UNIVERSITY OF UTAH

Ginger Cannon, Amy Brunvand, Matt Abbott, Chris Strong SUSTAINABILITY OFFICE | SPRING 2018 The University of Utah in Salt Lake City, Utah is a regional travel destination for a large population of commuters, resulting in significant travel demand, emissions, and their associated carbon footprint. The population of the campus can swell to over 40,000 individuals during peak periods, impacting the surrounding roadway network and public transportation services. Sustainable transportation options, both to and within the University campus, reduce vehicle-related greenhouse gas (GHG) emissions. The University of Utah supports increased commute trips using alternative modes and has adopted multiple plans, programs and policies to help balance the region's transportation network.

### **Report Highlights**

Over half of all survey respondents travel 8 miles or less to their campus destination.

- 85% of commuters report a one-way commute of 24 miles or less.
- A majority of commuters are within a reasonable walking or biking distance to campus.

#### Active transportation is 13% of all commute trips.

- The remaining mode split is 52% private vehicle, followed by 24% public transit.
- The faculty population represents the highest percentage of private vehicle use (64%).
- The student population represents the highest percentage of active transportation use (19%).

#### A total of 507,742 miles are traveled one-way on each weekday to the University of Utah.

• The most popular campus destinations are Main Campus (north and south), followed by Health Sciences.

#### Commuting behavior is complex.

- Transportation mode choices depend on multiple factors, including but not limited to: weather, time of day, cost, proximity and convenience.
- Many commute trips involve more than one mode of transportation.

Awareness and use of most sustainable transportation programs and services is low.

• UCard Ed pass and the live campus shuttle tracker report high use, but other commuter programs and services rank low.

#### Comments describing the commute experience primarily discuss parking on campus.

• Additional themes are commuter needs, mode choice and infrastructure.

### Introduction

First administered in 2013, the objective of the Commuter Survey is to provide the University with an accurate baseline assessment of how people commute to and from campus. This self-reported information allows the University to measure progress and compare itself to similar academic institutions. In addition, the data lends support for programs and initiatives that help to increase the use of more sustainable modes of transportation, rather than driving alone, and provide direction for implementing transportation demand management (TDM) strategies.

In the 2017 administration of the survey respondents are asked about mode choice, point of origin, distances traveled, commute frequency, and familiarity with supportive programs. This year's survey is particularly important as the campus begins studying mobility hubs to expand transportation services and update the University's 2008 Campus Master Plan.

This report provides high-level analysis to inform the following:

- Changes in the modes that people use to travel to campus
- Estimated vehicle-related GHG emissions
- Understanding of factors that encourage use of sustainable transportation modes
- Developing new programs to better distribute travel demand and serve the campus community

The first half of the survey asked respondents to identify which part campuses they travel to, how far their home is located from each campus, the number of days traveled to each campus per week and the mode(s) of transportation used to travel to each campus. This information was used to calculate the total mileage traveled each year by students, faculty and staff for each mode of transportation. Mileage information was then used to estimate the University's commuting carbon footprint.

The second half of the survey focused on obtaining a better understanding of why different modes of transportation are favored by faculty, students and staff as well as determining which potential incentives or programs might encourage the use of alternative modes of transportation. Survey respondents were invited to share any other information about their commute experience in a narrative, open ended question format.

### Methodology

Written reports from previous years were used in the development of the 2017 survey questions. With changes in personnel and different departments responsible for past surveys, a consistent question set has not been developed nor are raw data sets from previous surveys available. A staff team drafted survey questions and reviewed content with Facilities Management and Commuter Services leadership. Survey testing was completed by employees and students using multiple user interfaces, and adjustments made in advance of final survey distribution.

The survey was administered online using a cloud based tool and was open for responses from November 6-22, 2017 (17 business days). No paper forms were distributed. The survey listed 23 questions (including demographics), only one of which was open-ended for individual comment<sup>1</sup>.

A stratified random-sample method was used to obtain email addresses for target population categories (faculty, staff, undergraduate and graduate students). Each category was sent an email invitation with instructions from senior leadership. A reminder was distributed to the sample group one week after the survey opened<sup>2</sup>. As an incentive to increase response rate, gift cards to the Campus Store were provided by Commuter Services.

The following table represents the University population categories sampled. *Only complete survey responses are considered within the calculations for this report.* 

Category	2017 Population <sup>3</sup>	2017 Population (%)	Sample Size	Survey Responses	Survey Responses (%)
Undergraduate	24,635	41%	4,000	1,025	4%
Graduate	8,125	14%	4,000	1,508	19%
Faculty	3,534	6%	4,000	1,529	43%
Staff	23,737	40%	8,000	3,236	14%

Figure 1: 2017 Commuter Survey Population

The target response rate for statistical significance was met in all population categories with a 95% confidence level and margin of error +/-3%. The majority of questions required responses due to use of skip logic, with the exception of optional demographic questions. Respondents who indicated they primarily commute to a satellite destination were disqualified from further response but allowed to enter the drawing for a gift card. The average time to complete the online survey was six minutes.

### Analysis

#### Commute Characteristics

**Distance Traveled** For all survey respondents, the average one-way distance traveled to campus is approximately 12 miles. A small percentage of respondents (.01%) reported commuting over 100 miles; these "super commuters" are excluded from calculations.

	Median distance	Average distance	Standard deviation
All commuters	8	12.67	19.21
Exclude "super commuters"	8	12.12	11.78

Using the average distance traveled, we calcluate that 507,742 miles are traveled one-way on each weekday to the University of Utah. This calculation factors the percentage of the commuter population who indicated they did not commute or telecommuted each day.

<sup>&</sup>lt;sup>1</sup> See Appendix for 2017 Commuter Survey questions.

<sup>&</sup>lt;sup>2</sup> See Appendix for email invitation to sample population groups.

<sup>&</sup>lt;sup>3</sup> Population Census source: Office of Budget and Institutional Analysis, 2017 University of Utah Fast Facts.

