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Capturing Transit Rider Perspectives on Safety and Harassment: Lessons from San Francisco

### Permalink

<https://escholarship.org/uc/item/82g7152f>

### Authors

Wasserman, Jacob L.

Brozen, Madeline

Loukaitou-Sideris, Anastasia, PhD

### Publication Date

2025-02-01

### DOI

10.7922/G2NC5ZJN

# Capturing Transit Rider Perspectives on Safety and Harassment: Lessons from San Francisco

Jacob L. Wasserman, Research Program Manager, UCLA Institute of  
Transportation Studies

Madeline Brozen, Deputy Director, UCLA Lewis Center for Regional  
Policy Studies

Anastasia Loukaitou-Sideris, Ph.D., Distinguished Professor of Urban  
Planning, UCLA Luskin School of Public Affairs

February 2025

## Technical Report Documentation Page

<b>1. Report No.</b> UC-ITS-2022-51		<b>2. Government Accession No.</b> N/A		<b>3. Recipient's Catalog No.</b> N/A	
<b>4. Title and Subtitle</b> Capturing Transit Rider Perspectives on Safety and Harassment: Lessons from San Francisco			<b>5. Report Date</b> February 2025		
			<b>6. Performing Organization Code</b> UCLA ITS		
<b>7. Author(s)</b> Jacob L. Wasserman, <a href="https://orcid.org/0000-0003-2212-5798">https://orcid.org/0000-0003-2212-5798</a> ; Madeline Brozen, <a href="https://orcid.org/0000-0003-4231-8298">https://orcid.org/0000-0003-4231-8298</a> ; Anastasia Loukaitou-Sideris, <a href="https://orcid.org/0000-0003-0186-4751">https://orcid.org/0000-0003-0186-4751</a>			<b>8. Performing Organization Report No.</b> UCLA ITS-LA2201		
<b>9. Performing Organization Name and Address</b> Institute of Transportation Studies, UCLA 3320 Public Affairs Building Los Angeles, CA 90095-1656			<b>10. Work Unit No.</b> N/A		
			<b>11. Contract or Grant No.</b> UC-ITS-2022-51		
<b>12. Sponsoring Agency Name and Address</b> The University of California Institute of Transportation Studies <a href="http://www.ucits.org">www.ucits.org</a>			<b>13. Type of Report and Period Covered</b> Final Report (September 2022 – February 2025)		
			<b>14. Sponsoring Agency Code</b> UC ITS		
<b>15. Supplementary Notes</b> DOI:10.7922/G2NC5ZJN					
<b>16. Abstract</b> Personal safety concerns continue to be one of the most critical issues among transit riders and women and gender minorities in particular. These safety concerns stem from the experience of sexual harassment that people who identify as women face frequently. While harassment can be a common occurrence, the vast majority of these experiences go unreported to transit agencies, leaving agencies without information about the magnitude of this problem on their system. This report details work with the San Francisco Municipal Transportation Agency (SFMTA) in their efforts to understand and address this problem. The SFMTA, working with two UCLA graduate students, designed a survey that drew from previous survey efforts and was tailored to address their interests and needs. This report documents the process of developing and deploying the questionnaire, in an effort to help other agencies take the first steps to better understanding rider safety and harassment. Through breaking down SFMTA's approach, this report intends to inspire and inform similar efforts at other agencies.					
<b>17. Key Words</b> Transit riders, Sexual harassment, Safety, Surveys, Gender, Transportation equity			<b>18. Distribution Statement</b> No restrictions.		
<b>19. Security Classification (of this report)</b> Unclassified		<b>20. Security Classification (of this page)</b> Unclassified		<b>21. No. of Pages</b> 104	<b>22. Price</b> N/A

Form Dot F 1700.7 (8-72)

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## Acknowledgments

This study was made possible through funding received by the University of California Institute of Transportation Studies from the State of California through the Public Transportation Account and the Road Repair and Accountability Act of 2017 (Senate Bill 1). The authors would like to thank the State of California for its support of university-based research and especially for the funding received for this project. The authors also thank Greer Cowan and Pearl Liu for their preparation of, analysis of, and insights on the survey, the staff at SFMTA and the Transit App who shared their knowledge and thoughts on the topics of this research, and all those who responded to the survey.

The UCLA Institute of Transportation Studies acknowledges the Gabrielino/Tongva peoples as the traditional land caretakers of Tovaangar (the Los Angeles basin and So. Channel Islands). As a land grant institution, we pay our respects to the Honuukvetam (Ancestors), 'Ahihirom (Elders) and 'Eyoohiinkem (our relatives/relations) past, present and emerging.

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Jacob L. Wasserman, Research Program Manager, UCLA Institute of Transportation Studies

Madeline Brozen, Deputy Director, UCLA Lewis Center for Regional Policy Studies

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# Introduction

## Context and Purpose

Personal safety concerns continue to be one of the most critical issues among transit riders and women and gender minorities in particular. These safety concerns stem from the experience of sexual harassment that people who identify as women face frequently. Sexual harassment comes in different forms, with verbal harassment being the most common (Ceccato and Loukaitou-Sideris, 2022). While harassment is a common occurrence, the vast majority of these experiences go unreported to transit agencies, leaving agencies without information about the magnitude of this problem on their system (Ceccato and Loukaitou-Sideris, 2022). The UCLA research team worked with the San Francisco Municipal Transportation Agency (SFMTA) to address this problem.

The SFMTA operates the “Muni” system, consisting of both bus and rail transit, and oversees parking, active transportation, street design, and taxicabs in the City and County of San Francisco, providing them with the opportunity to address sexual harassment and safety more broadly than on the transit system alone. The SFMTA has recently undertaken efforts to understand and address sexual harassment and gender-specific barriers to riding transit. Issues affecting the transit ridership of women and non-binary riders are unfortunately not new, though the upheavals of the Coronavirus Disease 2019 (COVID-19) pandemic for the agency and its travelers made them more salient.

As one of the first steps in this work, UCLA researchers worked with SFMTA staff to conduct and analyze a survey of transit riders’ travel, experiences with harassment, feelings of safety, and potential solutions. Led by UCLA graduate students Greer Cowan and Pearl Liu, this effort collected 1,613 responses in February and March 2023 through a partnership with the Transit App. They subsequently analyzed the findings in their 2023 capstone project *Rethinking Transit Safety: Understanding and Addressing Gender-based Harassment and Enhancing Safety on San Francisco’s Muni Transit System* (Cowan and Liu, 2023).

Overall, Cowan and Liu (2023) find stark issues of harassment and feelings of lack of safety on the SFMTA system. Two thirds of respondents experienced harassment themselves, and around the same share witnessed it. Safety perceptions declined after dark, with less than a third of respondents feeling safe riding at night. Women and gender minorities experienced greater harassment and lower feelings of safety than their male counterparts, to a statistically significant degree. People of color, younger people, and people with disabilities also experienced harassment at higher rates. Among a selection of potential responses, providing transit ambassadors and more lighting were ranked most likely to improve safety on the system. Cowan and Liu (2023) provide more analysis and discussion of the survey results in their capstone.

In this report, we take a step back and review the process of developing this survey, fielding it, analyzing its results, and turning those results into policy responses. We recount the motivations and origins of the survey,

review its questions and structure in detail, and reflect on lessons learned from its deployment and analysis. In doing so, we compare this survey to selected prior surveys of transit riders or travelers on issues relating to gender, safety, and harassment (See Appendix for full survey instruments):

- *Public Transit Safety among University Students* (Loukaitou-Sideris et al., 2020) (“university student survey”): an international survey of transit safety among university students
- *Understanding How Women Travel* (Galicia et al., 2019): a survey of women’s travel behavior by the Los Angeles County Metropolitan Transportation Authority (LA Metro)
- *Changing Lanes: A Gender Equity Transportation Study* (Reynolds et al., 2021) (“*Changing Lanes*”): a survey of women’s travel behavior and needs by the City of Los Angeles Department of Transportation
- *Learning about Street Harassment on Transit: A Survey Instrument for Transit Agencies* (Agrawal et al., 2023) (“MTI survey”): a model survey of harassment on transit (discussed below)

We also draw from interviews we conducted of SFMTA staff involved in the agency’s gender equity efforts, in different departments and levels of the organization, as well as staff at the mobile application “Transit,” through which the survey was deployed.

In tandem with the SFMTA’s efforts, the California Legislature passed Senate Bill (SB) 1161 (2022) and SB 434 (2023) to create better awareness of sexual harassment patterns in public transit. These bills mandated that the ten largest transit agencies in the state (measured by pre-pandemic ridership) conduct surveys of their riders on harassment and report the data publicly (California Legislature, 2022, 2023 and Scauzillo, 2023). SB 1161 (2022) tasked the Mineta Transportation Institute (MTI) at San José State University with developing and refining a sample survey on harassment and safety on public transit (California Legislature, 2022). The survey and report developed in response (Agrawal et al., 2023), alongside funding allocated from the state department of transportation, Caltrans, will be of use to agencies mandated to administer such surveys.

We build on MTI’s work, demonstrating how a survey of the type they developed can be employed by a large transit agency and exploring nuances and differences in survey application. We also explore the internal agency structures that best position harassment surveys like MTI’s or Cowan and Liu’s (2023) to succeed. The aim of this report is to offer other agencies a toolkit and set of lessons learned as they launch their own surveys and fulfill their requirements under the new law. While smaller transit agencies are not mandated by state law to conduct such surveys, they too may benefit from this report, should they run a survey as well.

In the sections that follow, we first provide context and motivations for SFMTA’s gender equity efforts and then discuss how their 2023 survey was developed and deployed. We review questions in different sections of the survey instrument, comparing them to prior surveys and explaining the reasons behind differences in survey design. Then, we offer some takeaways for agencies looking to field their own survey on gendered harassment based on our own experience conducting this survey. We conclude with reflections on how surveys can help to translate findings into action and what follow-up agency staff and policymakers should undertake after conducting their survey. A reproduction of the SFMTA survey instrument and those of our comparison surveys follows in the appendix.

## SFMTA's Gender Equity Efforts

The agency's gender equity efforts, termed the SFMTA Safety Equity Initiative (along with other anti-harassment work), were born of several factors. For one, the agency has incorporated equity analysis into its strategic planning documents, project and service implementation processes, and budgeting. "Equity is one of our core values," noted Julie Kirschbaum, SFMTA's Director of Transit. "...It's...a screening factor for all of our decision-making." For instance, during the pandemic recovery, the agency first restored service in "equity neighborhoods" (those with higher shares of low-income residents and people of color). According to Kirschbaum, the Muni Service Equity Strategy dates back to 2014, with earlier efforts such as discounted low-income Lifeline transit passes beginning in 2005. In 2020, the agency created a Racial Equity Action Plan, in response to a mandate to all City departments. These equity efforts created the internal conditions, structures, and relationships that fostered the Safety Equity Initiative in more recent years (SFMTA, 2021, 2022, 2024b, 2024a; Maguire, 2020; Nelson et al., 2021; and Belov, 2024).

The Safety Equity Initiative also expanded upon the system's existing safety and security efforts. Kimberly Burrus, SFMTA's Chief Security Officer, characterized fighting harassment as part of creating a safe and open system, even if all incidents cannot be criminally pursued under the penal code. The agency uses safety and security as "the first standard measure" of system performance (SFMTA, 2024b). Its portfolio includes not just enforcement agreements with the City's police department but also contracted security, fare inspections, video surveillance, and community ambassadors, the last under the Muni Transit Assistance Program begun in 1996 (SFMTA, 2024b; Dailey, 2024; and Burrus, 2021).

While these proactive steps contributed to the effort being launched, staff also acknowledged in interviews that the Safety Equity Initiative was a response to steadfast community input. For years, the agency had received complaints and accounts of harassment from riders, particularly from women and non-binary travelers. Then, the COVID-19 pandemic raised the importance of the issue, as anti-Asian hate crimes and harassment, on transit and beyond, hit the city and intersected with gendered harassment. Per our interviews, SFMTA's Youth Transportation Advisory Board likewise reported to agency staff gendered concerns about safety on transit among young riders. These public reports, along with media stories and other community input, moved the agency to act.

Finally, the agency as a whole was moved to launch the effort in part because of internal champions. Staff from different departments began raising the issue informally and discussing it together, before forming a loosely organized group. Before this group came together, the SFMTA had no reliable baseline data on harassment, as their surveys did not specifically ask about sexual harassment and their 311 system<sup>1</sup> lacked a category for reporting it. As Maia Moran, a former SFMTA staff member within the transit division and a lead on the Safety Equity Initiative, described:

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<sup>1</sup>The phone, online, and mobile app system for non-emergency reports to the City of San Francisco, ranging from reporting harassment to reporting potholes

The agency is an aggregate of people who hold either their own personal experiences or possibly hold the kind of anecdotes that we all hear. And so I think, reflecting on some of the early conversations that I was engaged in, it felt like there was almost this sense of relief or catharsis amongst staff when the topic was brought up, because I think oftentimes, the people that I was having these conversations with were other women or gender-minority staff. And many of them were like, ‘I’ve experienced this,’ or, ‘I know exactly what you’re talking about,’ or, ‘You don’t even have to say more; I’ve been there,’ or, ‘My mom, my sister, my cousin, my sons, my friend has experienced some version of this.’...It’s been [an] interesting combination, at that aggregated agency level, of both...external pressure and...internal momentum or motivation.

We note that all the key staff involved in these SFMTA gender equity efforts (as well as the two UCLA students who conducted the capstone survey with them) are women. The lead staff on LA Metro’s *Understanding How Women Travel* survey (Galicia et al., 2019) and LADOT’s *Changing Lanes* survey (Reynolds et al., 2021) were mainly women as well. Having the perspective of riding transit as a woman drove the SFMTA staff to convince their agency to take further action and informed the survey itself.

