Campus		
Yes, a fall or crash but I had no injuries	55.3%	45.8%	66.7%	227	3392
Yes, an injury but I did not need medical attention	37.3%	36.8%	28.9%	155	2310
Yes, an injury and I had to visit an urgent care or emergency room without being admitted	5.7%	12.9%	2.2%	34	508
Yes, an injury and I was admitted to a hospital	1.8%	4.5%	2.2%	12	182
Weighted Sample	228	155	45	**428**	NA
Projected Population	3,405	2,319	668	NA	**6392**

Results are based on responses to question Q333 (experience a fall or crash while using bike during last year). Data are weighted by role and gender.

Among those who had a fall or crash while riding an e-bike on campus 47 percent did not sustain any injuries (Table 4). The share of respondents who required an emergency room visit was higher for e-bike users than bike users. Fifteen percent of those who fell on campus and 27 percent of those who fell off campus needed to visit emergency room. The share of those who were admitted to a hospital due to a fall on campus was also higher for e-bike users than bike users (7.3 percent vs. 1.8 percent).

Table 4. Type of fall or crash among those who used e-bike at least once in 2021-22

Type of Fall or Crash	Of those who used e-bike			Weighted Sample	Projected Population
	On Campus	Off Campus	Both On-Campus and Off-Campus		
Yes, a fall or crash but I had no injuries	46.5%	0%	0%	6	95
Yes, an injury but I did not need medical attention	31.3%	73%	100%	9	136
Yes, an injury and I had to visit an urgent care or emergency room without being admitted	14.9%	27%	0%	3	45
Yes, an injury and I was admitted to a hospital	7.3%	0%	0%	1	15
Weighted Sample	14	4	2	**19**	NA
Projected Population	204	52	34	NA	**290**

Results are based on responses to question Q332 (experience a fall or crash while using e-bike during last year). Data are weighted by role and gender.

None of those who experienced a fall or crash while using e-skateboard or skates, conventional skateboard, or kick scooter required an emergency room visit or were admitted to a hospital (Tables 5 and 6). Fifty percent of e-skateboard users and 40 percent of skate, conventional skateboard, or kick scooter users who fell on campus had an injury but did not need any medical attention. Ninety percent of e-scooter users who fell on campus had an injury but did not need any medical attention (Table 7).

Table 5. Type of fall or crash among those who used electric skateboard (e-skateboard) at least once in 2021-22

Type of Fall or Crash	Of those who used e-skateboard			Weighted Sample	Projected Population
	On Campus	Off Campus	Both On-Campus and Off-Campus		
Yes, a fall or crash but I had no injuries	50%	0%	100%	5	71
Yes, an injury but I did not need medical attention	50%	100%	0%	3	46
Yes, an injury and I had to visit an urgent care or emergency room without being admitted	0%	0%	0%	0	0
Yes, an injury and I was admitted to a hospital	0%	0%	0%	0	0
Weighted Sample	4	1	3	**8**	NA
Projected Population	66	14	38	NA	**117**

Results are based on responses to question Q373 (experience a fall or crash while using e-skateboard during last year). Data are weighted by role and gender.

Table 6. Type of fall or crash among those who used skates, conventional skateboard, or kick scooter at least once in 2021-22

Type of Fall or Crash	Of those who used skates			Weighted Sample	Projected Population
	On Campus	Off Campus	Both On-Campus and Off-Campus		
Yes, a fall or crash but I had no injuries	60%	35.4%	84.2%	19	279
Yes, an injury but I did not need medical attention	40%	64.6%	15.8%	12	185
Yes, an injury and I had to visit an urgent care or emergency room without being admitted	0%	0%	0%	0	0
Yes, an injury and I was admitted to a hospital	0%	0%	0%	0	0
Weighted Sample	19	6	6	**31**	NA
Projected Population	281	88	93	NA	**463**

Results are based on responses to question Q335 (experience a fall or crash while using skates, conventional skateboard, or kick scooter during last year). Data are weighted by role and gender.

Table 7. Type of fall or crash among those who used electric scooter (e-scooter) at least once in 2021-22

Type of Fall or Crash	Of those who used e-scooter			Weighted Sample	Projected Population
	On Campus	Off Campus	Both On-Campus and Off-Campus		
Yes, a fall or crash but I had no injuries	10.4%	24.7%	0%	1	22
Yes, an injury but I did not need medical attention	89.6%	56.9%	100%	7	108
Yes, an injury and I had to visit an urgent care or emergency room without being admitted	0%	0%	0%	0	0
Yes, an injury and I was admitted to a hospital	0%	18.5%	0%	1	11
Weighted Sample	4	4	1	**8**	NA
Projected Population	65	60	15	NA	**141**

Results are based on responses to question Q334 (experience a fall or crash while using e-scooter during last year). Data are weighted by role and gender.

Reasons for a Fall or Crash

The survey asked the respondents the reason for their fall or crash while using a particular mode (Table 8). Across all modes, slip or swerve was the most common reason for a fall. Among bike and e-bike users, collision with another bicyclist was the second most common reason for a fall. Collision with an object was the second most common reason for a fall among e-skateboard, skate, and e-scooter users.