The following figures depict the commute distance traveled for all respondents. As indicated by the distribution curve, 85% of respondents report traveling 24 miles or less for their one-way commute. Over half of all respondents travel 8 miles or less to their campus destination; a radius that contains many choices for sustainable transportation (public transit, bicycling, walking, carpool, etc.).





*Figure 2 and 3. Distribution of commute distance and 8 mile buffer from University center.* 

**Commute Origin** The University's commute shed is largely concentrated within Salt Lake County, with a small portion of respondents self-reporting out of state travel distances<sup>4</sup>.

61.5% of all commuters arrive from 15 zip codes (note: zip codes do not follow city boundaries in all geographies). The campus zip code (84112) is not represented as a significant commute origin.



Figure 4. Top 15 zip codes of origin by Role.

Zip Code	Corresponding City		
84108	Salt Lake City		
84102	Salt Lake City		
84103	Salt Lake City		
84105	Salt Lake City		
84106	Salt Lake City, South Salt Lake, Millcreek		
84109	Salt Lake City, Millcreek		
84121	Salt Lake City, Solitude, Holladay,		
	Cottonwood Heights, Holladay, Brighton, Murray		
84124	Salt Lake City, Holladay, Millcreek		
84010	Bountiful, West Bountiful, Woods Cross		
84115	Salt Lake City, South Salt Lake		
84107	South Salt Lake, Millcreek, Murray		
84117	Holladay, Cottonwood, Millcreek, Murray		
84111	Salt Lake City		
84047	Midvale, Cottonwood Heights		
84123	Taylorsville, South Salt Lake, Murray		

<sup>&</sup>lt;sup>4</sup> See Appendix for state and county maps of commute origin by zip code.



*Figure 5. Commute origin by zip code, Wasatch Front region.* 

**Campus Destination** Consistent with 2014 survey data, the most popular commute destinations are the University's Main Campus (north and south) and Health Sciences campus.

The percentage of commuters traveling to Research Park has increased by 2% from 2014, while the percentage of commuters traveling to Health Sciences has increased by 10% from 2014. Future surveys should allow respondents to further specify their role as employees working for Hospital and Clinics, Huntsman Cancer Institute or Health Sciences due to the different commuting habits and work shifts associated with health care services.



Figure 6. Campus destination for all respondents.



Figure 7. Campus destination by Role.

**Commute by Days of the Week** Tuesday and Wednesday are the busiest commute days of the week. A similar pattern is evident within previous surveys. Fewer people commute to campus on the weekend days, which is indicative of current class schedules.



Figure 8. Commute by Days of the Week

**Time of Arrival and Departure** University commuters are on the similar time schedule as the larger community and contribute to traffic congestion and diminished air quality during rush hour periods. Peak arrival time is between 7-9 a.m., with 75% of commuters departing between noon-7 p.m. In openended comments, respondents report arranging their class schedules to avoid peak travel time.



Figure 9. Time of arrival and departure for all commuters.

**Primary Mode on Campus** Every commute trip, no matter the mode used, begins and ends with a walk. Walking is the most utilized form of campus transportation with 82% of students and 69% of employees walking each day. After walking, employees and students primarily drive alone in a car, bicycle or ride the U Campus Shuttle to move around campus.



Figure 10. Primary Mode of Transportation on Campus by Role

#### Commute Mode Split

Respondents were asked what mode of transportation they typically use to arrive to campus for their inbound and outbound commute each day of the week. Commute mode split is a primary data point for University transportation benchmarks, including reporting for the AASHE Sustainability Tracking, Assessment & Rating System<sup>™</sup> (STARS).





When the commute mode split of all respondents is broken down by University role, faculty and staff are most likely to use a personal vehicle for their commute. Students are most likely to use UTA transit or modes of active transportation. No significant statistical difference exists between modes chosen for campus arrival and departure times.





Figure 12: Commute Mode Split by Role.

**Income and Personal Vehicle Use** Respondents were asked if they typically drive a personal vehicle to campus. In correlating responses with income level, personal vehicle use increases when income level rises.



Figure 13. Personal Vehicle Use by Income Level.

**Miles Traveled by Mode** Respondents were allowed to choose more than one transportation mode to describe their daily commute. If respondents chose more than one mode, the survey did not ask a person to specify how many miles were traveled using each mode. The figure below indicates two ways of estimating the distance traveled by mode. One measurement is the median, which represents half of the commuters who travel this distance or less. The average distance is higher than the median because the calculation of the average includes longer distances that involve a multi-modal commute.

It is important to note that the transportation mode people choose is strongly associated with the total distance they need to travel to arrive at their destination. Motorized modes are associated with longer commute distances and the average distances for active transportation modes and the U Campus Shuttle are high due to distances that involve multi-modal commute trips.

Mode	Median distance	Average distance	Standard deviation
Walk/Run	2	6.95	11.20
Bicycle	3	4.37	5.46
Uber/Lyft	3	5.12	5.82
Skateboard/scooter	3	12.69	16.50
UTA Bus	4	10.16	12.65
Motorcycle/Moped	5	8.76	9.51
U Campus Shuttle	5	10.28	11.68
Carpool	8	11.50	10.64
Private Vehicle	10	12.62	11.14
UTA TRAX	14	15.48	12.46
UTA Frontrunner	36	36.70	14.32

Figure 14. Estimated Miles Traveled by Mode.

**Mode Split Comparison by Miles Traveled** This figure compares overall mode split by percent of total miles traveled from past commuter surveys. 2013 & 2014 data is from the 2014 survey report. Overall mode split by percent of miles traveled has not significantly shifted over five years.



Figure 15. Mode Split by Percent of Total Miles Comparison, 2013-2017

**Multi-modal Commute** Commuting to the University involves a complex array of choices and options. Not all commute trips use a single mode of transportation. Commuters may use more than one mode or make different commute choices depending on circumstances (i.e. time of day, weather, off-campus destination, caretaking, etc.).

Respondents were allowed to choose more than one transportation mode to describe their daily commute. The following table shows an association of one mode to another when respondents selected two or more modes of transportation on the same day. This selection can be referred to as a bi-modal or multi-modal commute trip. This data reveals which modes are strongly correlated and provides insight as to which modes may be used in tandem for a one-way commute trip or as alternative choice on different days.