These staff members drew from the experiences and tools of the Bay Area Rapid Transit (BART) system. BART, the regional subway system, launched the “Not One More Girl” campaign in 2021, which had been in development since 2019 (BART, 2023a and Cowan and Liu, 2023). The nonprofit Alliance for Girls created a report on the experiences of girls and non-binary children of color riding transit (Donoso, Gutiérrez, and Qureshi, 2019), to which BART staff responded by developing the campaign in partnership with several community groups. The initiative included surveying about harassment; adding reporting options; creating public education campaigns, posters, and art; changing the system’s code of conduct; and expanding the transit ambassador program (BART, 2023a, 2023b, 2024 and Cowan and Liu, 2023). SFMTA staff followed a number of these approaches, including administering the survey described below.

# Survey Approach

## Questionnaire Development

Under the Safety Equity Initiative, SFMTA and UCLA developed a survey to better understand and establish a baseline for harassment on the SFMTA system. “You cannot track progress on something you’re not measuring,” Director Kirschbaum said.

The SFMTA and UCLA teams drew on questions from other surveys of harassment on transit (especially past UCLA surveys and the BART and Alliance for Girls’ survey) and from past SFMTA surveys. The survey was tested internally by SFMTA staff in September 2022 and then edited and translated into Spanish, Mandarin Chinese, Tagalog, and Russian. The final survey covered ridership and travel patterns, experiences, reporting, feelings of safety, and demographics.

## Survey Method

Initially, the SFMTA team planned to conduct an intercept survey, in which surveyors would approach riders in person at stops and on vehicles. Staff and the UCLA team began developing and testing the survey with this method in mind. However, as the agency typically contracts out survey deployment, it lacked significant internal capacity to launch a survey effort itself, especially given the cross-departmental nature of this survey. Meanwhile, efforts to locate and pay a community-based partner to deploy the survey across the city also ran into delays and contracting hurdles in early 2023. Without an external partner, SFMTA staff themselves would have to conduct the survey “on a more or less volunteer basis,” according to lead staff member Moran.

An existing partnership provided an opportunity to overcome these survey administration challenges. The SFMTA had a relationship with Transit, the company that produces the mobile app “Transit.” The Transit App provides real-time transit information, schedules, and directions for transit agencies around the world. Around the time of the survey’s development, other staff at SFMTA were in conversation with Transit App staff, discussing ways that they could collaborate, share data, and conduct analysis.

In addition to providing transit directions, the Transit App also crowdsources data about transit ride quality and crowding (“rate my ride” data) and conducts a quarterly “rider happiness survey.” In the initial discussions with the SFMTA, Transit App staff suggested that these data could be used to address existing data gaps. After further discussions with SFMTA staff, the parties agreed that the Transit App could be used as a platform to test the technical functionality of launching an agency survey via the app and the logistics of coordinating such a survey between the agency and the app company.

The timing proved incredibly fortuitous, as the SFMTA team and UCLA students had finalized the survey instrument when this partnership opportunity arrived. Deploying the survey on the Transit App promised

savings in labor, costs, time, and coordination, as compared to running a paper and/or online survey. Moreover, with the ongoing COVID-19 pandemic, an app-based survey offered a way to avoid potentially difficult in-person interactions. The pandemic had also disrupted SFMTA's usual schedule and means of survey-taking, leading to both some loss in institutional memory and a need to rethink established methods. Further, the UCLA students had a hard deadline by which they needed to collect data in order to complete their capstone project and graduate.

Transit App provided app users a link to the survey in a banner at the top of the app and sent users a push notification. Because the SFMTA was an existing client, Transit App did not charge for running the survey banner. The company informed the researchers that they found this is a fruitful approach to working with existing clients and that they would be willing to take a similar approach with other agencies in the future. The survey itself was hosted online (SFMTA, 2023), on SFMTA's ArcGIS Survey123 system; the Transit App merely provided users with external links to it. At the end of the two-week data collection period, SFMTA independently sent the survey via text and email to subscribers to its Muni Alerts program as well (Cowan and Liu, 2023). Overall, 72 percent of the responses came from the Transit App banner and 28 percent came from the follow-up texts and emails, with a total of over 1,600 responses.

# Analysis of Questions and Comparison to Prior Surveys

## Ridership and Travel Patterns

The survey included five categories of questions. The first set covered travel patterns and transit use. Asking respondents about their ridership patterns helps to set the context for their harassment experiences. For that reason, the first question in the survey (Cowan and Liu, 2023, p. 58) was:

1. *For the past six months, how often do you ride Muni (buses, Muni Metro trains, streetcars, and/or cable cars)?*
  - *Every day*
  - *A few times a week*
  - *A few times a month*
  - *Once a month or less*
  - *Never*
  - *Don't know/not sure*

These frequencies are functionally similar to other UCLA-developed questionnaires, such as the university student survey, which have had responses of “every day,” “5-6 days per week,” “3-4 days per week,” “1-2 days per week,” “less than once per week,” and “never” (Loukaitou-Sideris et al., 2020, pp. 93, 98). The MTI survey used fewer options—“2 or more days a week,” “1-4 days a month,” and “a few times a year or less”—to keep the question short and simple (Agrawal et al., 2023, pp. 20, 36). In all cases, though, the surveys avoided subjective terms like “rarely” or “often,” which could lead to different interpretations by different respondents.

Using this question, Cowan and Liu (2023) analyze the experiences of harassment and perceptions of safety by frequency of transit use. They find that more frequent riders experienced harassment most often, and less frequent riders less so. Interestingly, also reporting frequent harassment were some who responded that they never rode Muni—likely people who used to but no longer ride the system, potentially, as Cowan and Liu (2023) posit, because of harassment. But only 30 of the 1,613 respondents to the SFMTA survey answered “never” about their ridership frequency, a sign that the survey targeted current transit riders. Cowan and Liu (2023) also find that those who rode a few times a month felt the safest, slightly more so than more frequent riders and much more so than less frequent riders, who may be afraid to take transit and thus ride less.

The survey could have asked non-users or infrequent users whether they used to ride the system or used to ride it more often and whether safety was a determining factor in reducing their transit use. While this approach was not done in the SFMTA survey to save respondents’ time (nor in the MTI survey questionnaire (Agrawal et al., 2023)), it could be incorporated into future online survey instruments.



The SFMTA survey’s questions did not ask respondents to break down their transit use by mode (Cowan and Liu, 2023), again for brevity.<sup>2</sup> However, in future surveys, it may be helpful to ask which part of the system people use, for systems with both bus and rail service such as Muni. For example, riders who only take subways or trains may have different experiences and concerns than people who only ride the bus.

The SFMTA survey also included a new question (Cowan and Liu, 2023, p. 59), not included in the previous tools:

3. *When you use Muni, how often do you travel alone?*

- *Always*
- *Often*
- *Sometimes*
- *Rarely*
- *Never*
- *Don't know/not sure*

Cowan and Liu (2023) find that those who always or often traveled alone reported higher rates of harassment and lower feelings of safety. While SB 434 (2023) mandates that large transit agencies ask about whether a rider was alone or with others when they experienced harassment (California Legislature, 2023 and Agrawal et al., 2023), it does not require asking about the frequency with which travelers ride alone.

## Experiences

The survey section covering people’s experiences with harassment is the most critical part of the data collection instrument. Surveys should prompt respondents to say which specific types of harassment they may have experienced and on which part of the system these experiences occurred. Otherwise, if they are only asked about harassment in general, respondents may fail to report many common and socially normalized but unacceptable behaviors as harassment (Ceccato and Loukaitou-Sideris, 2020 and Agrawal et al., 2023).

The SFMTA survey took a list of different experiences in the prior UCLA university student survey and condensed them into broader categories (See **Table 1**) (Cowan and Liu, 2023 and Loukaitou-Sideris et al., 2020)—most notably asking about “inappropriate or unwanted language” (Cowan and Liu, 2023, pp. 59, 61), rather than the eight more distinct categories in the previous university student survey. The item “Inappropriate or unwanted touching or groping” (Cowan and Liu, 2023, pp. 59, 61) also condensed four behaviors into one category (Cowan and Liu, 2023 and Loukaitou-Sideris et al., 2020). It does not appear that this resulted in any significant loss of information. The SFMTA survey also had fewer categories than those in the MTI survey (Agrawal et al., 2023) but mapped less neatly onto them.

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<sup>2</sup>Nor did the MTI survey (Agrawal et al., 2023), whose authors tested their survey on two agencies that each operate only a single mode. The *Understanding How Women Travel* survey for LA Metro did ask multiple questions about travel by mode (Galicia et al., 2019).

**Table 1. Comparing Harassment Prompts between SFMTA and Prior UCLA University Student Surveys**

SFMTA Survey	UCLA University Student Survey
Inappropriate/unwanted language	Asked to have sex by a stranger Sexual comments (about clothing, looks) Unwanted sexual teasing, remarks Using obscene/abusive language Calling you “babe,” “honey,” “sweetheart” Asking you personal questions about sexual life Making kissing sounds Whistling
Inappropriate/unwanted touching or groping	Groping, touching inappropriately Unwanted kissing by a stranger Pulling or playing with your hair Invading personal space
Staring or leering	Unwanted sexual looks or gestures
Stalking or being followed	Stalking
Indecent exposure	Indecent exposure
Sexual gestures	Unwanted sexual looks or gestures Masturbating in public
	Showing pornographic images
	Other

*Data sources: Cowan and Liu, 2023, pp. 59–62 and Loukaitou-Sideris et al., 2020, pp. 97–98, 103–104*

Collecting information on what type of harassment people experience should be paired with asking about where in their transit journey these experiences occurred: on the way to/from stops/stations, at the stop/station, or on the vehicle. The SFMTA survey and the prior UCLA university student survey further differentiated between bus/stop and train/station settings (Cowan and Liu, 2023 and Loukaitou-Sideris et al., 2020).

Given SFMTA’s particular interest in and initiatives around station elevator safety, the SFMTA survey instrument listed elevators as a separate setting, distinct from bus stops and train platforms (though Cowan and Liu (2023) combined stop, platform, and elevator responses in their analysis). Other agencies with more park-and-ride facilities may want to consider adding parking structures as an additional option. The UCLA university student survey asked respondents how often they drove a car and their feelings of safety in parking structures (Loukaitou-Sideris et al., 2020) (“always,” “often,” “sometimes,” “rarely,” and, “never” (Loukaitou-Sideris et al., 2020, p. 111)).

Experiences on transit affect people’s perceptions of safety, even if they are not the direct target of harassment. After asking people about their own personal experiences, the SFMTA survey asked people about witnessing these behaviors directed toward others (Cowan and Liu, 2023).

The MTI survey also asked whether each of the unwanted behaviors happened to the respondent or to others but using a matrix with two columns of checkboxes (Agrawal et al., 2023). That survey additionally asked respondents how often they experienced or saw these behaviors collectively, on a five-point scale from “frequently” to “never” (Agrawal et al., 2023, pp. 23, 36).

The MTI survey asked what characteristic(s) (race, gender, age, etc.) respondents believed caused victims to be targeted. As the researchers argue, data from this question can help agencies tailor responses to certain types of harassment and hate (Agrawal et al., 2023). Yet it also relies on *respondents’* judgment of the incident, potentially leading to results influenced by respondents’ own biases. A respondent might deem a phone theft to have been a product of a victim’s age, for instance, whereas the perpetrator actually selected the victim because of the model of their phone or the way they were holding or storing it. Regardless, the question follows from the slightly broader remit of MTI’s survey (Agrawal et al., 2023), prescribed by SB 1161 (2022), as compared to the SFMTA survey’s (Cowan and Liu, 2023) (discussed below), and it is part of the state mandate for large transit agencies in California to collect this information (California Legislature, 2022, 2023).

The SFMTA survey included a question about where respondents had most often experienced or witnessed gender-based sexual harassment. The question included a map, on which respondents could select a location (Cowan and Liu, 2023). Cowan and Liu (2023) mapped the responses, revealing hotspots in downtown but also in the Mission Terrace and Excelsior districts. Harassment in downtown areas is somewhat expected because of the density of activities and concentration of ridership there. However, the mapped responses also highlighted other, less active areas specifically identified by women and gender minorities, shown to be statistically significant by optimized hot spot analysis. They disaggregated and analyzed responses by gender and grouped them by mode and proximate route(s).

The SFMTA survey also featured an alternative free-response box for those “not able to pinpoint” a location on the map, asking for “lines, stations, or stop locations” (Cowan and Liu, 2023, p. 62). Respondents gave neighborhoods and intersections as well. Because of differences in the type and scale of locations reported, however, Cowan and Liu (2023) did not combine these free-response answers with the analysis of the mapped pinpoints.

While a map feature can be a useful tool, it can be difficult to incorporate into an online survey—most survey platforms (Qualtrics, SurveyMonkey, and Google Forms) do not have the ability to easily embed a map—let alone trying to add a map to a paper survey. And on the SFMTA survey itself, the open-response option proved more popular (43% of respondents) than the interactive map (19% of respondents) (Cowan and Liu, 2023). While each revealed unique insights, a potential compromise would be to ask respondents about conditions at their stated most frequently used stop or station. This would allow the agency to see the spatial distribution of common stops used by respondents and have information about harassment at specific locations within the system. This might also help those taking the survey who are confused or unable to operate the map function.

We note that the most commonly reported locations of harassment may often correspond to the parts of the system or city with the highest ridership and activity, and thus, for convenience, an agency might choose to use

those readily available metrics instead when deciding where to concentrate their safety efforts (such as deploying transit ambassadors or installing new or improved lighting). Location questions can be useful in detecting harassment patterns which do not correlate neatly with ridership levels and may make sense if an agency has particular geospatial questions to answer. In that vein, the most revelatory responses to the map question on SFMTA's survey were those that identified areas with lower ridership.