Table 8. Reasons for fall or crash while using different modes

Reasons for fall or crash	Bike	Electric-assist bike (e-bike)	Electric skateboard (e-skateboard)	Skates, conventional skateboard, or kick scooter	Stand up electric scooter (e-scooter)
A slip or swerve resulting in a fall	34.4%	18.3%	55.4%	46.8%	34.0%
Collision with a bicyclist	25.8%	32.2%	0%	0%	18.6%
Collision with a motor vehicle	2.6%	13.1%	0%	0%	0%
Collision with a pedestrian	0.6%	0%	0%	0%	0%
Collision with an object (curb, tree, pole, bollard etc.) or animal	10.6%	13.1%	16.5%	26.1%	28.9%
Collision with someone on skates, skateboard, or scooter	0.9%	0%	0%	0%	7.9%
Didn't Say	25.1%	23.3%	28.0%	27.1%	10.6%

Results are based on responses to questions Q336, Q352, Q353, Q375, and Q354 (type of fall or crash). Data are weighted by role and gender.

Bike Theft

Table 9 shows the share of respondents who bicycled to campus at least once during the year 2021-2022 who were victims of bike theft or vandalism. Nine percent of undergraduate and 10 percent of graduate students reported that parts of their bikes were stolen. Twelve percent of undergraduates and the same percent of graduate students said that their entire bike was stolen. Eighty-eight percent of faculty members and 78 percent of staff did not experience theft or vandalism.

Table 9. Share of respondents experiencing incidents of bike theft or vandalism during 2021-22

Role	My bike was vandalized (damaged but not stolen)	Yes, but only parts of my bike were stolen (seat, wheel, accessories)	Yes, my entire bike was stolen	No, I had a bike on campus in the past year but did not experience a theft or vandalism	Not applicable: I did not have a bike on campus in the last year	Weighted Sample	Projected Population
Undergraduate Student	3.0%	9.3%	12.5%	69.7%	5.6%	789	11767
Graduate Student	1.4%	10.2%	11.6%	69.7%	7.1%	178	2658
Faculty	0.4%	7.5%	2.9%	88.0%	1.2%	65	964
Staff	0%	4.3%	7.5%	78.5%	9.7%	161	2406
Weighted Sample	26	103	133	857	73	**1193**	NA
Projected Population	393	1539	1982	12793	1088	NA	**17795**

Results are based on responses to questions Q2 (primary role) and Q312 (victim of bicycle theft or vandalism). Data are weighted by role and gender.

Eighty-nine percent of the respondents whose entire bike was stolen said that their bike was locked outdoors (Table 10).

Table 10. Share of respondents locking bike indoors or outdoors

Locked or unlocked	Share
Yes, locked outdoors	89%
Indoors and locked with a bike lock	1%
Indoors, but not locked with a bike lock	1%
No, unlocked outdoors	6%
Other:	2%

Results are based on responses to question Q313 (bike locked at the time of theft).
Data are weighted by role and gender.

Ninety- two percent of the theft victims whose bike was locked while stolen said it was locked to a bike rack while 5 percent said it was locked to a pole, railing, tree, or other fixed object (Table 11).

Table 11. Share of respondents locking bike to different objects

Object locked to	Share
A bike rack	92%
A pole, railing, tree, or other fixed object	5%
To itself only	3%

Results are based on responses to question Q370 (bike locked to).
Data are weighted by role and gender.

Fifty percent of the respondents used U-lock to lock their bike and 29 percent used a cable lock (Table 12). Fourteen percent of the theft victims used multiple locks.

Table 12. Share of respondents using different types of locks

Type of lock	Share
A cable lock	29.4%
A chain lock	6.2%
A U-lock	49.7%
More than one lock	14.3%
Another type of lock	0.4%

Results are based on responses to question Q314 (type of bike lock).
Data are weighted by role and gender.