In reading the table below, respondents who marked both Car and UTA TRAX represent 5% of all Car responses and 22% of all UTA TRAX responses. This association between modes may be worth exploring in more detail to develop a systems perspective regarding commute behavior.

	Car	Carpool	UTA TRAX	UTA Frnt	UTA Bus	U Shuttle	Motorcyl	Bicycle	Skate	Wk/Run	Uber/Lyft
Car		19%	22%	25%	20%	39%	46%	22%	36%	24%	27%
Carpool	2%		3%	4%	4%	39%	4%	4%	7%	5%	15%
UTA TRAX	5%	7%		40%	18%	23%	14%	15%	13%	23%	34%
UTA Frnr	1%	1%	8%		11%	5%	0%	2%	12%	4%	3%
UTA Bus	4%	9%	18%	57%		22%	15%	21%	34%	20%	35%
U Shuttle	4%	6%	10%	11%	10%		6%	7%	9%	21%	17%
Motorcycle	1%	1%	1%	0%	1%	1%		2%	9%	0%	4%
Bicycle	2%	4%	7%	4%	10%	8%	9%		49%	12%	17%
Skateboard	0%	0%	0%	1%	1%	0%	2%	2%		2%	2%
Walk/Run	3%	7%	15%	13%	13%	30%	3%	17%	73%		32%
Uber/Lyft	0%	1%	2%	1%	2%	2%	2%	2%	4%	2%	

*Figure 16.* Total bi-modal / total X axis. Yellow highlights (>10%, >20%, >30%) indicate choices strongly associated with another mode.

- **Private vehicle** (car, carpool, motorcycle) trips are least likely to be associated with a bi-modal commute trips. Inversely, all other modes are associated with car use.
- **UTA Transit** (TRAX, Frontrunner, Bus). Frontrunner (does not arrive on campus) but is strongly associated with use of UTA TRAX and Bus.
- **U Campus Shuttle** is strongly associated with private vehicle and walk/run, and also associated with use of UTA TRAX and Bus.
- Active Transportation (bicycle, skateboard/scooter, walk/run). Skateboard/scooter is strongly associated with private vehicles, UTA Transit, plus all active modes.
- **Uber/Lyft** is strongly associated with UTA Transit and walk/run.

#### **Comment Narrative**

The survey instrument asked respondents if there was anything else they would like to share about their commute experience in an open comment format. Qualitative analysis for the comments received was completed using *Atlas.ti* software to facilitate a grounded theory approach.

Comments were sorted by three campus destination areas (Research Park, Health Sciences, and Main Campus)<sup>5</sup>. A codebook was developed from the content of the comments in order to identify major themes. To the extent possible the narrative directly reflects language used in the comments.

Post-analysis, four major themes emerged:

- 1. Needs: Commuters expressed needs regarding personal safety, arriving on time and flexibility.
- 2. **Mode Choice**: For commuters who use more than one mode, mode choice is related to external conditions including time of day, weather, and day of the week. Frequently cited reasons for driving a personal vehicle are travel time, caretaking and off-campus travel. UCard Ed pass is appreciated by transit riders.
- 3. **Parking**: Parking is seen as expensive, overcrowded and too far from the destination. Parking pass holders are acutely aware of a hierarchy of privilege. A frequent complaint is disruption caused by game days and events.
- 4. **Infrastructure**: Commuters encounter barriers when traveling on campus. Key connections lack pedestrian or bicycle routes. Sidewalks are experienced as crowded and dangerous. U Campus Shuttle is reported as unreliable and slow.

#### Commuter Awareness of Transportation Programs and Services

Respondents were asked to rank their awareness and use of certain transportation programs and services. As shown below, a majority of commuters have used their UCard Ed pass for public transportation, and approximately half of respondents use or have heard of the live campus shuttle tracker. Overall, the remaining programs and services rank high as something people are not aware of or have never used.



Figure 17. Commuter awareness of programs and services

<sup>&</sup>lt;sup>5</sup> A narrative summary for each destination area is provided within the report Appendix.

#### Greenhouse Gas Emissions

Regular commuting to and from the institution by students and employees is part of the Scope 3 greenhouse gas (GHG) emissions which are indirect emissions from sources that are not owned or controlled by the institution. Scope 3 emissions are reported to AASHE STARS based on mode split/mile from the commuter survey, plus the addition of weighted campus users as defined by STARS Technical Manual 2.1 (2017), and GHG from the University of New Hampshire Carbon Calculator.

The following table is the reported and projected megatons of CO2 emitted from employee and student commuting to the University of Utah.

		Employee Commute	Student Commute
		MT eCO2	MT eCO2
	2008	35,056.53	22,367.39
	2009	36,835.58	22,886.84
	2010	37,314.91	22,904.15
	2011	33,056.78	22,606.77
	2012	36,567.36	24,242.76
	2013	36,557.54	22,654.64
	2014	30,561.45	20,234.01
	2015	n/a	n/a
	2016	29,665.32	14,192.03
Projected	2017	33,196.95	18,266.16
<b>Projected</b>	2018	32,883.58	17,726.17
<b>Projected</b>	2019	32,570.21	17,186.17
<b>Projected</b>	2020	32,256.83	16,646.18

### **Conclusion and Recommendations**

Transportation behavior to and from the University of Utah is a complex puzzle, as commute choices reflect a variety of changing conditions, attitudes and preferences. This report highlights data points that provide a snapshot of the current commute experience for the University population. The 2017 dataset used to produce this report is available within the Marriot library repository.

Future analysis of the survey data could support the development of interventions to provide individualized targeting of commuters based on geospatial information. Once developed, these interventions could provide an effective and low-cost way to reach University commuters and encourage sustainable transportation.

Limitations of the data are that only the University population was surveyed. Visitors, large non-University employers or hospital patients are not survey respondents and their transportation experience may highlight different needs and concerns. Another limitation is the difficulty of comparing trends over time as the raw data from past surveys is not available, and the reporting and measuring methodologies vary within each survey.