## Reporting

The SFMTA survey next explored if and how people report harassment and if not, why not. Cowan and Liu (2023) find that only six percent of respondents had ever reported harassment, even though 67 percent of respondents had experienced harassment. This finding is in line with other research showing very low levels of incidents of sexual harassment being reported (4% to 10%) (Cowan and Liu, 2023).

The SFMTA also asked about how respondents reported harassment (Cowan and Liu, 2023, p. 63):

10. *To whom have you reported the incident?*

(Check all that apply.)

- A police officer*
- Called 311 or 911*
- A Muni staff*
- Friends/family*
- Don't know/not sure*
- Other: [ ]*

This is a slightly more specific list than used in the MTI survey (Agrawal et al., 2023) but more condensed than the one used in the university student survey (Loukaitou-Sideris et al., 2020). The survey question's options should reflect the reporting options the particular agency makes available and/or wishes to evaluate.

To understand why reporting rates are so low, SFMTA asked about particular reasons for not reporting (Cowan and Liu, 2023, p. 63) (with a question adapted from the university student survey (Loukaitou-Sideris et al., 2020)):

11. *If you have not reported gender-based/sexual harassment or violence on Muni, why not?*  
(Check all that apply.)

- I was embarrassed by the experience.*
- I did not wish to remember the experience.*
- I do not feel comfortable reporting to the police.*
- I didn't know how to file a report.*
- I didn't think the situation was serious enough to report.*
- I didn't think reporting would make a difference.*
- I felt frightened/intimidated.*
- I experience language barriers that make it difficult for me to report.*
- Don't know/not sure*
- Other: [ ]*

This question proved particularly revealing, with 62 percent of respondents believing their report would not make a difference—almost double the next-most-common response. This varied little by demographic (Cowan and Liu, 2023). This sentiment sheds some light on the reality of sexual harassment incidents in public spaces: perpetrators (and witnesses) may be hard to identify and likely leave the scene of the incident once they arrive at their destination. This issue aside, the transit industry should be invested in ensuring that they have a reporting system in place and give assurances to people reporting that something will be done with the information. This conclusion does show that upfront barriers to reporting, such as language issues, discomfort with police, etc., are not as significant in comparison. Transit agencies therefore could improve reporting rates by improving harassment response.

The UCLA university student survey asked what other witnesses did (e.g., “pretended not to see” or “came forward and talked to [the] victim”) (Loukaitou-Sideris et al., 2020, p. 107) . This information may be helpful if agencies want to invest in strategies like bystander training, if an agency finds that people had witnessed events but did not intervene.

## Feelings of Safety

The next section of the SFMTA survey asked whether respondents felt safe at daytime, at nighttime, and in different locations. These questions provide a greater degree of detail about when riders feel safe than the MTI survey’s single five-point safety question (Agrawal et al., 2023). Cowan and Liu (2023) find striking differences in perceptions of safety before and after dark.<sup>3</sup>

The SFMTA survey next asked about possible harassment responses (Cowan and Liu, 2023, p. 64):

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<sup>3</sup>The MTI survey instead asked if witnessed/experienced harassment occurred in the daytime or night (Agrawal et al., 2023).

15. In your view, what can make traveling by Muni safer?

(Check all that apply.)

- Police patrolling stops, stations, and vehicles*
- Transit ambassadors at stops, stations, and on vehicles*
- Cameras (CCTV) on the vehicle or at stops and stations*
- More lighting at stops or stations*
- Direct phone line to security at stops or on vehicles*
- Text to report concerns hotline*
- Digital timetable at stops or stations*
- More frequent service*
- Anti-harassment campaigns/signs*
- More populated stations/stops*
- Don't know/not sure*
- Other: [ ]*

Responses to this type of question will allow an agency to make more informed decisions about which strategies to prioritize, especially given the limited resources of most transit systems. And as perceptions of safety are subjective, a question like this can allow agencies to focus on strategies that riders themselves say they need (to the degree, of course, that a stated-preference survey can capture their true feelings). In the SFMTA survey, transit ambassadors and better lighting were the top requested improvements (Cowan and Liu, 2023).

The university student survey asked a similar question but had respondents select three preferred responses only and offered a slightly different set of responses (Loukaitou-Sideris et al., 2020). The latter reflected the survey's international deployment—for example, by asking about women-only transit vehicles in service outside the U.S. Staff should choose the exact set of possible responses to reflect strategies their agency has implemented or is considering implementing. In the *Understanding How Women Travel* survey, LA Metro asked respondents what items and policies made them feel safe at present, instead of asking them to speculate about future actions (Galicia et al., 2019). The MTI survey did not ask about possible responses but instead about precautions that individuals took to avoid harassment (Agrawal et al., 2023).

## Demographics

As with other transit rider surveys we reviewed (Agrawal et al., 2023 and Loukaitou-Sideris et al., 2020), the SFMTA survey placed the demographic questions at the end of the survey instrument (Cowan and Liu, 2023). Agency staff advised this as a best practice, as demographic questions are often the most skipped and can be viewed as invasive (Agrawal et al., 2023, 2015, 2017). Putting them at the end of the survey could prevent a potential respondent being unnerved by initial demographic questions and then declining the survey altogether. On the other hand, it could lead to a greater rate of incomplete surveys, if a respondent stops

answering questions when they reach the demographics section, hampering demographic analysis of survey results. However, the evidence on whether the placement of demographic questions actually affects response rates is mixed or not conclusive, though it may depend on the type of survey and how it is deployed (Teclaw, Price, and Osatuke, 2012 and Ziegenfuss et al., 2021).

In order to reassure respondents, build rapport, and ensure their continued response, the SFMTA survey, again following others, included a brief explanation of why the survey asks for demographic information (Cowan and Liu, 2023, p. 64):

Now we have some questions about you! They are meant to help us better understand the diverse communities SFMTA serves. If you don't feel like answering a question, please move on to the next one. These are all completely optional, voluntary and confidential.

The SFMTA harassment survey largely borrowed demographic questions from past SFMTA surveys, for compatibility. But in a departure from our comparison surveys (Agrawal et al., 2023; Loukaitou-Sideris et al., 2020; Galicia et al., 2019; and Reynolds et al., 2021) and prior SFMTA surveys, this survey first asked about gender (Cowan and Liu, 2023). This reflects the survey's particular focus on *gendered* harassment. The UCLA research team suggested moving the question to the top of the demographics section in order to increase its response rate and thereby bolster cross-tabulations by gender. The survey question offered several options regarding gender (Cowan and Liu, 2023, p. 64–65):

16. *How do you describe your gender identity?*

(Select all that apply.)

- Female*
- Male*
- Transgender*
- Gender non-binary*
- Don't know/not sure*
- Prefer not to answer*
- Another gender: [ ]*

This question includes transgender and non-binary options. Unlike some other published studies, the researchers received a large number of responses from gender-minority travelers and were able to compare their responses to those of other survey participants. Surveyed transgender and non-binary riders each had higher rates of harassment than both cisgender men and women. The difference in rates of harassment of various types between cisgender respondents and gender minorities was statistically significant, demonstrating the importance of understanding the unique experiences of gender minorities. Furthermore, Cowan and Liu (2023) found that transgender and non-binary respondents were less likely than cisgender men or women to see police patrols and transit ambassadors as increasing safety. While the authors do not explain this finding, we speculate that transgender and non-binary respondents are less trusting of transit police and transit staff than other rider groups. In a study of transgender and gender non-conforming individuals in

Portland, Oregon, research participants shared negative harassment experiences from transit agency staff, which may shed light on this finding (Lubitow, et al., 2017). Even if a survey is not able to garner many responses from gender minority respondents, the responses can still prove revelatory.

In future surveys, we recommend having separate options for transgender female respondents, transgender male respondents, and gender non-binary respondents (as in LADOT's *Changing Lanes* survey (Reynolds et al., 2021)). This can facilitate comparing their unique experiences. We also suggest a separate yes/no question on whether the respondent identifies as lesbian, gay, bisexual, or another sexual orientation other than heterosexual/straight.

Compared to the MTI survey (Agrawal et al., 2023) and university student survey (Loukaitou-Sideris et al., 2020), the SFMTA survey collected other demographic information in somewhat greater detail, including having a greater number of more narrow age ranges, listing particular types of disabilities instead of just asking if the respondent has a disability, listing specific languages common in San Francisco for the question about language spoken at home, and asking about the respondent's degree of English fluency. Like those other surveys, the SFMTA survey includes Hispanic or Latino/a as an option alongside Black, white, etc. in a single race/ethnic question (Cowan and Liu, 2023). This differs from how the U.S. Census asks about race and ethnicity—with a separate question on Hispanic/Latino/a origin—but better reflects how most respondents conceive of racial and ethnic categories (Agrawal et al., 2023). Compared to the MTI survey (Agrawal et al., 2023), the SFMTA survey did not ask about income or religion (the latter a mandate of the state legislature in SB 1161 (2022) and SB 434 (2023), which the MTI survey authors admit is “unusual and sensitive” (Agrawal et al., 2023, p. 29)).

Finally, we note that the SFMTA survey asked respondents if they owned a car (Cowan and Liu, 2023). Vehicle ownership is a significant determinant of who rides transit, even controlling for other factors, and increasing ownership spurred much of the pre-pandemic decline in transit use across California (Taylor et al., 2009, 2020; Manville, Taylor, and Blumenberg, 2018; Manville et al., 2023; Blumenberg et al., 2020; and Schouten, Blumenberg, and Taylor, 2021). Cowan and Liu (2023) find statistically significantly, albeit slightly higher rates of harassment among respondents without a car.

## Different Survey Focuses

The differences among the surveys described above stem in many cases from differences in the surveys' focus, which in turn resulted from the particular research questions each survey was designed to answer and the needs and mandates of their sponsors. They also are the product of how each survey was to be deployed. Online surveys can be longer and more complex than paper surveys deployed on-board vehicles.

For instance, the MTI survey is more broadly about street harassment (based on any sociodemographic factor) and less specific about sexual and gendered harassment (Agrawal et al., 2023). Its list of unwanted behaviors, for instance, include “Hostile comments, sounds, or gestures,” “Pushing, spitting, coughing on you, or other physical assault,” and “Personal property damaged or stolen” (Agrawal et al., 2023, pp. 22, 36). These could



certainly be the result of targeting based on a particular characteristic, but as the authors themselves note, they could also simply be aggressive but non-targeted behaviors. In comparison, the behaviors listed in both columns of **Table 1** were specifically written to reflect elements of sexual/gendered harassment. This difference stems from the direction from the state legislature to focus on a wide range of street harassment behaviors, compared to the gendered focus of the SFMTA survey and surveys from which it drew (California Legislature, 2022; Cowan and Liu, 2023; and Loukaitou-Sideris et al., 2020).

Other surveys presented at the outset of this report included questions about harassment and safety but largely focused on gender differences in travel patterns. For example, LA Metro's *Understanding How Women Travel* survey (Galicia et al., 2019) and LADOT's *Changing Lanes* survey (Reynolds et al., 2021) asked about trip purposes such as errands and demographic information such as having children in the household, with the aim of exploring unique travel behaviors and barriers for women. Safety and harassment do come up in the questions, but often as options for why respondents do or do not ride transit.

All told, agencies should select a survey focus and questions based on the purpose of the survey and, in the case of harassment, their regulatory or legal obligations. On-board rider surveys should be designed to generate basic data about transit rider demographics and use of the system, while a more comprehensive online survey can dig deeper and reveal unexpected patterns and prompt new questions. On-board surveys must be shorter in length and simpler in their question design, given that many are still collected on paper. In contrast, online surveys can incorporate more questions and more complexity, like question-skipping logic. Additionally, people filling out an online survey are not rushed to complete it because their stop is coming up and can fill out the survey on their own time. Overall, agencies may be well-served by using both approaches to better understand their riders and their experiences in order to make informed decisions about how to improve their systems.

# Reflections on the Survey Process

## Flexibility and Continuity in Survey Processes

One important lesson from SFMTA's survey experience is to be adaptable as circumstances change. As discussed above, the original plan for the survey was to collect responses in person and online. When staff at SFMTA and the Transit App first discussed conducting the survey via the app, agency staff immediately pivoted. The end result was a survey with more responses than likely could have been collected with the original method. The survey was also completed in time for the students to analyze the data in their year-long master's capstone project, a timeline which the logistics of the original survey might have rendered impossible. Shifting survey methods and platforms should of course not be done lightly, but this experience demonstrates the value of being thoughtful and adaptable simultaneously.

The presence of a semi-informal group from different departments guiding the survey and the Safety Equity Initiative contributed to this nimbleness. However, staff we interviewed cautioned that this structure suffers from being less able to pass on institutional memory and create processes, roles, and funding necessary to repeat surveys over time. To be sure, staff did not *choose* this organizational model but rather gathered an informal group at first because no single unit already existed for addressing gender equity.

## New Options Offered by App-Based Surveys

In their report on the MTI survey, Agrawal et al. (2023, p. 42) recommend that surveys of harassment on transit “rely on a paper, self-complete survey as the primary response method.” They cite a study finding a response rate over nine in ten for paper, in-person transit intercept surveys, compared to less than one in ten for online surveys (Agrawal et al., 2015, 2017). We do not have a response rate to compare for this app-based survey or the number of app users presented with an option to take the survey. However, the 1,613 responses collected in a month and a half demonstrate that app-based surveys can more than make up in volume what they lose in response rate. Moreover, Cowan and Liu (2023) find that their harassment survey respondents lined up with those of a recent rider survey<sup>4</sup> on race/ethnicity, gender, and frequency of riding transit. As might be expected, the age of respondents to the 2023 app-based harassment survey skewed younger than that of respondents to the 2019 and 2021 general ridership surveys. Otherwise, though, the volume of responses alleviated concerns about the representativeness of an app-based survey. The harassment survey was available in the typical set of languages used by the agency for their other surveys (Cowan and Liu, 2023).