APPENDICES

Appendix A: Heat Maps of Crash Locations On-Campus, 2022-23 Campus Travel Survey

Figure A 1. Bike Users' Crash Locations

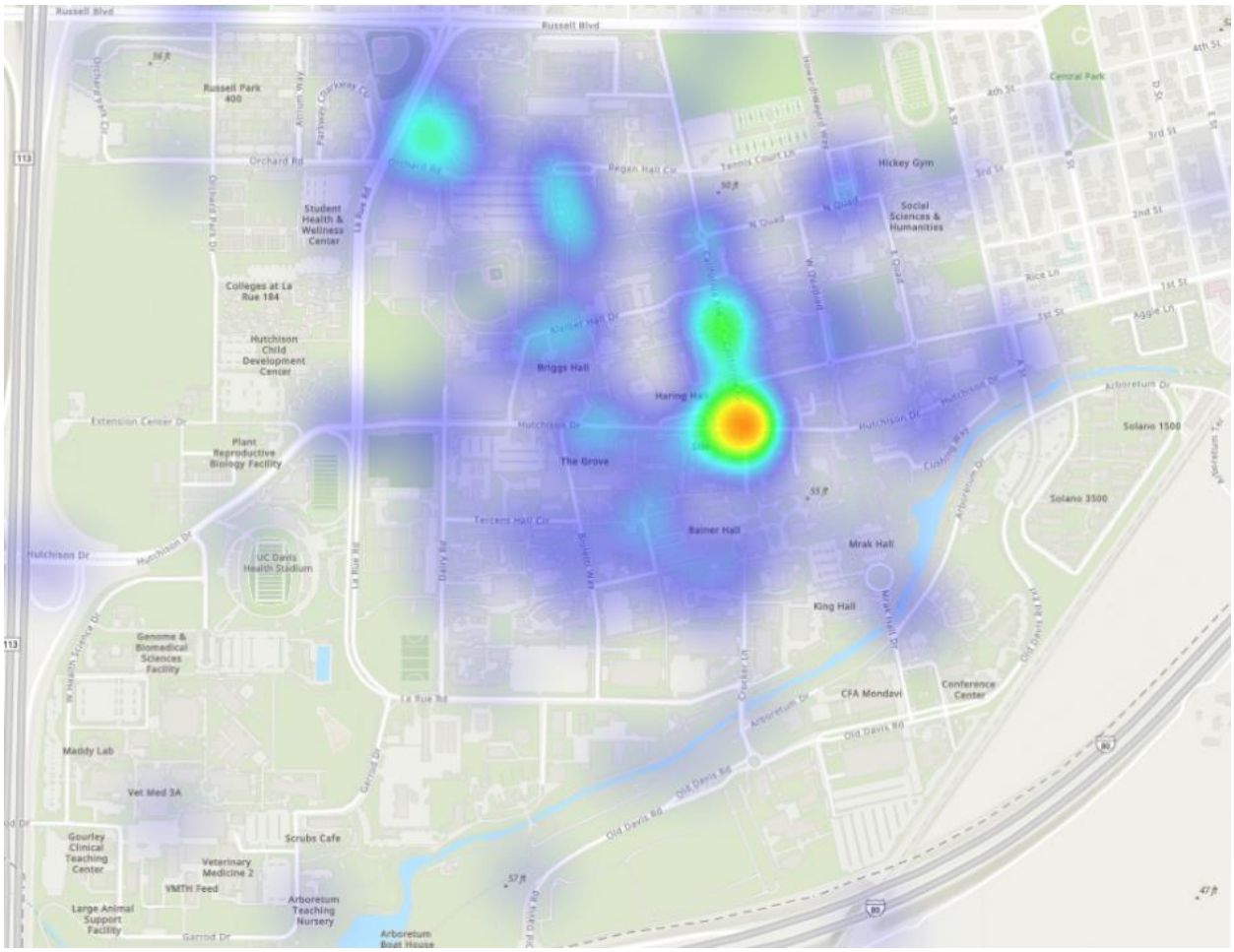