To improve future surveys, the following is recommended:

- Conduct the commuter survey every two years and place on the main survey calendar
- Assign the survey administration and reporting to a research department with transportation interest and expertise
- Allocate a budget commensurate with a University-wide survey effort
- Standardize question set and reporting format
- Store survey data in a central repository for shared use

Questions related to this written report and the associated appendix should be directed to:

Ginger Cannon, Active Transportation Manager, University of Utah

Amy Brunvand, Sustainability Librarian, University of Utah

### University of Utah, Commuter Survey Report Appendix

- A. University of Utah Fast Facts, 2017 OBIA
- B. 2017 Commuter Survey Questions
- C. Email invitation to University population
- D. Maps of commute origin by zip code (State, County, City with Buffer Zones)
- E. Comment Narrative: Main Campus, Research Park and Health Sciences

# **UNIVERSITY OF UTAH FAST FACTS**

#### Student Enrollment (Fall 2017 Census - Utah Campus)

	Headcount	Male	Female	Full-time	Resident
Undergraduate Students	24,635	53%	47%	73%	84%
Graduate Students	8,125	54%	46%	76%	67%
Total	32,760	53%	47%	74%	80%
First Time Freshmen	4,119	50%	50%	94%	67%

#### Degrees Awarded (July 1, 2016-June 30, 2017)

Bachelor's	5,214
Master's	2,140
Doctorate Professional	339
Doctorate Research	451

#### **Official Graduation Rate**







Fall 2016 to Fall 2017

### Percent of Race/Ethnicity by Student Type

	First Time Freshmen	Undergraduate Students	Graduate Students
White	68%	67%	63%
Hispanic/Latino	14%	13%	7%
Nonresident aliens	3%	5%	16%
Asian	7%	7%	5%
Two or more races	6%	5%	3%
Race and/or ethnicity unknown	0%	2%	5%
Black or African American	1%	1%	1%
Native Hawaiian or other Pacific Islander	1%	0%	0%
American Indian or Alaska Native	0%	0%	0%

16:1 Student to Faculty Ratio



More than **680** significant faculty awards from National and International Societies and Governing Councils

#### 2017-18 Undergraduate Tuition & Fees [Per Semester, 15 credit hours]

	Tuition	Fees
Resident	\$3,848	\$564

#### Faculty Headcount (Fall 2017)

	Full-time	Part-time
Tenure Line	1,502	150
Librarians	54	-
Career Line	1,429	133
Visiting	16	3
Adjunct	72	175

#### Staff Headcount (November 2017)

	Full-time	Part-time
Campus	5,138	5,045
School of Medicine	3,374	670
Hospital/Clinics	8,067	1,443

### For the Year Ended June 30, 2017 (\$'s in thousands)

of Operations	Support
Tuition and Fees	327,508
Patient Services	2,192,329
Grants and Contracts	397,813
Sales and Services	900,958
Auxiliaries and Other	333,351
State Appropriations	322,050
Gifts	117,949
Investment Income	97,547

Sources of Revenue in Support

#### Value of Endowment Assets

Endowment Value 1,003,450

Operating Experi	363
Instruction	491,606
Research	343,778
Public Service	803,607
Academic Support	121,276
Student Services	35,918
Institutional Support	83,464
Plant Maintenance	84,488
Student Aid	(300)
Other	144,941
Hospital	1,751,557
Component Units	504,630

Functional Classification of Operating Expenses

For more information visit: www.obia.utah.edu

2017 Commute Survey, University of Utah

#### Welcome to the 2017 Commute Survey!

This survey is intended for everyone who regularly travels to the University of Utah for school or work. Participating in this survey takes less than 10 minutes to complete. Doing so is voluntary, and we assure you that all responses are confidential and the results will only be published in the aggregate, without connection to any individual.

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

- Your role at the University of Utah
- Your travel to and from campus
- Some background information about you

To reward you for your time and input, you may enter to win prizes redeemable at the Campus Store; remember to provide your contact information at the end of the survey to be considered.

Thanks for participating - your feedback is important to us!

#### 2017 Commute Survey, University of Utah

First, we have a few questions about your role at the U.

1. What is your association with the University of Utah (choose all that apply)?

Undergraduate Student

Graduate Student

Faculty

Staff

2. How many years have you been at the U of U (in any role)?

3. What is your home ZIP code?

4. C	)id you	live or	campus	at any	time	in	2017	?
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C	)	Yes
C	)	No

5. Which semesters did you live on campus?

Spring

Summer

Fall

Next, we ask questions about your travel to and from the University campus.

6. For the Fall 2017 semester, what is your primary University of Utah commuting destination?

University Campus - Salt Lake City (includes all buildings within Main Campus, Health Sciences, Fort Douglas/Student Dorms, Research Park, and Student Apartments)

Satellite Location

7. For the Fall 2017 semester, please select the general campus destination of your inbound commute (choose all that apply).

Main Campus North
Main Campus South
Fort Douglas & Student Dorms
Health Sciences
Research Park
Student Apartments

8. How many miles is your typical one-way commute from home to campus? Click <u>here</u> to open a new tab where you can approximate your route distance using an online map. An inbound commute is defined as your way to campus; an outbound commute is moving off campus to your next destination.