Furthermore, the app-based survey provided some of the benefits of a paper survey without the drawbacks. Two of the reasons Agrawal et al. (2023) recommend on-board paper surveys are to ensure that all respondents are actually transit riders and to avoid the high costs of filtering for the small share of transit riders among

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<sup>4</sup>The 2021 SFMTA Ridership Survey was taken by telephone and received 413 responses (Corey, Canapary, and Galanis, 2022).

phone or Internet surveys of the general public. By using an app whose purpose is to provide real-time information to transit riders, agencies can avoid both issues and home in on transit riders nearly as effectively. And unlike a paper or telephone survey (or even an online survey requiring multiple rounds of e-mail blasts or online postings), the marginal cost of soliciting and getting additional responses from an app-based survey is minimal. To be sure, the unique circumstances of this survey lent itself to an app-based survey in ways that might not apply to other agencies at other times. For instance, a survey on technology use by transit riders or on travel by older adults might not achieve a representative set of responses from an app-based deployment. But compared to typical online and telephone surveys (against which Agrawal et al.'s (2023) report on the MTI survey compared), app-based surveys offer new advantages.

## Statistical Analysis

Cowan and Liu (2023) conducted numerous descriptive cross-tabulations of the SFMTA survey results, analyzing responses not just by gender but by race/ethnicity, disability, car ownership, and more. They also conducted select chi-squared tests to determine the statistical significance of certain differences in responses between groups of respondents. Depending on the survey and resources available, other statistical methods could be employed. But SFMTA staff reported that cross-tabulations alone proved quite helpful in understanding trends on the system and variation by gender and other rider characteristics.

# Conclusion: How Surveys Can Help Agencies Understand and Address Harassment

A survey is useful as an information-gathering tool, but alone, it does not address or ameliorate harassment. From our interviews with SFMTA staff, we found three primary ways that surveys can and are aiding agency responses to harassment.

First and most directly, a survey and analysis of it can inform the type and location of agency strategies to address harassment. SFMTA plans to use the geospatial findings to help prioritize physical infrastructure improvements such as lighting and other bus stop improvements. Likewise, a survey can inform leadership about reasons why people do not report harassment—most commonly in this survey, “I didn’t think reporting would make a difference” (Cowan and Liu, 2023, p. 45). This finding has led SFMTA staff to plan for how to ensure better reporting, including better publicizing the available reporting options. They earlier added a new category for harassment on the 311 reporting system, which they can also publicize. Staff stated that their growing push to increase reporting has led to at least one serial harasser being banned from the system due to the documentation that these reports now provide.

Second, a survey provides greater context and support for current anti-harassment and gender-based efforts and those nearing deployment. Survey findings can back, support, and advance plans and programs and can improve those in development. While harassment and safety are one of the most common issues facing female passengers, most agencies are not collecting data to understand its prevalence. Even if the survey results do not directly influence the specifics of these initiatives, the findings give support to staff and decision-makers. For instance, if an agency has partially planned but not yet funded or implemented an anti-harassment campaign, statistics from a survey could serve as powerful motivators for voters and elected officials to push it forward. Topline results, such as Cowan and Liu’s (2023) findings that two thirds of riders and three quarters of women had experienced harassment on transit in the prior six months, can help make the case externally for the importance of investing in responses and prevention.

Likewise, when an agency takes steps to encourage reporting of harassment and make it easier, the number of recorded incidents may likely increase—due not to worse behavior on the system but rather better reporting of existing behavior. But on its surface, such a rise may make an agency’s anti-harassment efforts appear as if they are not working or even backfiring. A survey can help inoculate an agency against this perception. SFMTA staff have already anticipated this issue and plan to use survey findings showing high current rates of non-reporting to explain the issue publicly.

Third, surveys like this can inform future plans and spur agencies to act on issues of safety and gender. While most transit systems recognize the problem, many agencies do not explicitly prioritize responding to it and do not evaluate their service and projects through a gender-based lens. A survey can highlight these issues within

an agency. The results can push staff or leadership to do more, from launching formal programs to convening an internal working group to simply thinking about harassment and the needs of women and non-binary travelers when designing transit infrastructure. As SFMTA staff member Moran observed, “The survey...has the momentum to...prompt a lot of change and...is a new form of accountability at the agency, because,...now,...no one can say ‘We don’t have the data.’ anymore.” Even the process of drafting and deploying the survey can bring together different parts of an agency that do not usually work together to think about gender-related issues.

Surveys are just one information-gathering tool among many, but agencies may find surveys a fruitful place to start their rider outreach efforts. Further approaches include interviews and focus groups, which can reveal deeper and unexpected information about the ramifications of harassment and violence on transit. These settings may also allow participants to share sensitive personal experiences that they might not feel comfortable doing on a survey. Other useful tools might include travel diaries, safety audits, ethnographic observations on the system, analysis of 311 and police reports, and surveys and interviews of vehicle operators and other front-line staff. And in all such strategies, agencies should keep in mind that the experiences of former riders, potential riders, and non-riders are more difficult to capture but nonetheless important to growing transit use and keeping it safe.

We return to the idea above that feelings of safety are ultimately personal and subjective, even if rooted in external conditions on the system. Safety is multi-dimensional, and safety means different things to different people at different times. Given this complexity, survey questions must be carefully crafted, tested, and refined to ensure that the results tackle the particular aspect of safety the agency intends the questions to address. In staff analysis of survey results, it is critical not to lump together “feelings of safety” into a single category or topline statistic, at least for decision-making purposes, and rather have information that is specific to individual safety dimensions.

Finally, the SFMTA joined a small but growing group of transit agencies that are taking concrete steps to respond to rider safety and harassment experiences, especially among women and gender minorities. Similar to other efforts, they learned that agencies cannot rely on reporting alone to understand the magnitude of the problem their riders face. Transit agencies can begin the process towards action by first understanding rider experiences through proactive data collection efforts. This report highlights the existing resources available to agencies to begin this journey and work to improve the rider experience.

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# Appendix: Survey Instruments

## SFMTA Survey

### SFMTA Safety Equity Initiative—Gender-based Experience Survey

The SFMTA is committed to prioritizing safety in transit and mobility systems. Particularly, by combating harassment and violence and empowering Muni riders and workers. Everyone deserves public transit that prioritizes safety and security. That includes all Muni users, SFMTA employees, San Franciscans and visitors to San Francisco.

The aim of the Safety Equity Initiative is to create a safer environment for all Muni riders and SFMTA staff. This supports SFMTA’s mission of providing excellent transit and mobility service. This survey will help the SFMTA understand existing and evolving needs of Muni riders and those traveling in San Francisco.

Content warning: *This survey includes questions that reference sexual harassment and gender-based violence. Completing this survey may be difficult for some participants with similar past experiences. Please engage in self-care as you decide to complete the survey.*

### Part 1. Travel Pattern

Thinking about your experiences in the past six months...

1. For the past six months, how often do you ride Muni (buses, Muni Metro trains, streetcars, and/or cable cars)?
  - Every day
  - A few times a week
  - A few times a month
  - Once a month or less
  - Never
  - Don’t know/not sure

*[If “Never” or “Don’t know/not sure,” skip to Question #5.]*

2. Is Muni your primary means of transportation? For example, do you take Muni buses, trains, and streetcars more frequently than you drive a personal vehicle or use taxis/Uber/Lyft?
  - Yes
  - No
  - Don’t know/not sure

3. When you use Muni, how often do you travel alone?
- Always
  - Often
  - Sometimes
  - Rarely
  - Never
  - Don't know/not sure
4. Do you use Muni to connect to regional transit? If so, to which do you connect?  
(Check all that apply.)
- I don't use Muni to connect to regional transit.
  - BART
  - AC Transit
  - Golden Gate Transit
  - SamTrans
  - Caltrain
  - Don't know/not sure
  - Other: [ ]

## Part 2. Experiences

Thinking about your experiences in the past six months...

Reminder: We will use this data to better understand how to improve customer safety and prevent gender-based violence and harassment.

5. If you have personally experienced any of the following forms of gender-based/sexual harassment or violence, please indicate the location.  
(Check all that apply, but if you have not experienced a specific form, simply leave the question blank and move on to the next question.)

Inappropriate/unwanted language:

- On the bus/train
- At a bus stop
- On a train platform
- Near/in station elevators
- Walking to and from stops/stations
- Don't know/not sure

Inappropriate/unwanted touching or groping:

- On the bus/train
- At a bus stop
- On a train platform
- Near/in station elevators
- Walking to and from stops/stations
- Don't know/not sure

Staring or leering:

- On the bus/train
- At a bus stop
- On a train platform
- Near/in station elevators
- Walking to and from stops/stations
- Don't know/not sure

Stalking or being followed:

- On the bus/train
- At a bus stop
- On a train platform
- Near/in station elevators
- Walking to and from stops/stations
- Don't know/not sure

Indecent exposure:

- On the bus/train
- At a bus stop
- On a train platform
- Near/in station elevators
- Walking to and from stops/stations
- Don't know/not sure

Sexual gestures:

- On the bus/train
- At a bus stop
- On a train platform
- Near/in station elevators
- Walking to and from stops/stations
- Don't know/not sure

6. If you have seen any of the following forms of gender-based/sexual harassment or violence, please indicate the location.

*(Check all that apply, but if you have not witnessed or seen a specific form, simply leave the question blank and move on to the next question.)*

Inappropriate/unwanted language:

- On the bus/train
- At a bus stop
- On a train platform
- Near/in station elevators
- Walking to and from stops/stations
- Don't know/not sure

Inappropriate/unwanted touching or groping:

- On the bus/train
- At a bus stop
- On a train platform
- Near/in station elevators
- Walking to and from stops/stations
- Don't know/not sure

Staring or leering:

- On the bus/train
- At a bus stop
- On a train platform
- Near/in station elevators
- Walking to and from stops/stations
- Don't know/not sure

Stalking or being followed:

- On the bus/train
- At a bus stop
- On a train platform
- Near/in station elevators
- Walking to and from stops/stations
- Don't know/not sure

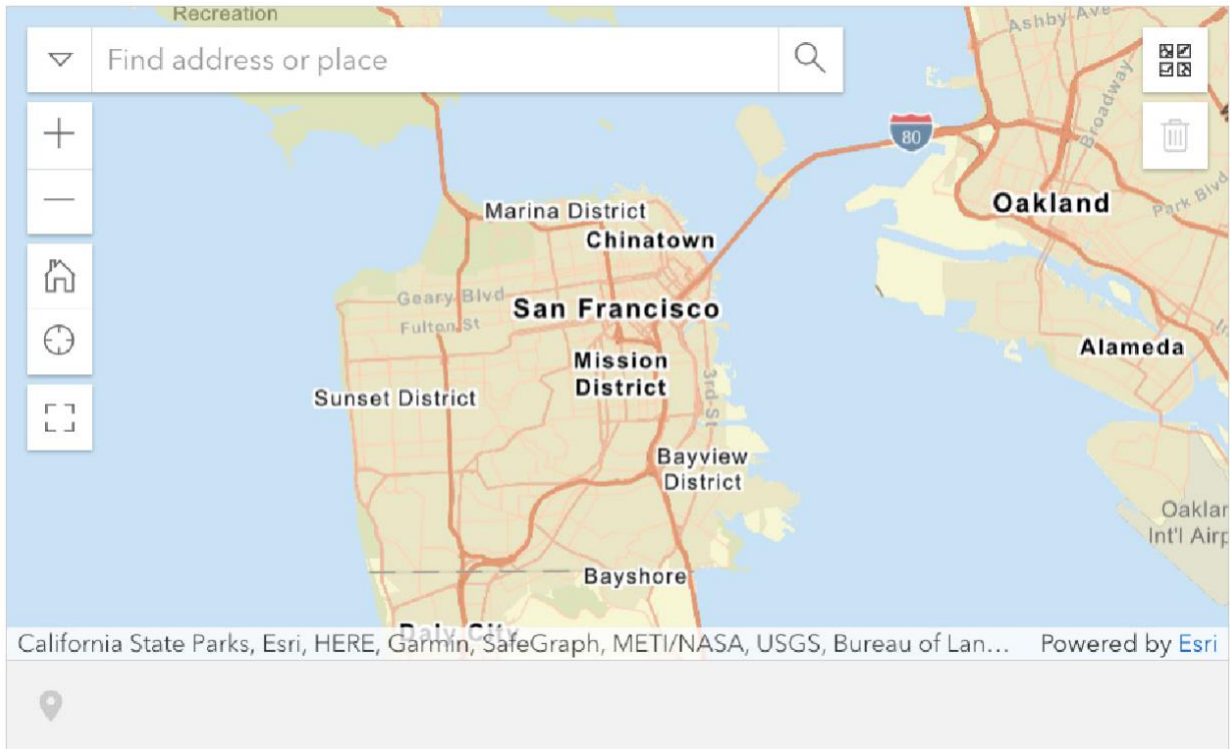
Indecent exposure:

- On the bus/train
- At a bus stop
- On a train platform
- Near/in station elevators
- Walking to and from stops/stations
- Don't know/not sure

Sexual gestures:

- On the bus/train
- At a bus stop
- On a train platform
- Near/in station elevators
- Walking to and from stops/stations
- Don't know/not sure

7. While riding on transit or to transit stops, where have you experienced or seen gender-based/sexual harassment or violence? If able, please pin point the spot of the incident or the most common spot of incidents.  
*(If not able to pinpoint, please fill out the question below.)*



8. At which Muni lines, stations, or stop locations have you experienced or seen gender-based/sexual harassment or violence? If able, please note the intersection or neighborhood/district of the incident.