Figure A 2. E-Bike Users' Crash Locations

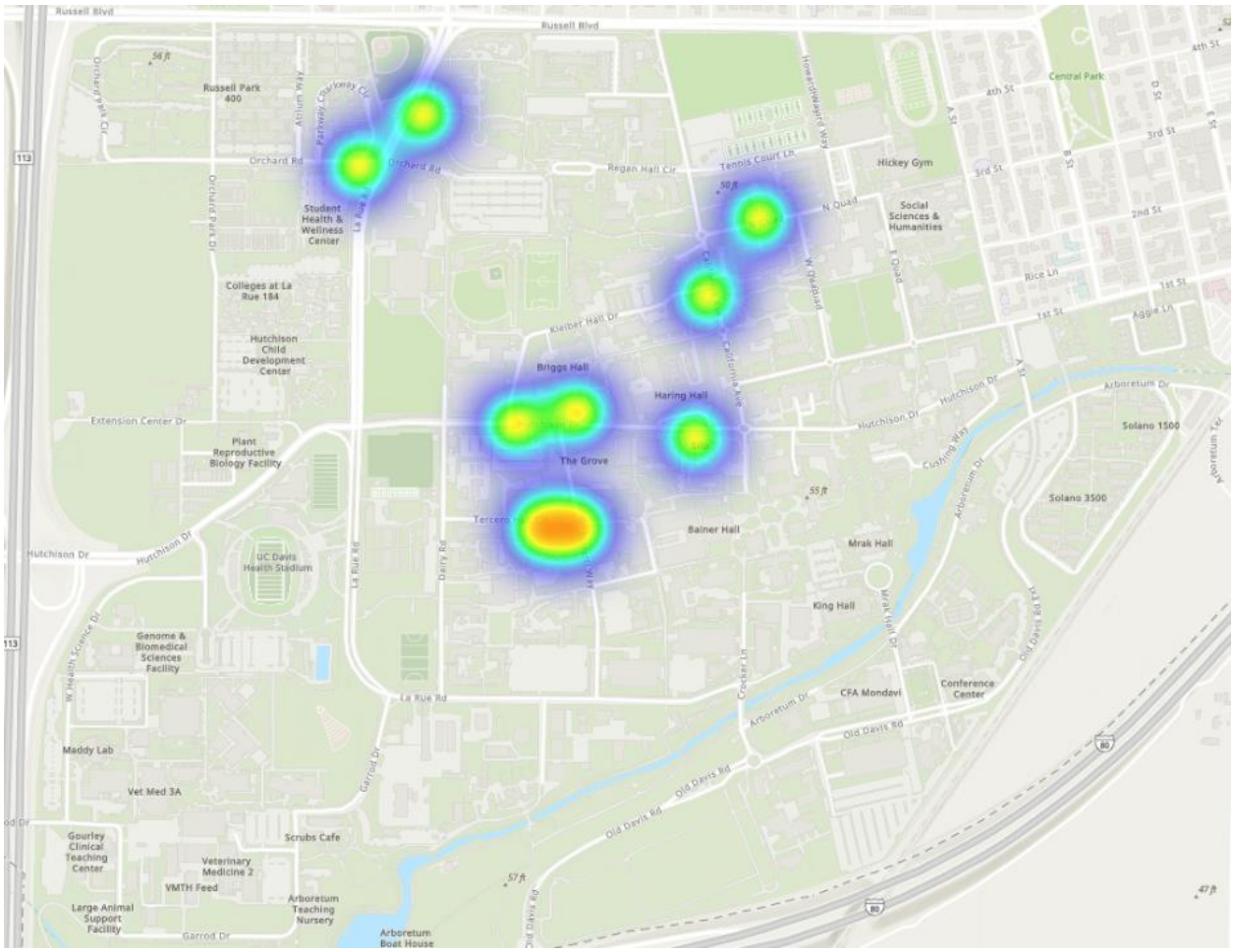


Figure A 3. E-Skateboard Users' Crash Locations

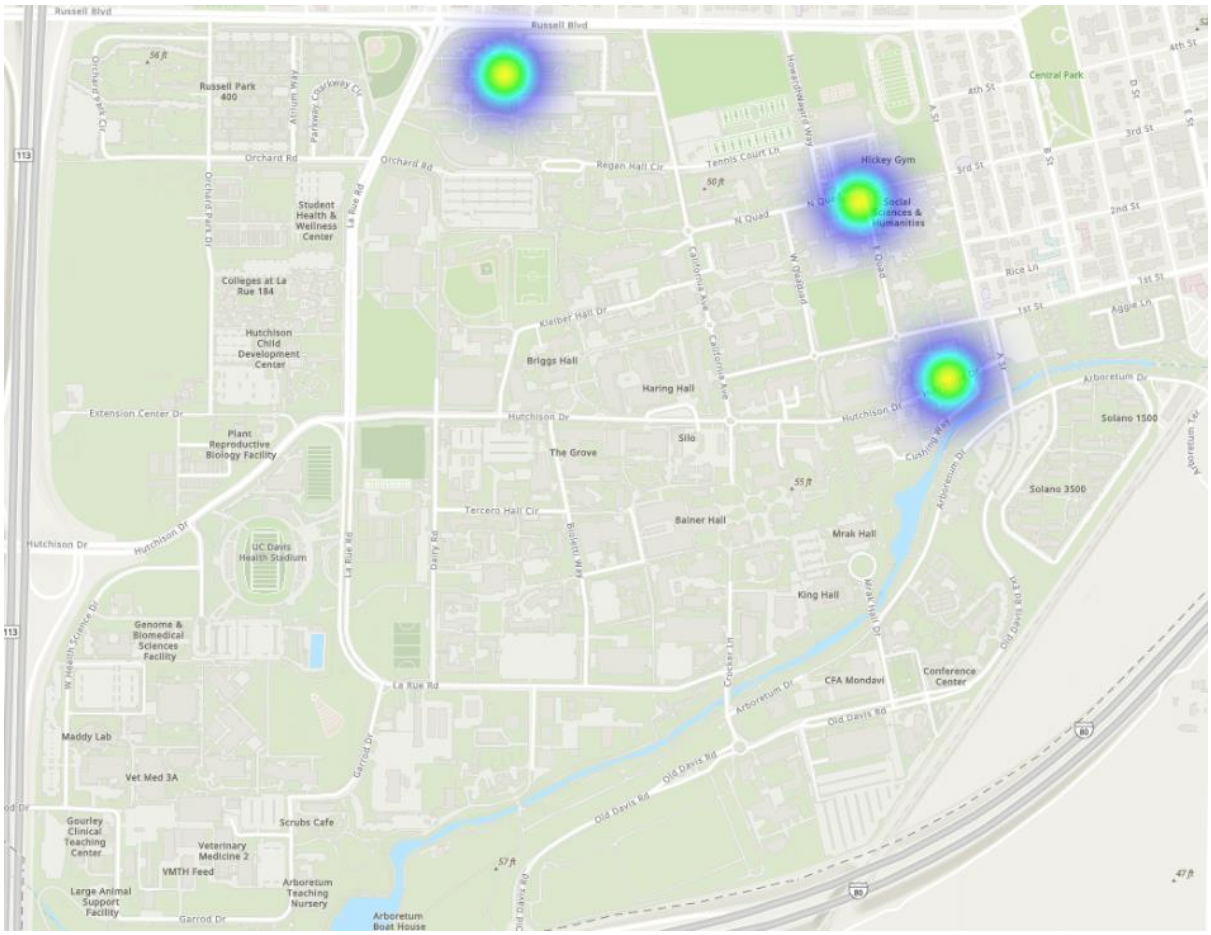
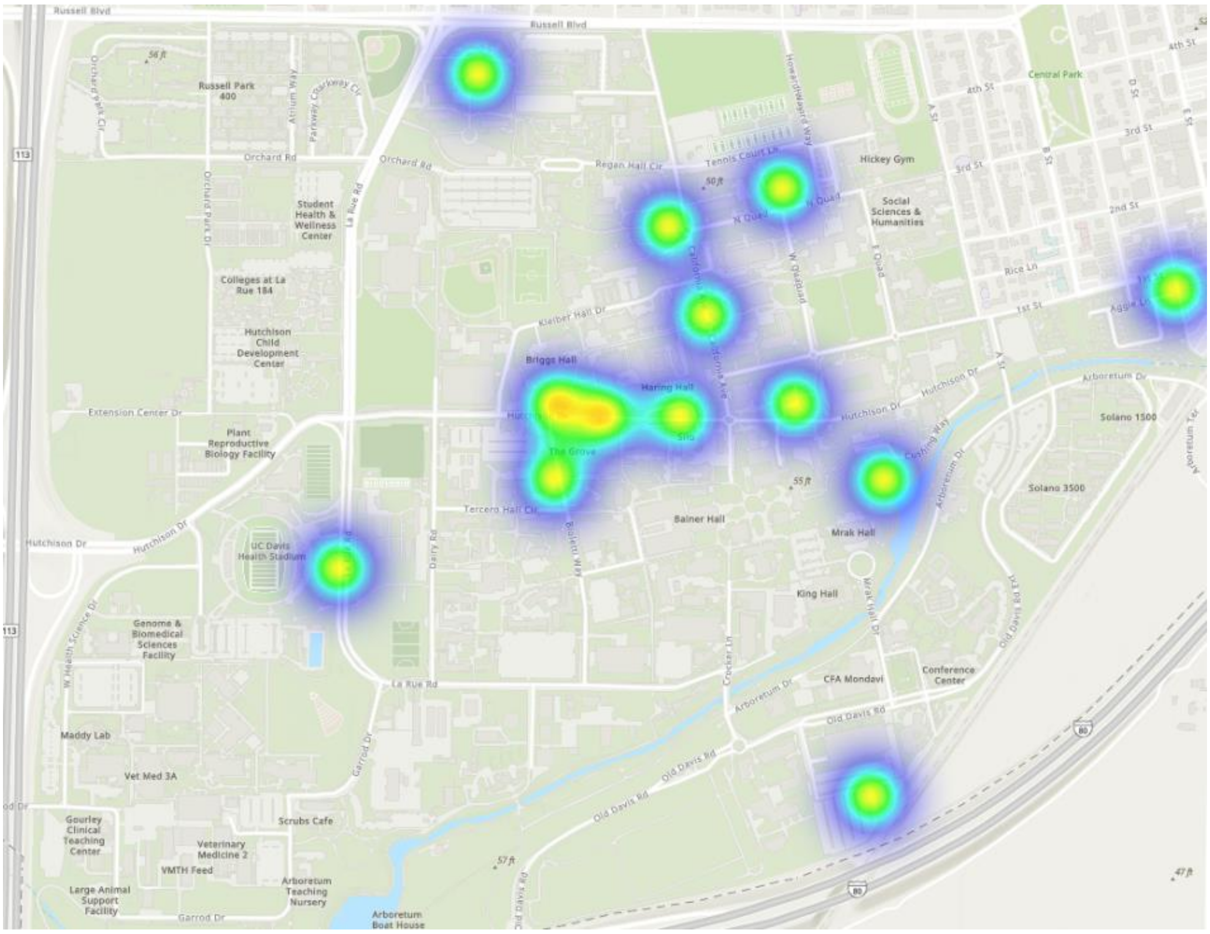