#### Monday Tuesday Wednesday Thursday Friday Saturday Sunday Drive in personal vehicle alone or with children under 16 Carpool or Vanpool (2+ people, 16 or older) UTATRAX UTA Frontrunner UTA Bus U Campus Shuttle Motorcycle or Moped Bicycle Skateboard, scooter or rollerskates Walk or run Telecommute Uber or Lyft services I do not commute to campus this day

## For the Fall 2017 semester, what mode(s) of transportation do you typically use to arrive to campus each day for your inbound commute? (choose all that apply)

9. For the Fall 2017 semester, what mode(s) of transportation do you typically use to depart from campus each day for your *outbound commute*? (choose all that apply)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Drive in personal vehicle alone or with children under 16							
Carpool or Vanpool (2+ people, 16 or older)							
UTATRAX							
UTA Frontrunner							
UTA Bus							
U Campus Shuttle							
Motorcycle or Moped							
Bicycle							
Skateboard, scooter or rollerskates							
Walk or run							
Telecommute							
Uber or Lyft services							
I do not commute to campus this day							

10. For the Fall 2017 semester, do you typically drive a personal vehicle to campus?

(	)	Yes

) No

11. Which type of personal vehicle do you use most often to commute?

Gasoline or diesel vehicle

Conventional hybrid vehicle (does not plug into the electricity grid)

- Plug-in hybrid electric vehicle
- All-electric vehicle
- CNG fueled vehicle
- Biofuel vehicle
- Hydrogen fuelcell vehicle
- Other (please specify)

12. While on campus, how do you typically move between destinations?

- Walk or run
- Skateboard, scooter, rollerskates
- Bicycle
- Motorcycle or moped
- U Campus Shuttle
- UTA TRAX
- UTA Bus
- Carpool or vanpool
- Drive alone in a car
- Motorized cart (University-owned)
- Other (please specify)

#### 13. What time do you typically arrive on campus?

- 12:00 a.m. 4:59 a.m.
- 5:00 a.m. 6:59 a.m.
- 7:00 a.m. 8:59 a.m.
- 🔵 9:00 a.m. 11:59 a.m.
- 12:00 p.m. 4:59 p.m.
- 5:00 p.m. 6:59 p.m.
- 7:00 p.m. 8:59 p.m.
- 9:00 p.m. 11:59 p.m.

#### 14. What time do you typically leave the campus?

- 12:00 a.m. 4:59 a.m.
- 5:00 a.m. 6:59 a.m.
- 7:00 a.m. 8:59 a.m.
- 🔵 9:00 a.m. 11:59 a.m.
- 12:00 p.m. 4:59 p.m.
- 5:00 p.m. 6:59 p.m.
- 7:00 p.m. 8:59 p.m.
- 9:00 p.m. 11:59 p.m.

#### 15. How familiar are you with these campus programs or infrastructure?

	I've never heard of it	I've heard of it, but never used it	I've used it
UCard on UTA buses and trains	$\bigcirc$	$\bigcirc$	$\bigcirc$
Live Campus Shuttle Tracker	$\bigcirc$	$\bigcirc$	$\bigcirc$
Enterprise Car Share	$\bigcirc$	$\bigcirc$	$\bigcirc$
Zimride online ride matching	$\bigcirc$	$\bigcirc$	$\bigcirc$
UTA carpool and vanpool	$\bigcirc$	$\bigcirc$	0
Lock it or Lose it	$\bigcirc$	$\bigcirc$	$\bigcirc$
Guaranteed ride home	$\bigcirc$	$\bigcirc$	$\bigcirc$
Electric vehicle charging stations	$\bigcirc$	$\bigcirc$	$\bigcirc$
Campus bike shop	$\bigcirc$	$\bigcirc$	$\bigcirc$
Bike repair stations	$\bigcirc$	$\bigcirc$	$\bigcirc$
S.A.F.E. (Sidewalks are for Everyone)	$\bigcirc$	$\bigcirc$	0

16. Is there anything else you'd like to share about your commute experience?

This last part of the survey asks a few more questions about you.

# We use this information to help understand travel choices and how the people taking the survey might represent the University community as a whole. Your answers are confidential and will not be used for any other purposes.

17. Do you have any temporary or permanent conditions that limit your ability to walk, bike, drive or use public transit?

	Yes	No
Walk	0	$\bigcirc$
Bike	$\bigcirc$	$\bigcirc$
Drive	$\bigcirc$	$\bigcirc$
Use public transit	$\bigcirc$	0
<ul> <li>18. What is your gender identity?</li> <li>Woman</li> <li>Man</li> <li>Trans* or Transgender</li> <li>Prefer not to disclose</li> <li>Self Identify (please specify)</li> </ul>		

19. What was your gross income in 2016? (please estimate your individual income only, not your household income)

- \$0-9,999
- \$10,000 -24,999
- \$25,000 49,999
- \$50,000 -74,999
- \$75,000 99,999
- \$100,000 124,999
- \$125,000 149,000
- \$150,000 +
  - Prefer not to disclose

Dear U Community Member:

You have been specially selected to participate in our 2017 Commuter Survey, which helps us better understand how the university community travels to the University of Utah for school or work. Participating in this survey is voluntary and should take fewer than 10 minutes to complete. The survey will remain open through Monday, November 20th. All responses are confidential, and the results will only be published in the aggregate, without connection to any individual.

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

- × Your role at the University of Utah
- × Your travel to and from campus
- × Some background information about you

To reward you for your time and input, you may enter to win prizes redeemable at the Campus Store, including a grand prize of \$500 gift card. Please remember to provide your contact information at the end of the survey to be considered.

Survey link: <u>https://www.surveymonkey.com/r/2017Commute</u>

Thanks for participating. Your feedback is important to us!

Best regards,

Amy Wildermuth Chief Sustainability Officer

Gordon Wilson Associate Vice President for Administrative Services













### University of Utah 2017 Commuter Survey Main Campus: Comment Summary

Survey Question #18 "Is there anything else you'd like to share about your commute experience?"

- Total Comments Main Campus, North OR South N=1146
  - o (Main Campus, North OR South) & Health Sciences N= 121 (9%)
  - o (Main Campus, North OR South) & Research Park N=60 (4%)

#### **Primary Narratives**

#### Main Concerns by mode

Vehicles	UTA	U Campus shuttle	Active Transportation
Parking	Lack of routes	Higher satisfaction on	Personal safety:
	connecting home and	Main Campus than	sidewalks congested,
	campus	Research Park or	lack of crosswalks,
		Health Sciences.	poorly lit areas,
			dangerous traffic
Game Days	Lack of weekend,		Lack of bike routes and
	evening hours		lanes: not well marked,
			end abruptly
Travel time: rush hour,	Transit reliability and		Bike infrastructure,
congested traffic,	frequency		covered racks, bikes on
congested parking,			UTA, Showers & Locker
need to arrive on time.			rooms

#### **Main Campus Commute**

#### Automobile:

Many comments related to automobiles address parking (see below). At rush hour there is traffic congestion on all routes to campus. Commuters perceive driving as faster, more predictable, and more convenient than other modes. They feel frustrated when conditions add unexpected travel time. Reasons for using a car include caretaking, traveling between school and work, and transporting things.