### Part 3. Reporting

9. Have you ever reported gender-based/sexual harassment or violence on Muni?
- Yes
  - No
  - I have not experienced incidents in the past.
  - Don't know/not sure

*[If "No," skip to Question #11. If "I have not experienced incidents in the past" or "Don't know/not sure," skip to Question #12.]*

10. To whom have you reported the incident?

*(Check all that apply.)*

- A police officer
- Called 311 or 911
- A Muni staff
- Friends/family
- Don't know/not sure
- Other: [ ]

11. If you have not reported gender-based/sexual harassment or violence on Muni, why not?

*(Check all that apply.)*

- I was embarrassed by the experience.
- I did not wish to remember the experience.
- I do not feel comfortable reporting to the police.
- I didn't know how to file a report.
- I didn't think the situation was serious enough to report.
- I didn't think reporting would make a difference.
- I felt frightened/intimidated.
- I experience language barriers that make it difficult for me to report.
- Don't know/not sure
- Other: [ ]

#### **Part 4. Impressions of Safety**

Reminder: We will use this data to better understand how to improve customer safety and prevent gender-based violence and sexual harassment.

12. Do you feel safe when using Muni during the daytime?

- Always
- Often
- Sometimes
- Rarely
- Never
- Don't know/not sure



13. Do you feel safe when using Muni during the nighttime?

- Always
- Often
- Sometimes
- Rarely
- Never
- Don't know/not sure

14. Where do you feel the least safe when using Muni?

*(Check all that apply.)*

- Have not experienced this
- On the bus/train
- At a bus stop
- On a train platform
- Near/in station elevators
- Walking to and from stops/stations
- Don't know/not sure
- Other: [ ]

15. In your view, what can make traveling by Muni safer?

*(Check all that apply.)*

- Police patrolling stops, stations, and vehicles
- Transit ambassadors at stops, stations, and on vehicles
- Cameras (CCTV) on the vehicle or at stops and stations
- More lighting at stops or stations
- Direct phone line to security at stops or on vehicles
- Text to report concerns hotline
- Digital timetable at stops or stations
- More frequent service
- Anti-harassment campaigns/signs
- More populated stations/stops
- Don't know/not sure
- Other: [ ]

## Part 5. Demographics

Now we have some questions about you! They are meant to help us better understand the diverse communities SFMTA serves. If you don't feel like answering a question, please move on to the next one. These are all completely optional, voluntary and confidential.

16. How do you describe your gender identity?

*(Select all that apply.)*

- Female
- Male
- Transgender
- Gender non-binary
- Don't know/not sure
- Prefer not to answer
- Another gender: [ ]

17. With what race and/or ethnicity do you identify?

*(Select all that apply.)*

- Asian and/or Pacific Islander
- Black and/or African American
- Hispanic and/or Latinx
- Middle Eastern and/or North African
- Native American
- White
- Don't know/not sure
- Prefer not to answer
- Another race or ethnicity

*Please specify: [ ]*

18. What is your age?

- 18 or under
- 19-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75 or over
- Don't know/not sure
- Prefer not to answer

19. Please select all languages that you speak at home.  
(Select all that apply.)

- English
- Cantonese
- Mandarin
- Spanish
- Filipino and/or Tagalog
- Russian
- Vietnamese
- Don't know/not sure
- Prefer not to answer
- Another language  
*Please specify: [ ]*

20. How well do you speak English?

- Very well
- Well
- Not well
- Not at all
- Don't know/not sure
- Prefer not to answer

21. Do any of the following disabilities currently affect your daily life?  
(Select all that apply.)

- Blindness or vision impairment
- Hearing impairment
- Mobility disability (example: difficulty walking or climbing stairs)
- Cognitive or mental impairment
- None
- Don't know/not sure
- Prefer not to answer
- Another disability or disabling health condition  
*Please specify: [ ]*

22. Do you have access to a private car that can be used for transportation in San Francisco?
- Yes
  - No
  - Not applicable/don't know/not sure
  - Prefer not to answer
23. What is your ZIP code?

### **Confirmation of Survey Submission**

Thank you for taking our survey. Read more about our program vision, goals, intended outcomes and commitment to the community on the [Safety Equity Initiative project page](#). E-mail us about this initiative and other safety issues at <[MuniSafe@SFMTA.com](mailto:MuniSafe@SFMTA.com)>. Incidents can be reported through our [Muni Feedback form](#) and the 311 customer service phone line.

*Source: Cowan and Liu, 2023, pp. 58–66*

## UCLA University Student Survey

Please select your university affiliation

- Undergraduate student
- Graduate student
- Staff
- Faculty
- Other

1. On a typical weekday, how long do you estimate is your trip to the university from door-to-door?
  - More than 2 hours
  - Between 1 hour to 2 hours
  - Between half an hour and 1 hour
  - Between 15 to 30 minutes
  - Less than 15 minutes

### Bus Travel

2. On a typical week, how often do you use **a bus**?  
Please do not include buses or vans owned/operated by your university.
  - Every day
  - 5-6 days per week
  - 3-4 days
  - 1-2 days per week
  - Less than once per week
  - Never

*[If "Never," skip to Question #13.]*

3. Do you feel safe when using the bus during daytime?
  - Always
  - Often
  - Sometimes
  - Rarely
  - Never

4. Do you feel safe waiting at the bus stop during daytime?
- Always
  - Often
  - Sometimes
  - Rarely
  - Never
5. Do you feel safe when using the bus after dark?
- Always
  - Often
  - Sometimes
  - Rarely
  - Never
  - I don't use the bus after dark.
6. Do you feel safe walking to or waiting at the bus stop after dark?
- Always
  - Often
  - Sometimes
  - Rarely
  - Never
  - I never wait at the bus stop after dark.

7. Do any of the following prevent you from using the bus more often?  
 (Mark all that apply.)

*[Options in a random order]*

- Slow journey times
- Unreliable or infrequent bus service
- Antisocial behavior of others (drinking, cursing, smell)
- Overcrowded services
- Fear of victimization while waiting for the bus
- Dirty environment on bus
- Many transfers
- Sexual harassment on the bus
- Fear of victimization while on the bus
- Lack of info about bus schedules; lack of digital schedule or time showing arrival
- Dirty environment during walk to the bus stop
- Ticket cost
- Fear of crashes
- Fear of terrorism

8. Which of the following do you perceive as being a significant problem on the bus and at the bus stops you are using?  
 (Please mark all that apply.)

*[Options in a random order]*

	<i>At the bus stop</i>	<i>On the bus</i>
Poorly illuminated	<input type="checkbox"/>	<input type="checkbox"/>
Vandalism	<input type="checkbox"/>	<input type="checkbox"/>
Drunk people	<input type="checkbox"/>	<input type="checkbox"/>
Poorly guarded/empty most of the day	<input type="checkbox"/>	<input type="checkbox"/>
Verbal/physical threats	<input type="checkbox"/>	<input type="checkbox"/>
Isolated	<input type="checkbox"/>	<input type="checkbox"/>
Obscene language	<input type="checkbox"/>	<input type="checkbox"/>
Sexual harassment	<input type="checkbox"/>	<input type="checkbox"/>

	<i>At the bus stop</i>	<i>On the bus</i>
Drug use/sales	<input type="checkbox"/>	<input type="checkbox"/>
Panhandling	<input type="checkbox"/>	<input type="checkbox"/>
Robbery	<input type="checkbox"/>	<input type="checkbox"/>
Invade personal space	<input type="checkbox"/>	N/A
Violent crime	<input type="checkbox"/>	<input type="checkbox"/>
Jewelry snatching	<input type="checkbox"/>	<input type="checkbox"/>
Pickpocketing	<input type="checkbox"/>	<input type="checkbox"/>

9. In the last 3 years, have you experienced any of the following while traveling on, heading to, or waiting for the bus?

*(Please mark all that apply.)*

*[Options in a random order]*

<i>Type of sexual harassment/assault</i>	<i>On the bus</i>	<i>To/from the bus stop</i>	<i>At the bus stop</i>
Using obscene/abusive language	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unwanted sexual looks or gestures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calling you “babe,” “honey,” “sweetheart”	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sexual comments (about clothing, looks)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unwanted sexual teasing, remarks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Indecent exposure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Whistling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Making kissing sounds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stalking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asking you personal questions about sexual life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



<i>Type of sexual harassment/assault</i>	<i>On the bus</i>	<i>To/from the bus stop</i>	<i>At the bus stop</i>
Groping, touching inappropriately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Masturbating in public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pulling or playing with your hair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Showing pornographic images	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asked to have sex by a stranger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unwanted kissing by a stranger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Do you feel necessary to take any precautions against crime when using public buses?

- Yes
- No

*[If “No,” skip to Question #12.]*

11. Which of the following precautions do you take?

*(Mark all that apply.)*

*[Options in a random order]*

- Travelling only during daytime
- Waiting for transit only at well-lit places
- Dressing a certain way
- Avoiding carrying purses, wallets, holding them close to you
- Sitting close to the driver
- Avoiding particular bus stops
- Carrying something as a weapon
- Not wearing jewelry
- Waiting for transit only if other people are around
- Avoiding particular bus lines
- Always travelling with someone else

12. Please select **the three most important** options from the list below that, in your view, can make traveling by bus safer.

- More lighting at bus stops
- More frequent bus service
- Police patrolling bus stops
- Digital timetable at bus stops
- Cameras (CCTV) at bus stops
- Cameras (CCTV) on the bus
- More police officers patrolling buses
- Direct police line at bus stop
- Direct police line in the bus
- Anti-harassment campaigns/signs
- “Women-only” buses

### Travel by Train (Subway or Light Rail)

13. On a typical week, how often do you use **the train**?

- Every day
- 5-6 days per week
- 3-4 days
- 1-2 days per week
- Less than once per week
- Never

*[If “Never,” skip to Question #24.]*

14. Do you feel safe when using the train during daytime?

- Always
- Often
- Sometimes
- Rarely
- Never

15. Do you feel safe waiting on the train platform during daytime?

- Always
- Often
- Sometimes
- Rarely
- Never

16. Do you feel safe using the train after dark?

- Always
- Often
- Sometimes
- Rarely
- Never
- I don't use the train after dark.

17. Do you feel safe walking to or waiting on the train platform after dark?

- Always
- Often
- Sometimes
- Rarely
- Never
- I never wait on the platform after dark.

18. Which of the following prevent you from using the train more often?  
(Mark all that apply.)

*[Options in a random order]*

- Antisocial behavior of others (drinking, cursing, smell)
- Dirty environment on subway
- Overcrowded services
- Fear of victimization while on the subway
- Sexual harassment on the subway
- Slow journey times
- Fear of victimization while waiting for the subway
- Fear of victimization while walking to the subway
- Dirty environment during walk to the subway station
- Unreliable or infrequent subway service
- Many transfers
- Lack of info about subway schedules; lack of digital schedule or time showing arrival
- Ticket cost
- Fear of crashes
- Fear of terrorism

19. Which of the following do you perceive as being a significant problem on the train and at the platform you are using?

*(Please mark all that apply.)*

*[Options in a random order]*

	<i>On the train</i>	<i>At the platform</i>
Drunk people	<input type="checkbox"/>	<input type="checkbox"/>
Vandalism	<input type="checkbox"/>	<input type="checkbox"/>
Obscene language	<input type="checkbox"/>	<input type="checkbox"/>
Verbal/physical threats	<input type="checkbox"/>	<input type="checkbox"/>
Sexual harassment	<input type="checkbox"/>	<input type="checkbox"/>
Panhandling	<input type="checkbox"/>	<input type="checkbox"/>
Poorly guarded/empty most of the day	<input type="checkbox"/>	<input type="checkbox"/>
Drug use/sales	<input type="checkbox"/>	<input type="checkbox"/>
Robbery	<input type="checkbox"/>	<input type="checkbox"/>
Pickpocketing	<input type="checkbox"/>	<input type="checkbox"/>
Violent crime	<input type="checkbox"/>	<input type="checkbox"/>
Jewelry snatching	<input type="checkbox"/>	<input type="checkbox"/>
Design	<input type="checkbox"/>	<input type="checkbox"/>
Poorly illuminated	<input type="checkbox"/>	<input type="checkbox"/>

20. In the last 3 years, have you experienced any of the following while travelling on the train, heading to the station, or waiting at a platform?

*(Please mark all that apply.)*

*[Options in a random order]*

<i>Type of sexual harassment/assault</i>	<i>On the train</i>	<i>To/from the station</i>	<i>At the platform</i>
Using obscene/abusive language	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>Type of sexual harassment/assault</i>	<i>On the train</i>	<i>To/from the station</i>	<i>At the platform</i>
Calling you “babe,” “honey,” “sweetheart”	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sexual comments (about clothing, looks)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Whistling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unwanted sexual teasing, remarks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Indecent exposure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stalking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Making kissing sounds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Masturbating in public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asking you personal questions about sexual life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Groping, touching inappropriately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Showing pornographic images	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asked to have sex by a stranger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pulling or playing with your hair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unwanted kissing by a stranger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. Do you feel it necessary to take any precautions against crime when using the train?

- Yes
- No

*[If “No,” skip to Question #24.]*

22. Which of the following precautions do you take?  
(Mark all that apply.)

*[Options in a random order]*

- Travelling only during daytime
  - Dressing a certain way
  - Avoiding carrying purses, wallets, or holding them close to you
  - Sitting close to door
  - Carrying something as a weapon
  - Avoiding particular stops
  - Not wearing jewelry
  - Always travelling with someone else
  - Avoiding particular lines
23. Of the items listed below, select **the three most important** things that, in your view, can make travelling by train safer.
- Police patrolling subway stations
  - More police officers patrolling subway trains
  - Cameras (CCTV) on the subway trains
  - Cameras (CCTV) at subway stations
  - More lighting at subway stations
  - Direct police line at subway stations
  - Direct police line in the subway trains
  - Digital timetable at subway stations
  - “Women-only” subway trains
  - Frequent services
  - Anti-harassment campaigns

## Crime Reporting

24. If you have been a victim of sexual assault or harassment crime while **on the bus, train, at the bus stop or station platform, or on your way to/from the transit stop**, have you reported it to anyone?
- Yes
  - No
  - You have not been a victim of sexual assault or harassment in a transit environment.