Figure A 4. Skates/ Conventional Skateboard, Kick-scooter Users' Crash Locations



Appendix B: Safety and Crashes Block of Survey Instrument, 2022-23 Campus Travel Survey

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

Q382 Since the start of 2022 Fall Quarter, have you been hit by any of the following while you were walking on campus?

- ○ Electric-assist bike (e-bike) (1)
- ○ Bike (2)
- ○ Stand up electric scooter (e-scooter) (3)
- ○ Electric skateboard (e-skateboard) (4)
- ○ Skates, conventional skateboard, or kick scooter (5)
- ○ No, I have not been hit by any of the listed modes while walking (6)

Q347 Did you work or study at UC Davis during the 2021-22 academic year?

- ○ Yes (1)
- ○ No (2)

Display This Question:

If Did you work or study at UC Davis during the 2021-22 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 2021 through the end of Summer Session 2022. 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 2021-22 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)	○	○
Bike (5)	○	○
Stand up electric scooter (e-scooter) (6)	○	○
Electric skateboard (e-skateboard) (10)	○	○
Skates, conventional skateboard, or kick scooter (7)	○	○

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]

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

- ○ Daily or nearly daily (1)
- ○ 3-6 Days per week (2)
- ○ 1-2 Days per week (3)
- ○ 1-3 Days per month (4)
- ○ 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 e-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 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?

- ○ A slip or swerve resulting in a fall (1)
- ○ Collision with an object (curb, tree, pole, bollard etc.) or animal (2)
- ○ Collision with a bicyclist (3)
- ○ Collision with someone on skates, skateboard, or scooter (7)
- ○ Collision with a pedestrian (4)
- ○ 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)
- ○ Bike (2)
- ○ 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?