#### Parking:

Nearly all parking comments are negative. Commuters are concerned that parking is hard to find, costly, and not close to their destination. Limited parking associated with game days and special events is a source of frustration, particularly since there is no information about where to park. Comments show a acute awareness of different levels of parking privilege connected with different pass types. Holding a pass is viewed as an entitlement, and pass holders feel a sense of unfairness when expectations are not met. Commuters who seldom drive would like occasional parking passes. Commuters report using strategies to cope with limited parking including cruising for empty stalls, paying for visitor parking despite holding a pass, risking a fine in an unauthorized space, arriving early, parking off-campus, getting dropped off and picked up, changing transportation mode, or working at night. A few report extreme solutions such as quitting, or sleeping in the car.

### University of Utah 2017 Commuter Survey Main Campus: Comment Summary

#### Transit:

Main Campus is served by a number of UTA routes and three stops on the UTA TRAX red-line. U Campus Shuttles runs around the perimeter and connect Main Campus to Health Sciences, Research Park and some remote parking lots. There is no central bus stop on main campus. High satisfaction is reported for U Card Transit pass, PC Connect, and UTA bike racks (though racks are sometimes full). Some routes are crowded at peak times (TRAX, #2, #6, #213, #220,...) U Campus Shuttle is perceived as slow and it is sometimes faster to walk. There is a need for better evening and weekend service for both UTA and U Campus shuttles. Some riders use Uber/Lyft for hours with poor transit service. Reasons for not using transit include long commute time, lack of convenient routes, lack of evening/weekend hours, and family and work obligations. There are few UTA connections North of campus or along the East Bench. Some respondents find transit maps and schedules confusing. Other reasons for not using transit include creepy people, and motion sickness.

#### Active Transportation:

Comments address concerns regarding both routes to and on campus. Not all roads to campus have bike lanes. The city has improved bike lane connectivity to the edge of campus, and the easy/difficult/steep ratings of the U to Downtown bikeway are appreciated. However, routes end once they get to campus. Pedestrians experience dangerous crosswalks on many routes to campus. Bicyclists like UTA bus bike racks, but they are sometimes full. On campus bicycles and pedestrians use the same sidewalks. Sidewalks are perceived as unsafe due to congestion, fast bikes and skateboards and distracted pedestrians. Golf carts and motor vehicles are seen as a hazard and the perception is that they are using sidewalks as a North-South shortcut. Construction blocks sidewalks and snow makes them treacherous. The campus is on a hill so many routes are steep or have stairs. Pedestrian routes are indirect and poorly marked. Some routes end abruptly where they cross parking lots with no safe passage through parking lots. Crosswalks are at infrequent intervals or in dangerous places. The Kennecott overpass is appreciated. Cyclists would like more covered and secured bicycle parking.

#### **Routes for Active Transportation**

Specific routes mentioned or suggested in the comments are:

- 100 S. not bicycle friendly.
- 1300 E. Bad traffic
- *Guardsman Way*: Good bike lane. Difficult to exit the campus. Cyclists need a safe way to cross *500 S*. onto the Guardsman bike lane.
- North Campus Drive: not bicycle friendly, no clear bike lane, fast traffic
- South Campus Drive: No clear bike lane
- South Campus Drive Roundabout: with train tracks through the center of it and a pedestrian controlled stoplight crosswalk nearby is a nightmare.
- N. Virginia St./University St. Need "share the road" signs on Virginia street
- Exits from the Student Life Center, Baseball field and Law School are poorly laid out.
- Walk to and from TRAX on South Campus station is terrible.
- Marriot Library visitor parking has a dangerous three-way stop.

### University of Utah 2017 Commuter Survey Research Park: Comment Summary

#### Survey Question #18 "Is there anything else you'd like to share about your commute experience?"

Format: Open Comment

- Research Park N= 144
- Research Park & Health Sciences N= 70
- Code "Research Park" from Health Sciences or Main Campus N=16

Total Comments N=230

#### **Primary Narratives**

#### Main Concerns by Mode

Vehicles	UTA	U Campus Shuttle	Active Transportation
Parking	Travel time (transfers)	Reliability (especially on-demand shuttle)	Lack of bike routes (to RP and connecting to Health Sciences and Main Campus)
Traffic Congestion &Traffic patterns (Especially Foothill Drive	Proximity of routes/stops	Travel time; waiting	No sidewalks
Personal Safety: Traffic patterns, traffic congestion, remote, poorly lit parking lots	Personal safety: no sidewalks to bus stops; nighttime/evening	Personal safety: No sidewalks to bus stops, reckless drivers, nighttime/ evening service.	Personal safety: no sidewalks/crosswalks; fast traffic; remote; poor snow removal

#### **Research Park Commute**

#### Automobile:

Access to Research Park via Foothill Drive is congested during morning and evening rush hours when traffic patterns entering Research Park at Foothill Drive and at Sunnyside Ave. are perceived as unsafe. Parking is relatively higher satisfaction than on Main Campus or Health Sciences. People say there are few spots for visitors, students or other non-employees. If drivers leave during the day they can't find a parking spot when they return. Connection to Health Sciences and Main Campus by car is poor due to parking availability at destinations. There are no electric vehicle charging stations.

#### Transit:

Nearly all transit commutes require a time-consuming transfer. UTA Bus routes run infrequently. The Park City Connect route does not stop at Research Park. Some bus stops have no sidewalks for pedestrian access. Connection to TRAX, Health Sciences and Main Campus is via a low-satisfaction ondemand U Campus Shuttle perceived as: unreliable resulting in unpredictably long wait times; confusing to reverse back to their original pickup location, particularly during evening/nighttime hours; stops change without notice; night on-demand Shuttle employees gave wrong information.