*[If “No,” skip to Question #26; if “You have not been a victim of sexual assault or harassment in a transit environment,” skip to Question #29.]*

25. To whom have you reported the sexual assault or harassment crime?  
(Mark all that apply.)

- Parents
- Police
- Spouse
- Bus driver
- Train operator
- Other family
- Transit agency
- School authorities

*[If “Yes” on Question #24, skip to Question #27.]*

26. Can you indicate why you have not reported the sexual assault or harassment crime?  
(Mark all that apply.)

- Did not believe criminal would be caught
- Wanted to avoid trouble
- Felt the crime was unserious
- Unsure how to report
- Embarrassment
- Did not wish to remember incident
- Fear of Police

27. Did anyone witness the sexual assault or harassment crime?

- Yes
- No or I’m unsure

*[If “No or I’m unsure,” skip to Question #29.]*

28. What was the reaction of other people witnessing the sexual assault or harassment while **on the bus, train, tram, or commuting train; at the bus stop or station platform; or heading to/from the transit stop?**

- Pretended not to see
- Watched at a distance
- Came forward and talked to victim
- Talked to offender
- Came forward silently

29. In the last 3 years, have you been exposed to serious crime (aggravated assault, robbery, rape) while **on the bus or train, at the bus or train stop/platform, or while heading to or from a transit stop?**

- No
- Yes

*[If "No," skip to Question #32.]*

30. Please explain the type of serious crime you were exposed to.

- Robbery
- Physical violence
- Rape
- Murder
- Theft

31. Have you reported the serious crime(s) you have been exposed to?  
*(Mark all that apply.)*

- No
- Yes, to the police
- Yes, to the bus driver
- Yes, to the train operator
- Yes, to the bus company
- Yes, to the rail company
- Yes, to family or friends
- Yes, to school
- Other

*Please explain: [ ]*

32. In the last 3 years, has someone you know been exposed to serious crime (aggravated assault, robbery, rape, murder) while **on the bus or train, at the bus or train stop/platform, or while heading to or from a transit stop?**

- No
- Yes

*[If "No," skip to Question #34.]*



33. Please explain the type of serious crime that someone you knew was exposed to.

- Physical violence
- Theft
- Rape
- Murder
- Robbery

34. In the last 3 years, have you been exposed to theft/pickpocket, jewelry snatching, or robbery while **on the bus or train, at the bus or train stop/platform, or while heading to or from a transit stop?**

- No
- Yes

*[If “No,” skip to Question #36.]*

35. Have you reported the serious crime(s) you have been exposed to?  
(Mark all that apply.)

- No
- Yes, to the police
- Yes, to the bus driver
- Yes, to the train operator
- Yes, to the bus company
- Yes, to the rail company
- Yes, to family or friends
- Other

*Please explain: [ ]*

### **Private Transportation**

36. How often do you use a **traditional taxi** service (not Lyft or Uber)?

- Often (at least once a week)
- A few times per month
- Not often (a few times per year)
- Never

*[If “Never,” skip to Question #38.]*

37. Do you feel safe when using a taxi service?

- Always
- Often
- Sometimes
- Rarely
- Never

38. How often do you use **ride-hailing** services (Lyft, Uber, etc.)?

- Often (at least once a week)
- A few times per month
- Not often (a few times per year)
- Never

*[If "Never," skip to Question #40.]*

39. Do you feel safe when using a ride-hailing service?

- Always
- Often
- Sometimes
- Rarely
- Never

40. How often do you ride in a car?

	<i>Driver</i>	<i>Passenger</i>
Every day	<input type="radio"/>	<input type="radio"/>
5-6 days per week	<input type="radio"/>	<input type="radio"/>
3-4 days	<input type="radio"/>	<input type="radio"/>
1-2 days per week	<input type="radio"/>	<input type="radio"/>
Less than once per week	<input type="radio"/>	<input type="radio"/>
Never	<input type="radio"/>	<input type="radio"/>

41. Do you own a car?
- Yes
  - No
  - No, but I have access to a private car I don't own

42. Do you feel safe in parking structures?
- Always
  - Often
  - Sometimes
  - Rarely
  - Never

43. How often do you use a bike?
- Every day
  - 5-6 days per week
  - 3-4 days
  - 1-2 days per week
  - Less than once per week
  - Never
  - I don't own a bike

*[If "I don't own a bike," skip to Question #45.]*

44. Which of the following prevents you from using a bike more often?  
(Mark all that apply.)
- Fear of traffic collision
  - Fear that the bike will get stolen
  - Physically strenuous
  - Fear of being harassed

## Profile

45. Are you an international student?
- Yes
  - No

46. What is your five-digit home ZIP code where you live during the school year?
47. Think about a transit stop that you use and is the closest to where you live during the school year. What is a pair of streets that intersect near this stop (e.g., 35<sup>th</sup> and Vermont)?
48. Please indicate your gender.
- Female
  - Male
  - Transgender female or transgender male
  - Other
  - Prefer not to say
49. Please indicate if you are LGBTQI (lesbian/gay/bisexual/transgender/queer/intersex).
- Yes
  - No
  - Prefer not to say
50. Please indicate your race/ethnicity.  
(Check all that apply.)
- White/Caucasian
  - Black/African American
  - Latino
  - Asian/Pacific Islander
  - American Indian
  - Mixed race
51. Please indicate your age.
- 18-29
  - 30-39
  - 40-49
  - 50-59
  - 60+

Source: Loukaitou-Sideris et al., 2020, pp. 93–112

## LA Metro *Understanding How Women Travel* Survey

1. Language
  - English
  - Spanish
  - Chinese
2. Are you at least 18 years old?
  - Yes
  - No
3. What year were you born?
4. Which of the following do you identify as?
  - Male
  - Female
  - Non-binary
5. Do you identify as LGBTQIA?
  - Yes
  - No
  - Prefer not to answer
6. What is your home ZIP code?
7. Metro Rail
  - Regular
  - Infrequent
  - Previous
  - Non-rider
8. Metro Bus
  - Regular
  - Infrequent
  - Previous
  - Non-rider

9. Type

- Rider
- Infrequent
- Previous
- Non-rider

10. What type of transportation do you normally use to make trips?

- Drive alone
- Drive with others in the car
- Transit
- Walk/bicycle
- Carpool/vanpool
- Uber/Lyft
- Other

11. *Type of transportation normally used to make trip: [ ]*

12. Last time traveled to: work

- Drove alone
- Drove with others in the car
- Took transit
- Walked/bicycled
- Took Uber/Lyft, ride-hailing services
- Do not travel to this type of place

13. Last time traveled to: school

- Drove alone
- Drove with others in the car
- Took transit
- Walked/bicycled
- Took Uber/Lyft, ride-hailing services
- Do not travel to this type of place

14. Last time traveled to: social/recreational
  - Drove alone
  - Drove with others in the car
  - Took transit
  - Walked/bicycled
  - Took Uber/Lyft, ride-hailing services
  - Do not travel to this type of place
15. Last time traveled to: medical/dental
  - Drove alone
  - Drove with others in the car
  - Took transit
  - Walked/bicycled
  - Took Uber/Lyft, ride-hailing services
  - Do not travel to this type of place
16. Last time traveled to: household errands
  - Drove alone
  - Drove with others in the car
  - Took transit
  - Walked/bicycled
  - Took Uber/Lyft, ride-hailing services
  - Do not travel to this type of place
17. Last time traveled to: taking a child or family member to destination
  - Drove alone
  - Drove with others in the car
  - Took transit
  - Walked/bicycled
  - Took Uber/Lyft, ride-hailing services
  - Do not travel to this type of place

18. Last time traveled to: special event
- Drove alone
  - Drove with others in the car
  - Took transit
  - Walked/bicycled
  - Took Uber/Lyft, ride-hailing services
  - Do not travel to this type of place
19. Last time traveled to: other
- Drove alone
  - Drove with others in the car
  - Took transit
  - Walked/bicycled
  - Took Uber/Lyft, ride-hailing services
  - Do not travel to this type of place
20. *Other place traveled to: [ ]*
21. Frequency to: work or school
- 5+ days/week
  - 3-4 days/week
  - 1-2 times/week
  - 1-2 times/month
  - Less than once a month
  - Do not travel to this type of place
22. Frequency of: social/recreational trips
- 5+ days/week
  - 3-4 days/week
  - 1-2 times/week
  - 1-2 times/month
  - Less than once a month
  - Do not travel to this type of place



23. Frequency of: medical/dental trips
- 5+ days/week
  - 3-4 days/week
  - 1-2 times/week
  - 1-2 times/month
  - Less than once a month
  - Do not travel to this type of place
24. Frequency of: household errands
- 5+ days/week
  - 3-4 days/week
  - 1-2 times/week
  - 1-2 times/month
  - Less than once a month
  - Do not travel to this type of place
25. Frequency of: taking child or family to a destination
- 5+ days/week
  - 3-4 days/week
  - 1-2 times/week
  - 1-2 times/month
  - Less than once a month
  - Do not travel to this type of place
26. Frequency of: special event trips
- 5+ days/week
  - 3-4 days/week
  - 1-2 times/week
  - 1-2 times/month
  - Less than once a month
  - Do not travel to this type of place

27. During what times of the day do you typically travel on weekdays?

*(Multiple response)*

- 1:00 A.M.-4:59 A.M.
- 5:00 A.M.-9:59 A.M.
- 10:00 A.M.-11:59 A.M.
- 12:00 P.M.-3:59 P.M.
- 4:00 P.M.-5:59 P.M.
- 6:00 P.M.-10:59 P.M.
- 11:00 P.M.-12:59 A.M.
- Don't travel on this day

28. During what times of the day do you typically travel on weekends?

*(Multiple response)*

- 1:00 A.M.-4:59 A.M.
- 5:00 A.M.-9:59 A.M.
- 10:00 A.M.-11:59 A.M.
- 12:00 P.M.-3:59 P.M.
- 4:00 P.M.-5:59 P.M.
- 6:00 P.M.-10:59 P.M.
- 11:00 P.M.-12:59 A.M.
- Don't travel on this day

*[If "Previous" on Question #9, skip to Question #31; if "Non-rider" on Question #9, skip to Question #43.]*

29. During what times of the day do you typically travel on transit on weekdays?

*(Multiple response)*

- 1:00 A.M.-4:59 A.M.
- 5:00 A.M.-9:59 A.M.
- 10:00 A.M.-11:59 A.M.
- 12:00 P.M.-3:59 P.M.
- 4:00 P.M.-5:59 P.M.
- 6:00 P.M.-10:59 P.M.
- 11:00 P.M.-12:59 A.M.
- Don't travel on this day

30. During what times of the day do you typically travel on transit on weekends?

*(Multiple response)*

- 1:00 A.M.-4:59 A.M.
- 5:00 A.M.-9:59 A.M.
- 10:00 A.M.-11:59 A.M.
- 12:00 P.M.-3:59 P.M.
- 4:00 P.M.-5:59 P.M.
- 6:00 P.M.-10:59 P.M.
- 11:00 P.M.-12:59 A.M.
- Don't travel on this day

*[If "Rider" or "Infrequent" on Question #9, skip to Question #33.]*

31. During what times of the day did you typically travel on the weekdays?

*(Multiple response)*

- 1:00 A.M.-4:59 A.M.
- 5:00 A.M.-9:59 A.M.
- 10:00 A.M.-11:59 A.M.
- 12:00 P.M.-3:59 P.M.
- 4:00 P.M.-5:59 P.M.
- 6:00 P.M.-10:59 P.M.
- 11:00 P.M.-12:59 A.M.
- Don't travel on this day

32. During what times of the day did you typically travel on the weekends?

*(Multiple response)*

- 1:00 A.M.-4:59 A.M.
- 5:00 A.M.-9:59 A.M.
- 10:00 A.M.-11:59 A.M.
- 12:00 P.M.-3:59 P.M.
- 4:00 P.M.-5:59 P.M.
- 6:00 P.M.-10:59 P.M.
- 11:00 P.M.-12:59 A.M.
- Don't travel on this day

*[If "Previous" on Question #9, skip to Question #35.]*

33. What makes it difficult for you to use public transit?  
(Multiple response)

- Public transit is slow.
- Public transit is expensive.
- I travel with children.
- I travel with an individual who needs assistance.
- Travel time is unreliable.
- Real-time arrival info is unpredictable.
- Service is not frequent enough.
- I have to make too many transfers.
- It is confusing to navigate.
- It doesn't go where I need to go.
- It doesn't feel clean.
- It is too crowded.
- I don't feel safe on public transit.
- Service is not available when I need to travel.
- It is difficult for me to make multiple trips in a row.
- Other

34. What makes it difficult to use public transit: [ ]

[If "Rider" or "Infrequent" on Question #9, skip to Question #37.]

35. What made it difficult for you to use public transit?  
(Multiple response)

- Public transit is slow.
- Public transit is expensive.
- I travel with children.
- I travel with an individual who needs assistance.
- Travel time is unreliable.
- Real-time arrival info is unpredictable.
- Service is not frequent enough.
- I have to make too many transfers.
- It is confusing to navigate.
- It doesn't go where I need to go.
- It doesn't feel clean.
- It is too crowded.
- I don't feel safe on public transit.
- Service is not available when I need to travel.
- It is difficult for me to make multiple trips in a row.
- Other

36. What made it difficult to use public transit: [ ]

[If "Previous" on Question #9, skip to Question #40.]