- ○ Roller skates or rollerblades (1)
- ○ Electric skateboard (e-skateboard) (3)
- ○ Conventional skateboard (2)
- ○ Stand up electric scooter (e-scooter) (5)
- ○ Kick scooter (non-electric) (4)
- ○ Unsure (6)

Display This Question:

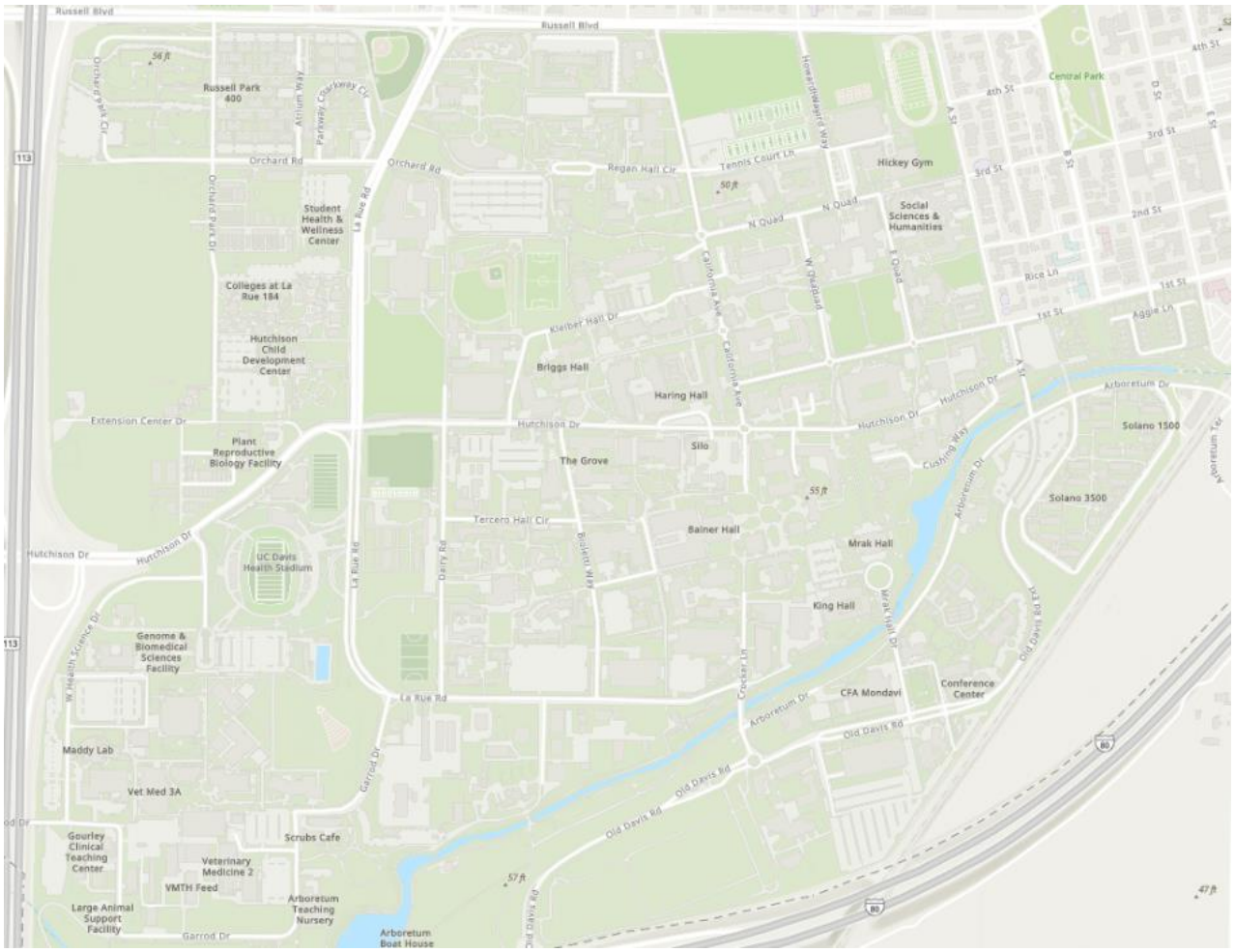
If During this period did you experience a fall or crash with an injury while using your e-bike? = Yes, a fall or crash but I had no injuries [On campus]

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.



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

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

- ○ Yes (1)
- ○ No (2)
- ○ 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

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]

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

- ○ Daily or nearly daily (1)
- ○ 3-6 Days per week (2)
- ○ 1-2 Days per week (3)
- ○ 1-3 Days per month (4)
- ○ 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?

- ○ A slip or swerve resulting in a fall (8)
- ○ Collision with an object (curb, tree, pole, bollard etc.) or animal (9)
- ○ Collision with a bicyclist (10)
- ○ Collision with someone on skates, skateboard, or scooter (11)
- ○ Collision with a pedestrian (12)
- ○ 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)
- ○ Bike (2)
- ○ 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?

- ○ Roller skates or rollerblades (1)
- ○ Electric skateboard (e-skateboard) (3)
- ○ Conventional skateboard (2)
- ○ Stand up electric scooter (e-scooter) (5)
- ○ Kick scooter (non-electric) (4)
- ○ Unsure (6)

Display This Question:

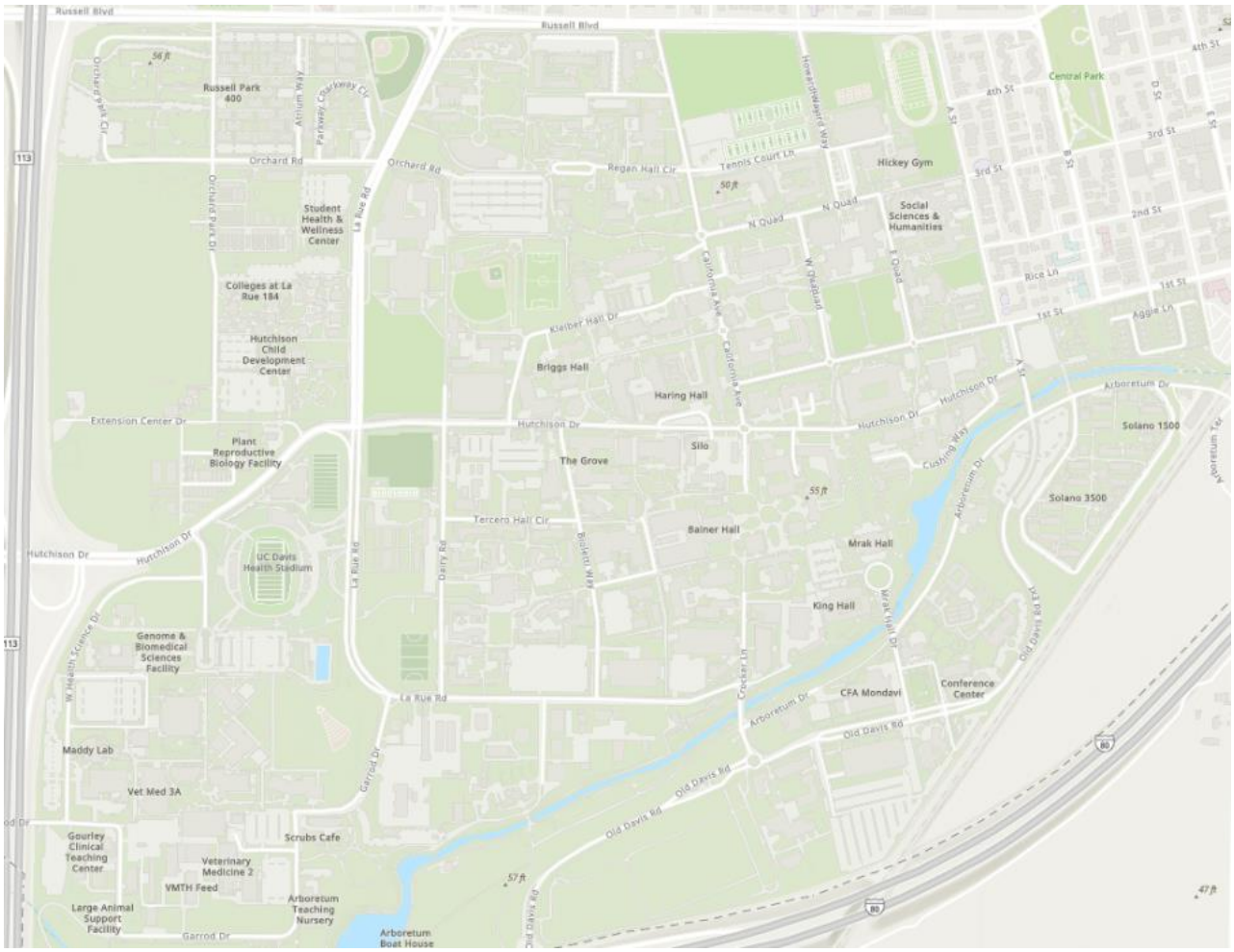
If During this period did you experience a fall or crash with an injury while using your bike? = Yes, a fall or crash but I had no injuries [On campus]

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.



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

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

- ○ Yes (1)
- ○ No (2)
- ○ 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

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]

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

- ○ Daily or nearly daily (1)
- ○ 3-6 Days per week (2)
- ○ 1-2 Days per week (3)
- ○ 1-3 Days per month (4)
- ○ 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?

- ○ A slip or swerve resulting in a fall (8)
- ○ Collision with an object (curb, tree, pole, bollard etc.) or animal (9)
- ○ Collision with a bicyclist (10)
- ○ Collision with someone on skates, skateboard, or scooter (11)
- ○ Collision with a pedestrian (12)
- ○ 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)
- ○ Bike (2)
- ○ 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?

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

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

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

- ○ Yes (1)
- ○ No (2)
- ○ 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

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]

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

- ○ Daily or nearly daily (1)
- ○ 3-6 Days per week (2)
- ○ 1-2 Days per week (3)
- ○ 1-3 Days per month (4)
- ○ 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?

- ○ A slip or swerve resulting in a fall (8)
- ○ Collision with an object (curb, tree, pole, bollard etc.) or animal (9)
- ○ Collision with a bicyclist (10)
- ○ Collision with someone on skates, skateboard, or scooter (11)
- ○ Collision with a pedestrian (12)
- ○ 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?

- ○ Electric-assist bike (e-bike) (1)
- ○ Bike (2)
- ○ 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?

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

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.

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

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

- ○ Yes (1)
- ○ No (2)
- ○ 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

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]

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?

- ○ Daily or nearly daily (1)
- ○ 3-6 Days per week (2)
- ○ 1-2 Days per week (3)
- ○ 1-3 Days per month (4)
- ○ 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?

- ○ A slip or swerve resulting in a fall (8)
- ○ Collision with an object (curb, tree, pole, bollard etc.) or animal (9)
- ○ Collision with a bicyclist (10)
- ○ Collision with someone on skates, skateboard, or scooter (11)
- ○ Collision with a pedestrian (12)
- ○ 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?