### University of Utah 2017 Commuter Survey Research Park: Comment Summary

#### Active Transportation:

Biking is an option for some Research Park commuters, and bicycles travel through Research Park as a route to other campus locations. Barriers are a steep hill; lack of bike routes; difficulty crossing or travelling along Foothill Drive; no bike racks on U Campus Shuttle; lack of shower/change facility. Walking is difficult because of a lack of sidewalks and crosswalks. Connections to Main Campus and Health Sciences are poor since there are no designated pedestrian or bike routes, and no sidewalks or crosswalks in some places.

#### **U** Campus Shuttle

Research Park is largely dependent on the U Campus Shuttle for connections to Health Sciences and Main Campus. Comments about the U Campus Shuttle Service are largely negative:

A mystery; Air conditioning broken, Always late; App doesn't respond during peak hours; Awful experiences, breaks down; calls go to voicemail; circular routes; does not answer calls; don't understand how to use it; embarrassing; frustrating; have to call; held captive at TRAX stop; horrible, I do not like it; in conflict with its purpose; inconsistent; inefficient; long wait; looked good on paper; no bike racks; no response to texts; no set times; not better; not coordinated with TRAX; not easy to use; not great; not straightforward; poor evening service; Poor shuttle connection between TRAX and Research Park; poor weekend service; passes stops; pulls away before TRAX stops; poor drivers; reckless drivers; requested but doesn't move on app; serious glitches; sits to wait for TRAX; staff says it doesn't go to UNI (wrong info); stops change without notice; Taking away black shuttle was a hard blow, lengthened travel time, terrible; unpredictable; variable time frame.

#### **Routes for Active Transportation**

Connectivity issues affect active transportation to Research Park and between Research Park, Health Sciences and Main Campus. Routes to and within campus are not continuous or well-marked. Road shoulders are in poor repair. Pedestrians are forced to walk in the road in areas with no sidewalks. Snow plows push snow from roads onto sidewalks.

Specific routes mentioned or suggested in the comments are:

- Suggest a dedicated bike route that exits the "above Foothill neighborhood" at Crestview Dr. and Sunnyside - and continues on the frontage road that parallels Sunnyside in "Heritage State Park". Then turns right, heading North, along the west end of "Heritage Park", through the west end parking lot, past the Event center, along what is now a gravel road. The bike route would come into Research Park on Colorow Road.
- *Chipeta Way*: Chipeta Way and Connor Rd terrible condition for biking. Massive pot holes everywhere.
- Colorow Drive: sidewalk and better lighting
- *Foothill*: Foothill/Sunnyside intersection dangerous; snow plowed onto sidewalk from foothill at the base of Wakara to Mario Cappechi; Foothill and Wakara bus stop has no route to building
- Mario Capecchi Drive: suggest a route east of and including Mario Capecchi;

### University of Utah 2017 Commuter Survey Research Park: Comment Summary

- *Sunnyside*: Fast traffic; Sunnyside/Arapeen/Chipeta route to research park dangerous; suggest a paved path below the Shoreline trail from Sunnyside all the way to the Health Sciences campus; Sunnyside has good bike lanes above Foothill; Sunnyside/Arapeen intersction is dangerous
- *Wakara*: suggest a bike route from Wakara to Research Park; no sidewalk on south side of Wakara; no sidewalk on Wakara Way between Chipeta and Colorow.
- This is the Place: Gate on frontage road "Heritage State Park" is closed during a commute hours; Governor's Grove loose gravel; West dirt rode signed not open to walking/biking; suggest a bike path somewhere on the property between Arapeen and This is the Place
- *Research Park to Health Sciences*: Poor shoulder maintenance between Ft. Douglas and research park, south of HCI, on hill between HCI and HSEB; suggest East-west and north-south bicycle corridors on and near campus, to/from HSC and to/from Research Park; suggest bike route between HSC and main campus and Research Park; no clear path between research park to hospital; indirect walking path to Health Sciences.

### University of Utah 2017 Commuter Survey Health Sciences: Comment Summary

#### Survey Question #18 "Is there anything else you'd like to share about your commute experience?"

Format: Open Comment

- Total Health Sciences Comments N=874
  - o Health Sciences & Research Park Comments N=69 (8%)
  - Health Sciences & Main Campus N=121 (14%)

#### **Primary Narratives**

#### Main Concerns by Mode

Vehicles	UTA	U Campus Shuttle	Active Transpiration
Parking proximity—HS parking lots are remote and rely on U Campus Shuttle or lengthy walks	Lack of early, late and weekend hours does not accommodate HS staff schedules.	On demand service unreliable with long waits	No good routes to walk from parking or transit stops.
Caretaking role.	Lack of transit routes to hospital. Transfer adds too much travel time.	Poor connections between U Campus shuttle and UTA	Poor connection to Research Park.
Congestion on Foothill and Mario Capecchi Drive	Lack of East Bench service.		No bike routes/lanes. Dangerous crosswalks.

#### **Health Sciences Commute**

There are only two streets used for automobiles to get to the Health Sciences (HS) campus. Along 100 S. to North Campus Drive and along Mario Capecchi Drive. Few UTA routes go to the hospital. There is one stop on the TRAX red line. The U Campus Shuttle connects HS to other parts of campus and remote parking lots (O-Zone, Guardsman Way, Wasatch Express). The Bonneville Shoreline trail is used as a commuting route for bikes and pedestrians, and bikes travel though Research Park and Fort Douglas. Employees at the hospital and clinics work 24/7 on-call with unpredictable hours. Many Health Sciences employees do shift work and arrive earlier and leave later than commuters to other parts of campus. Clinical Staff work at more than one location. There is pressure to arrive at work on time and employees cannot clock out to accommodate transit schedules. HS employees frequently travel to Research Park locations, which have poor connections by all modes. There are more stated concerns about mobility/disability than other campus destinations.