37. What makes it difficult for you to use public transit?  
(Rank #1)

- Public transit is slow.
- Public transit is expensive.
- I travel with children.
- I travel with an individual who needs assistance.
- Travel time is unreliable.
- Real-time arrival info is unpredictable.
- Service is not frequent enough.
- I have to make too many transfers.
- It is confusing to navigate.
- It doesn't go where I need to go.
- It doesn't feel clean.
- It is too crowded.
- I don't feel safe on public transit.
- Service is not available when I need to travel.
- It is difficult for me to make multiple trips in a row.
- Other

38. What makes it difficult for you to use public transit?  
(Rank #2)

- Public transit is slow.
- Public transit is expensive.
- I travel with children.
- I travel with an individual who needs assistance.
- Travel time is unreliable.
- Real-time arrival info is unpredictable.
- Service is not frequent enough.
- I have to make too many transfers.
- It is confusing to navigate.
- It doesn't go where I need to go.
- It doesn't feel clean.
- It is too crowded.
- I don't feel safe on public transit.
- Service is not available when I need to travel.
- It is difficult for me to make multiple trips in a row.
- Other

39. What makes it difficult for you to use public transit?  
(Rank #3)

- Public transit is slow.
- Public transit is expensive.
- I travel with children.
- I travel with an individual who needs assistance.
- Travel time is unreliable.
- Real-time arrival info is unpredictable.
- Service is not frequent enough.
- I have to make too many transfers.
- It is confusing to navigate.
- It doesn't go where I need to go.
- It doesn't feel clean.
- It is too crowded.
- I don't feel safe on public transit.
- Service is not available when I need to travel.
- It is difficult for me to make multiple trips in a row.
- Other

*[If "Rider" or "Infrequent" on Question #9, skip to Question #45.]*

40. What made it difficult for you to use public transit?  
(Rank #1)

- Public transit is slow.
- Public transit is expensive.
- I travel with children.
- I travel with an individual who needs assistance.
- Travel time is unreliable.
- Real-time arrival info is unpredictable.
- Service is not frequent enough.
- I have to make too many transfers.
- It is confusing to navigate.
- It doesn't go where I need to go.
- It doesn't feel clean.
- It is too crowded.
- I don't feel safe on public transit.
- Service is not available when I need to travel.
- It is difficult for me to make multiple trips in a row.
- Other

41. What made it difficult for you to use public transit?  
(Rank #2)

- Public transit is slow.
- Public transit is expensive.
- I travel with children.
- I travel with an individual who needs assistance.
- Travel time is unreliable.
- Real-time arrival info is unpredictable.
- Service is not frequent enough.
- I have to make too many transfers.
- It is confusing to navigate.
- It doesn't go where I need to go.
- It doesn't feel clean.
- It is too crowded.
- I don't feel safe on public transit.
- Service is not available when I need to travel.
- It is difficult for me to make multiple trips in a row.
- Other

42. What made it difficult for you to use public transit?  
(Rank #3)

- Public transit is slow.
- Public transit is expensive.
- I travel with children.
- I travel with an individual who needs assistance.
- Travel time is unreliable.
- Real-time arrival info is unpredictable.
- Service is not frequent enough.
- I have to make too many transfers.
- It is confusing to navigate.
- It doesn't go where I need to go.
- It doesn't feel clean.
- It is too crowded.
- I don't feel safe on public transit.
- Service is not available when I need to travel.
- It is difficult for me to make multiple trips in a row.
- Other

*[If "Previous" on Question #9, skip to Question #45.]*



43. Why don't you currently use public transit?

*(Multiple response)*

- Public transit is slow.
- Public transit is expensive.
- I travel with children.
- I travel with an individual who needs assistance.
- Travel time is unreliable.
- Real-time arrival info is unpredictable.
- Service is not frequent enough.
- I have to make too many transfers.
- It is confusing to navigate.
- It doesn't go where I need to go.
- It doesn't feel clean.
- It is too crowded.
- I don't feel safe on public transit.
- Service is not available when I need to travel.
- It is difficult for me to make multiple trips in a row.
- Other

44. Why don't you currently use public transit: [ ]

45. Do you currently have a driver's license?

- Yes
- No

*[If "Yes," skip to Question #48.]*

46. Why not?

*(Multiple response)*

- I prefer not to own a car.
- Do not need to get car insurance
- Transit is easier to use.
- Transit is cheaper than driving.
- Have friends/family who will give me a ride
- Medical restrictions
- Easier to walk/bike
- Easier to use Uber/Lyft
- Other

47. Why not: [ ]

48. How often do you have a household car available for your personal transportation needs?

- Always
- Most of the time
- Sometimes
- Infrequently
- Almost never
- Never

49. Who in the household most often uses the car?

- Myself
- Spouse/significant other
- Other person in my household
- Equally use the car(s)
- My household does not have a car
- Other

50. *Who else in the household most often uses the car: [ ]*

51. How many children are in your household?

- No children
- 1 child
- 2 children
- 3 children
- 4 children
- 5 or more children

52. *How many?: [ ]*

53. Who in your family is most often responsible for household errands?

- I am
- Spouse/significant other
- Other person in my household
- Caregiver
- I share these responsibilities with other in household

*[If “Previous” on Question #9, skip to Question #55; if “Non-rider” on Question #9, skip to Question #112.]*

54. How long have you been riding public transit in Los Angeles?

- Less than 1 year
- 1-2 years
- 3-4 years
- 5 years or more

*[If “Rider” or “Infrequent” on Question #9, skip to Question #56.]*

55. How long did you ride public transit in Los Angeles?

- Less than 1 year
- 1-2 years
- 3-4 years
- 5 years or more

*[If “Previous” on Question #9, skip to Question #58.]*

56. What is the most important reason you currently use public transit?

- Avoid traffic
- Transit is the fastest option for my trip.
- Don’t own a car
- Don’t have a driver’s license
- To save money on gas and parking
- Employer or school helps me pay for transit.
- Better for environment
- Time to rest, work, read, etc.
- For special event
- Other

57. *Most important reason currently using public transit: [ ]*

*[If “Rider” or “Infrequent” on Question #9, skip to Question #60.]*

58. What is the most important reason you used to use public transit?

- Avoid traffic
- Transit is the fastest option for my trip.
- Don't own a car
- Don't have a driver's license
- To save money on gas and parking
- Employer or school helps me pay for transit.
- Better for environment
- Time to rest, work, read, etc.
- For special event
- Other

59. *Most important reason used to use public transit:* [ ]

*[If "Previous" on Question #9, skip to Question #61.]*

60. When riding transit, how do you generally pay for your fare?

- Cash
- Money on TAP card
- Day pass
- 7-day pass
- 30-day pass
- Employer annual pass program
- Reduced fare pass/program

*[If "Rider" or "Infrequent" on Question #9, skip to Question #62.]*

61. When riding transit, how did you generally pay for your fare?

- Cash
- Money on TAP card
- Day pass
- 7-day pass
- 30-day pass
- Employer annual pass program
- Reduced fare pass/program

*[If "Previous" on Question #9, skip to Question #63.]*

62. Do you travel on transit with a child(ren)?

- Yes
- No

*[If “Yes,” skip to Question #68; if “No,” skip to Question #64.]*

63. Did you travel on transit with a child(ren)?

- Yes
- No

*[If “Yes,” skip to Question #69; if “No,” skip to Question #66.]*

64. Why do you not travel with a child(ren) on transit?

- Too difficult
- Too expensive
- Need to carry packages
- Public transit may not be safe.
- Don’t have children or other individuals in my care
- Other

65. *Why not travel with child(ren): [ ]*

*[If “Rider” or “Infrequent” on Question #9, skip to Question #68.]*

66. Why did you not travel with a child(ren) on transit?

- Too difficult
- Too expensive
- Need to carry packages
- Public transit may not be safe.
- Don’t have children or other individuals in my care
- Other

67. *Why not travel with child(ren): [ ]*

*[If “Previous” on Question #9, skip to Question #69.]*

68. Do you travel on transit with individual(s) who need assistance?

- Yes
- No

*[If “Yes,” skip to Question #74; if “No,” skip to Question #70.]*

69. Did you travel on transit with individual(s) who need assistance?

- Yes
- No

*[If “Yes,” skip to Question #76; if “No,” skip to Question #72.]*

70. Why do you not travel with an individual(s) who need assistance on transit?  
(Multiple response)

- Too difficult
- Too expensive
- Need to carry packages
- Public transit may not be safe.
- Don’t have children or other individuals in my care
- Other

71. Why not travel with individual who needs assistance: [ ]

*[If “Rider” or “Infrequent” on Question #9, skip to Question #74.]*

72. Why did you not travel with an individual(s) who need assistance on transit?  
(Multiple response)

- Too difficult
- Too expensive
- Need to carry packages
- Public transit may not be safe.
- Don’t have children or other individuals in my care
- Other

73. Why not travel with individual who needs assistance: [ ]

*[If “Previous” on Question #9, skip to Question #76.]*

74. In a typical month, how much money do you spend on public transit for yourself?

75. In a typical month, how much money do you spend on public transit for your child or other dependent?

*[If “Rider” or “Infrequent” on Question #9, skip to Question #78.]*

76. How much money did you spend on public transit for yourself?

77. How much money did you spend on public transit for children or dependents?

*[If “Previous” on Question #9, skip to Question #79.]*

78. How often do you carry packages, bags, carts, and/or travel with a stroller?

- Most of the time
- Sometimes
- Infrequently
- Almost never

*[If “Rider” or “Infrequent” on Question #9, skip to Question #80.]*

79. How often did you carry packages, bags, carts, and/or travel with a stroller?

- Most of the time
- Sometimes
- Infrequently
- Almost never

*[If “Previous” on Question #9, skip to Question #82.]*

80. What are the three most important items that make you feel safe when riding or waiting for public transit?

*(Multiple response)*

- Lighting
- Other people nearby
- Open businesses nearby
- Emergency intercom nearby
- Security cameras
- Transit employees or reps nearby
- Transit police nearby
- Other

81. *Most important item that makes you feel safe:* [ ]

*[If “Rider” or “Infrequent” on Question #9, skip to Question #84.]*

82. What were the three most important items that made you feel safe when riding or waiting for public transit?

*(Multiple response)*

- Lighting
- Other people nearby
- Open businesses nearby
- Emergency intercom nearby
- Security cameras
- Transit employees or reps nearby
- Transit police nearby
- Other

83. *Most important item that made you feel safe: [ ]*

*[If "Previous" on Question #9, skip to Question #87.]*

84. What are the three most important items that make you feel safe when riding or waiting for public transit?

*(Rank #1)*

- Lighting
- Other people nearby
- Open businesses nearby
- Emergency intercom nearby
- Security cameras
- Transit employees or reps nearby
- Transit police nearby
- Other

85. What are the three most important items that make you feel safe when riding or waiting for public transit?

*(Rank #2)*

- Lighting
- Other people nearby
- Open businesses nearby
- Emergency intercom nearby
- Security cameras
- Transit employees or reps nearby
- Transit police nearby
- Other



86. What are the three most important items that make you feel safe when riding or waiting for public transit?

*(Rank #3)*

- Lighting
- Other people nearby
- Open businesses nearby
- Emergency intercom nearby
- Security cameras
- Transit employees or reps nearby
- Transit police nearby
- Other

*[If “Rider” or “Infrequent” on Question #9, skip to Question #90.]*

87. What were the three most important items that made you feel safe when riding or waiting for public transit?

*(Rank #1)*

- Lighting
- Other people nearby
- Open businesses nearby
- Emergency intercom nearby
- Security cameras
- Transit employees or reps nearby
- Transit police nearby
- Other

88. What were the three most important items that made you feel safe when riding or waiting for public transit?

*(Rank #2)*

- Lighting
- Other people nearby
- Open businesses nearby
- Emergency intercom nearby
- Security cameras
- Transit employees or reps nearby
- Transit police nearby
- Other

89. What were the three most important items that made you feel safe when riding or waiting for public transit?

*(Rank #3)*

- Lighting
- Other people nearby
- Open businesses nearby
- Emergency intercom nearby
- Security cameras
- Transit employees or reps nearby
- Transit police nearby
- Other

*[If “Previous” on Question #9, skip to Question #91.]*

90. Of police officers you see on transit vehicles, are there...?

- Far too few officers
- Too few officers
- The right amount
- Too many officers
- Far too many officers

*[If “Rider” or “Infrequent” on Question #9, skip to Question #92.]*

91. Of police officers you saw on transit vehicles, were there...?

- Far too few officers
- Too few officers
- The right amount
- Too many officers
- Far too many officers

*[If “Previous” on Question #9, skip to Question #93.]*

92. Of police officers you see at public transit stops/stations, are there...?

- Far too few officers
- Too few officers
- The right amount
- Too many officers
- Far too many officers

*[If “Rider” or “Infrequent” on Question #9, skip to Question #94.]*

93. Of police officers you saw at public transit stops/stations, were there...?

- Far too few officers
- Too few officers
- The right amount
- Too many officers
- Far too many officers

94. Service agreement: other riders are courteous.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
- N/A

95. Service agreement: public transit is physically comfortable for me.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
- N/A

96. Service agreement: during the day, I feel safe while riding public transit.
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
  - N/A
97. Service agreement: during the day, I feel safe while waiting for public transit.
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
  - N/A
98. Service agreement: during the day, I feel safe while traveling to the stop/station.
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
  - N/A
99. Service agreement: after dark, I feel safe while riding public transit.
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
  - N/A

100. Service agreement: after dark, I feel safe while waiting for public transit.
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
  - N/A
101. Service agreement: after dark, I feel safe while traveling to the stop/station.
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
  - N/A
102. Service agreement: public transit operators are generally courteous and helpful.
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
  - N/A
103. Service agreement: public transit operators generally drive safely and smoothly.
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
  - N/A