- ○ Electric-assist bike (e-bike) (1)
- ○ Bike (2)
- ○ Unsure (4)

Display This Question:

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?

- ○ Roller skates or rollerblades (1)
- ○ Electric skateboard (e-skateboard) (3)
- ○ Conventional skateboard (2)
- ○ Stand up electric scooter (e-scooter) (5)
- ○ Kick scooter (non-electric) (4)
- ○ Unsure (6)

Display This Question:

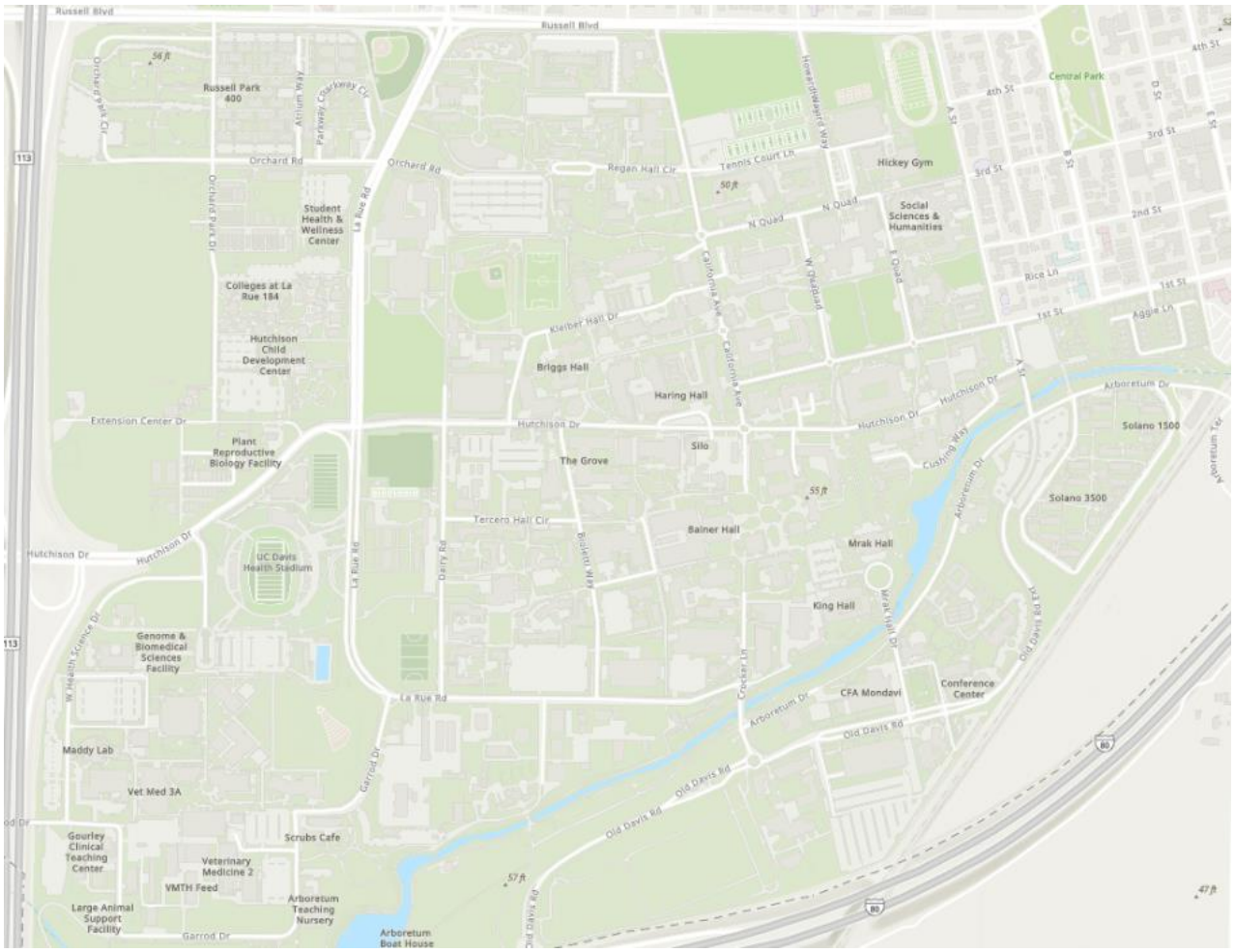
If During this period did you experience a fall or crash with an injury while using your skates, con... = Yes, a fall or crash but I had no injuries [On campus]

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.



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

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?

- ○ Yes (1)
- ○ No (2)
- ○ 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

Appendix C: Bike Theft Block of Survey Instrument, 2022-23 Campus Travel Survey

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Start of Block: Add On: Bike Theft

Display This Question:

If Did you work or study at UC Davis during the 2021-22 academic year? = 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 2021 through the end of Summer Session 2022.

Display This Question:

If Did you work or study at UC Davis during the 2021-22 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)
- ○ 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)
- ○ 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?

- ○ Yes, locked outdoors (1)
- ○ No, unlocked outdoors (2)
- ○ Indoors, but not locked with a bike lock (3)
- ○ 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?

- ○ A bike rack (1)
- ○ A pole, railing, tree, or other fixed object (2)
- ○ 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?

- ☐ A cable lock (1)
- ☐ A chain lock (2)
- ☐ A U-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?

- ○ Yes (1)
- ○ No (2)
- ○ Not sure (3)