#### Automobile:

Main reason for driving include travel time, lack of transit options, caretaking and need to move between locations during the day. Some drivers shift to transit on snowy days. Foothill Drive and Mario Capecchi Drive become congested at peak times. Traffic backs up at Primary Children's Hospital. A traffic light is needed on the road that connects the colleges of nursing and pharmacy and the garages behind HSEB. Electric vehicle charging options are limited. Traffic patterns and light timing are seen as problems causing congestion. Roads around Health sciences are in poor condition. Commuters are using

### University of Utah 2017 Commuter Survey Health Sciences: Comment Summary

Uber/Lyft for various purposes including snow days, carpooling and missed transit connections. A shooting incident near Red Butte Garden has caused heightened safety concerns.

#### Parking:

Most comments about parking are negative. Parking is perceived as expensive and not available. Lots are distant from destinations so that drivers are dependent on the U Campus Shuttle or walk long distances. Walking routes are indirect, poorly marked and feel unsafe at night. Close-in parking is full by 8:00am. There is a wait list for closer spots. Construction occupies spaces near buildings. Game days and Red Butte Concerts block parking. Reserved stalls sit empty. HSEB and Hospital do not have enough ADA parking and there are not enough spaces for "T" Permit holders. Employees resent having to pay to park in order to go to work, particularly since other hospitals in the area have free parking. There is concern that new buildings are under construction with no plan to accommodate more commuters. Commuters suggest willingness to park off-campus with (free) parking and a shuttle. Transit and active transportation users would like to "earn" occasional validated parking passes as a reward for not parking.

#### Transit:

Transit riders appreciate the UCard Pass, #2 bus, and Park City Connect Bus. (Not all HS departments participate in UCard). Some commuters walk to Health Sciences from UTA Routes in Research Park. Early morning and late night shifts make public transit impossible for many employees. UTA busses, TRAX and U Campus Shuttles do not run frequently (15 min intervals are preferred; #223 runs once every 2 hours). Routes stop running around 6:00 or 7:00pm.Some UTA routes do not run on weekends (e.g. #17). There is no longer a U Campus Shuttle from Frontrunner. Student-oriented shuttles stop running during breaks and summer although employees are still working. UTA bus routes have changed for construction but communication about changes and detours has been poor. There is no bus or TRAX route along the East Bench, a major car commute route from Wasatch Blvd to Foothill to Hospital. Transfers add extra travel time, and result in missed connections with long waits. There is no good walking route from TRAX to Research Park. TRAX tap-on station is not close to crosswalk and generates a line. Snow is not cleared from TRAX stop. Commuters feel unsafe at the Central TRAX station transferring to University Red Line trains. Some HS commuters resent paying for a UTA pass they cannot use, although others like flexibility to use the pass occasionally. Reasons for not using transit are long travel time and no routes close to home.

#### U Campus Shuttle:

On demand shuttle functions poorly. It is unreliable on evenings and weekends with long waits (25-45 minutes after calling). Infrequent early morning service. Circular routes. Poor shuttle connection between HS and Research Park. Shoreline garage has a shelter but no U Shuttle stops. Shuttle should wait for UTA TRAX Passengers. Construction has disrupted U shuttle stop at Hospital.

#### Active Transportation:

The main roads to HS have no bicycle lanes. Fast, aggressive driving is a safety hazard. Cyclists travel though the Avenues of Research Park/Fort Douglas. Cyclists shift to automobiles or transit in bad weather. Bike riders use Mario Capecchi Drive, mingling with fast traffic. Lights are timed for cars. Cyclists would like showers and bike lockers. Cyclists would like occasional parking passes for days when

### University of Utah 2017 Commuter Survey Health Sciences: Comment Summary

they need to drive. Bike/walk connections between HS and Research Park are poor. Sidewalks often come to an abrupt end, crosswalks don't connect to sidewalks. Sidewalks are not cleared of snow. Fast traffic makes crossing the street dangerous. Construction around the hospital blocks sidewalks. Around EEJ, EIHG and other buildings pedestrians have to walk in the street. Pedestrian connections through buildings are locked after-hours.

#### **Routes for Active Transportation**

Health Sciences cyclists and pedestrians are concerned about personal safety crossing congested roads with fast traffic and long walks at night to access parking and transit stops. Connections are poor not only between different parts of campus but traveling on the Health Sciences Campus. The location of Health Sciences means that active commuters pass through other parts of campus during their commute. Specific routes mentioned or suggested in the comments are:

- 100 S./North Campus Drive: there is a bend that is impossible to navigate with a very weird pedestrian crossing and UTA stop at the same time. I don't know why there isn't an overpass there for pedestrians; the intersection of E Penrose Dr. and S. Wasatch Dr.is dangerous for bikers. I suggest making a 1-foot wide opening in the central median to safely allow bicycles to cross N. Campus Dr. (as safe based on traffic), including the ability to cross to the median first and then cross to the other side as traffic clears. I have seen pedestrians trying to cross North Campus dodging cars because there is no cross-walk at that location.
- *Foothill Drive:* traffic congestion, no sidewalks, no UTA Routes, not bike friendly. Dangerous intersection at Foothill and Sunnyside.
- *Mario Capecchi Drive*: Road poorly maintained, no bike lane or shoulder; bikes mingle with traffic; no sidewalks on Mario Capecchi, especially under the bridge
- *Sunnyside*: Bike access between Sunnyside and health sciences needs improvement.
- Virginia St to Ft Douglas: No bike lane
- *Wasatch Drive*: the cross walk where the Wasatch express picks people up is incredibly dangerous The cross walk across Wasatch Drive from Lot 46 to the shuttle stop on the East side of Wasatch Drive to catch the Wasatch Express is a DEATH TRAP!
- Past HCL: there are sections of this road without sidewalks on either side
- *Dumke Building*: No crosswalk, no sidewalks.
- Eccles Broadcast Center: No route to TRAX
- JCC crosswalk: needs a light or flashing sign.
- *Hospital entrance renovation*: Poorly designed
- *Terrace to Medical Center*: Blocked by construction.