104. Service agreement: public transit operators respond quickly to incidents on board.
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
  - N/A
105. Service agreement: police or transit security respond quickly to incidents on board or at stops/stations.
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
  - N/A
106. Service agreement: I have space for items I carry on the bus.
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
  - N/A
107. Service agreement: Riding on the bus with packages and strollers is easy.
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
  - N/A

108. Service agreement: Riding on the bus with children is easy.
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
  - N/A
109. Service agreement: I have space for items I carry on the train.
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
  - N/A
110. Service agreement: Riding on the train with packages and strollers is easy.
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
  - N/A
111. Service agreement: Riding on the train with children is easy.
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
  - N/A
112. Additional comments

113. Have you ever used Uber/Lyft or other ride-hailing services?

- Yes
- No

*[If “Previous” on Question #9, skip to Question #115; if “Non-rider” on Question #9, skip to Question #122.]*

114. How has your use of public transit changed due to Uber/Lyft?

- Increased
- Stayed the same
- Decreased

*[If “Rider” or “Infrequent” on Question #9, skip to Question #116.]*

115. How did your use of public transit change due to Uber/Lyft?

- Increased
- Stayed the same
- Decreased

*[If “Previous” on Question #9, skip to Question #117.]*

116. How do you use ride-hailing services in relation to public transit?

- To reach a public transit stop/station
- To replace a public transit service
- For trips that public transit doesn’t serve

*[If “Rider” or “Infrequent” on Question #9, skip to Question #118.]*

117. How did you use ride-hailing services in relation to public transit?

- To reach a public transit stop/station
- To replace a public transit service
- For trips that public transit doesn’t serve

*[If “Previous” on Question #9, skip to Question #120.]*



118. What are the top two reasons you decide to use Uber/Lyft instead of public transit?  
(Multiple response)

- Faster than using public transit
- Public transit doesn't run early enough.
- Public transit doesn't run late enough.
- Safer to use than public transit during the day
- Safer to use than public transit at night
- Easier to use than riding public transit
- Because I missed my bus/train
- Because running late and public transit won't get me to destination on time
- Other

119. Top reason to use Uber/Lyft instead of public transit: [ ]

[If "Rider" or "Infrequent" on Question #9, skip to Question #122.]

120. What were the top two reasons you decided to use Uber/Lyft instead of public transit?  
(Multiple response)

- Faster than using public transit
- Public transit doesn't run early enough.
- Public transit doesn't run late enough.
- Safer to use than public transit during the day
- Safer to use than public transit at night
- Easier to use than riding public transit
- Because I missed my bus/train
- Because running late and public transit won't get me to destination on time
- Other

121. Top reason to have used Uber/Lyft instead of public transit: [ ]

122. In a typical month, how much do you spend on Uber/Lyft/taxi?

123. What did you do before Uber/Lyft were available?  
(Multiple response)

- Took a taxi
- Took transit
- Walked or biked
- Asked for a ride from a friend/family member
- Did not make the trip

124. Employment status

- Full-time
- Part-time
- Full-time student and working
- Full-time student not working
- Unemployed (seeking employment)
- Unemployed (not seeking employment)
- Stay at home parent or full-time caregiver

125. Which best describes household?

- No children
- Single-parent household with other adults
- Single-parent household with no other adults
- Two-parent household with other adults
- Two-parent household with no other adults

126. Disability

- Yes
- No

127. Ethnicity

- African American/Black
- Hispanic, Latinx, or Spanish origin
- Asian
- Native Hawaiian or other Pacific Islander
- American Indian or Alaska Native
- Caucasian/white
- Other

128. Other ethnicity: [ ]

- 129. Household income
  - Under \$10,000
  - \$10,000-\$24,999
  - \$25,000-\$34,999
  - \$35,000-\$49,999
  - \$50,000-\$74,999
  - \$75,000-\$99,999
  - \$100,000-\$149,999
  - \$150,000 or more
- 130. Date
- 131. Source
  - Sample
  - Metro
- 132. County
  - Los Angeles
  - Orange
  - San Bernardino
  - Riverside
  - Other
- 133. Age
- 134. Age group
  - 18-29
  - 30-44
  - 45-59
  - 60+
- 135. Income
  - Less than \$50,000
  - \$50,000 or more

Source: Galicia et al., 2019, app. C, pp. 1–25

# LADOT *Changing Lanes* Survey

## General Travel Trends

1. What is your ZIP code?

- 90025
- 90064
- 90049
- 90002
- 90059
- 91352
- 91504
- 91505
- 91040
- 91331
- Other: [ ]

2. How often did you use the travel choices listed below BEFORE the COVID-19 pandemic?

	<i>Every day</i>	<i>A few times per week</i>	<i>A few times per month</i>	<i>A few times per year</i>	<i>Never</i>
How often did you drive alone?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you carpool or get a ride with someone else?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you use Uber, Lyft, or a taxi?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you take public transportation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you use a bicycle, skateboard, or scooter?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you walk to places?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. In the last 7 days, how many days did you?

Drive somewhere by yourself?	0	1	2	3	4	5	6	7
Carpool or get a ride somewhere?	0	1	2	3	4	5	6	7
Take an Uber, Lyft, or taxi to go somewhere?	0	1	2	3	4	5	6	7
Ride public transportation to go somewhere?	0	1	2	3	4	5	6	7
Ride a bicycle, skateboard, or scooter to go somewhere?	0	1	2	3	4	5	6	7
Walk to get somewhere?	0	1	2	3	4	5	6	7

4. Who in your household is currently most often responsible for getting errands done (like grocery shopping, going to the pharmacy, childcare trips, etc.)?

- I am.
- Spouse/significant other
- Another person in my household (family member, roommate, caretaker, etc.)
- Someone who lives outside of my household (child, or neighbor, etc.)
- I share these responsibilities equally with others in my household.
- Most of our household-serving errands are done online.

5. How long does it take to get to the grocery store where your household buys most of your groceries?

- Less than 15 minutes
- 15-30 minutes
- 30-45 minutes
- More than 45 minutes

6. From the list below, select the top three things that you think would make travel easier for you:

- Easier access to a car
- Delivery services that bring things to me (groceries, medicine, etc.)
- One transit pass that everyone in my household can use
- Free transit for kids
- More frequent bus or train service
- Neighborhood shuttle service
- Free transfers between different types of buses or trains (DASH and Metro, for example)
- Payment credits to use for Lyft or Uber rides
- Access to public restrooms, public seating, or other amenities
- Better sidewalks and streets that make walking more comfortable
- More direct transit service between my home and where I need to go
- Bike share stations in my neighborhood
- Other: [ ]

7. What keeps you from walking more in your neighborhood now?

*Select all that apply.*

- Not enough lighting at night/only feel comfortable walking during the day
- Poorly maintained, cracked, uneven sidewalks
- Too many other people around or overcrowding
- Too many cars/traffic
- Fear of crime
- No places to walk to nearby
- Street intersections/street crossings that feel unsafe
- Physical limitations (I can't walk very far.)
- Other: [ ]

8. Please read the following statements and indicate whether you always agree, sometimes agree, neutral, disagree, or do not think it applies to you.

	<i>Always agree</i>	<i>Sometimes agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Does not apply to me</i>
I feel uncomfortable around people I do not know.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Privacy is important to me when I travel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	<i>Always agree</i>	<i>Sometimes agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Does not apply to me</i>
I feel safe on a bus or train.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel safe in a car or private vehicle.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel safe waiting for transit.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel safe walking in my neighborhood.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like being outside of my house.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel safe when I see other people around me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The cost of gas influences the number of places I go/trips I make.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Travel costs are a financial burden for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I walk to places to save money.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I use public transit to save money on transportation expenses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lyft/Uber/taxis are expensive to use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is difficult to get places I need/want to go on public transit.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Demographics

9. How many people, including you, live in your household?

10. How many are under age 5?
11. How many are ages 5-16?
12. How many cars are owned, leased, or available for regular use by the people who currently live in your household?
13. Before the pandemic, were you employed?
  - Yes, full time
  - Yes, part-time
  - No
14. Are you employed now?
  - Yes, full time
  - Yes, part-time
  - No, I'm furloughed from my job
  - No
15. Do you have a driver's license?
  - Yes
  - No
16. What was your annual household income before taxes last year (in 2019)?
  - Under \$25,000
  - \$25,000-\$50,000
  - \$50,000-\$75,000
  - \$75,000-\$100,000
  - \$100,00 and over
  - Don't know/prefer not to answer



17. What race/ethnicity do you identify with?

*Check all that apply/indicate all that apply.*

- White (non-Hispanic)
- Hispanic/Latinx
- Black
- Asian
- Middle-Eastern/North African
- Native Hawai'ian/Pacific Islander
- Native American
- Prefer not to say
- Other: [ ]

18. Which of the following age ranges reflects your age?

- 0-17
- 18-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70+

19. Which of the following best reflects your gender identity?

- Female
- Male
- Transgender female
- Transgender male
- Gender non-conforming
- Other
- Prefer not to say

20. Please indicate if you identify as LGBTQI+ (lesbian/gay/bisexual/transgender/queer/intersex)?

- Yes
- No
- Prefer not to say

21. How would you like us to contact you if you win this week's raffle prize? Please enter your e-mail or phone number in the space below.

E-mail address: [ ]

Phone number: [ ]

22. Are you interested in participating in a 20- to 30-minute travel questionnaire? Participants will be paid \$35.

Yes

*Please write your phone number: [ ]*

No

*Source: Reynolds et al., 2021, app. A, pp. 2–4*

# MTI Survey

## Transit Safety Survey

[Agency] is seeking to better understand if riders feel safe using their service. The following questions are sensitive, but will help [agency] improve safety. Your response is important even if you choose to skip some questions. The survey is for adults (18 years or older). All responses will be kept confidential.

1. How often do you typically use [agency]?
  - 2 or more days a week
  - 1-4 days a month
  - A few times a year or less

***The following questions ask about your experiences using [agency] over the past year or so. Think about all parts of a transit trip, both onboard and while waiting at stations or stops.***

2. How often do you feel safe using [agency]?
 

Always
↔
Never

3. Have you experienced any of the following yourself or seen them happen to others while using [agency] in the past year?

	<i>Happened to me</i>	<i>Saw it happen to others</i>
Hostile comments, sounds, or gestures	<input type="checkbox"/>	<input type="checkbox"/>
Sexual comments, sounds, looks, or gestures (asking you to have sex, calling you “babe,” whistling, kissing noises, leering, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
Following or stalking	<input type="checkbox"/>	<input type="checkbox"/>
Unwanted groping, kissing, or other inappropriate touching	<input type="checkbox"/>	<input type="checkbox"/>
Pushing, spitting, coughing on you, or other physical assault	<input type="checkbox"/>	<input type="checkbox"/>
Personal property damaged or stolen	<input type="checkbox"/>	<input type="checkbox"/>

	<i>Happened to me</i>	<i>Saw it happen to others</i>
Showing pornographic or offensive pictures or words	<input type="checkbox"/>	<input type="checkbox"/>
Exposing private body parts	<input type="checkbox"/>	<input type="checkbox"/>
Sexual assault or rape	<input type="checkbox"/>	<input type="checkbox"/>
Other <i>Specify: [ ]</i>	<input type="checkbox"/>	<input type="checkbox"/>
None	<input type="checkbox"/>	<input type="checkbox"/>

*[If “None” for both, skip to Question #11.]*

4. How often did you experience or see any of these behaviors when using [agency] in the past year?

                         
 Frequently      ↔      Never

5. Where did these incidents happen?  
*(Check all that apply.)*

- At stops/stations
- On board
- Other: [ ]

6. When did these incidents happen?  
*(Check all that apply.)*

- Daytime
- After dark

7. When these incidents happened, were you alone or with traveling companions?  
*(Check all that apply.)*

- Alone
- With traveling companions

8. When these incidents happened, did you report any of them?

*(Check all that apply.)*

- Did not report any
- To [agency] (in person, online, by phone, via social media, etc.)
- To police/law enforcement response
- Other  
*Specify: [ ]*

*[If “Did not report any,” skip to Question #9.]*

8a. Did you receive an appropriate response?

- Yes
- No
- Sometimes

9. When these incidents happened, do you think the victim was targeted because of...?

*(Check all that apply.)*

- Race or ethnicity
- Religion
- Language spoken
- Income
- Gender/gender expression
- Sexual orientation
- Age
- Disability
- Obesity
- None—it was random.
- Don't know
- Other

*Specify: [ ]*

10. Do you currently take any safety precautions when using [agency] to avoid being harassed?

*(Check all that apply.)*

- Don't ride at night
  - Avoid certain routes, stops, or stations
  - Don't ride alone
  - Other
- Specify: [ ]*
- No—don't take any safety precautions when using [agency]

## About You

*These questions are included to be sure we survey a mix of riders.*

11. Age

- 18-34
- 35-64
- 65 and older

12. Home ZIP code

13. What is your primary language?

- English
- Other  
*Specify: [ ]*

14. Race or ethnic identification  
*(Check all that apply.)*

- American Indian or Alaska Native
- Asian or Pacific Islander
- Black or African American
- Hispanic/Latino
- White
- Other  
*Specify: [ ]*

15. Do you have any disabilities that affect your experience using [agency]?

- Yes
- No

16. Gender  
*(Check all that apply.)*

- Female
- Male
- Non-binary
- Transgender
- Other  
*Specify: [ ]*

17. Do you identify as LGBTQIA+ (lesbian, gay, etc.)?

- Yes
- No

18. Annual household income

- Under \$25,000
- \$25,000-\$49,999
- \$50,000-\$99,999
- \$100,000+

19. What would you say is your religion?

- [ ]
- None

Comments or experiences related to safety/harassment on [agency]:

*You may also share comments online at [URL].*

Thank you for completing the survey!

*Source: Agrawal et al., 2023, pp. 36–37*



