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Lost Hours, Lost Opportunities: The Toll of Extreme Travel on Lower Income Communities in the San Fernando Valley

**Permalink**

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**Publication Date**

2024-06-13

**DOI**

10.17610/T6HW3T

**UCLA** Institute of  
Transportation Studies

**UCLA** Lewis Center  
for Regional Policy Studies

# Lost Hours, Lost Opportunities

The Toll of Extreme Travel on Lower Income Communities in the San Fernando Valley

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Project Lead: Alejandra Rios Gutierrez

Faculty Advisor: Adonia Lugo

Client: Pacoima Beautiful (PB)

June 2024

## Technical Report Documentation Page

<b>1. Report No.</b> N/A	<b>2. Government Accession No.</b> N/A	<b>3. Recipient's Catalog No.</b> N/A	
<b>4. Title and Subtitle</b> Lost Hours, Lost Opportunities: The Toll of Extreme Travel on Lower Income Communities in the San Fernando Valley		<b>5. Report Date</b> June 13, 2024	
		<b>6. Performing Organization Code</b> UCLA-ITS	
<b>7. Author(s)</b> Alejandra Rios Gutierrez		<b>8. Performing Organization Report No.</b> LAS2405	
<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> N/A	
<b>12. Sponsoring Agency Name and Address</b> UCLA Institute of Transportation Studies <a href="http://www.its.ucla.edu">www.its.ucla.edu</a>		<b>13. Type of Report and Period Covered</b> Final	
		<b>14. Sponsoring Agency Code</b> UC ITS	
<b>15. Supplementary Notes</b> DOI:10.17610/T6HW3T			
<b>16. Abstract</b> <p>Extreme commuting is increasing worldwide, especially in urban areas, driven by factors like limited affordable housing and job opportunities. In Los Angeles, individuals, particularly those in lower-income jobs, often face long commutes due to affordable housing constraints and proximity to job centers. Extreme commutes refer to spending 180 minutes or more traveling to and from work. This report expands on this concept to define 'extreme travel,' which aims to include travel to all destinations.</p> <p>This report examines how extreme travel affects economic, social, environmental, and health outcomes for lower-income people living, working, or studying in the San Fernando Valley (SFV) through a collaborative effort with Pacoima Beautiful (PB). PB is an environmental justice community-based organization primarily serving Northeast San Fernando Valley Latinx communities. The report investigates the causes of extreme travel, the impacts on socioeconomic, health, and environmental outcomes, and transportation challenges associated with extreme travel using a qualitative research approach. The data collected includes fourteen semi-structured interviews and 93 survey responses. The interviews allowed for in-depth conversations and documentation of first-hand experiences, while the survey provided data to compare experiences between people experiencing extreme travel and people who do not. Findings reveal that people who experience extreme travel face barriers to accessing transportation services, affordable housing near job centers, and quality jobs closer to home. Moreover, people with extreme travel feel it negatively impacts their social, economic, health, and environmental outcomes. The findings can inform policy and planning efforts, particularly in anticipation of the East San Fernando Valley Light Rail Transit Project, and contribute to environmental justice and transportation equity discourse.</p>			
<b>17. Key Words</b> transportation, equity		<b>18. Distribution Statement</b> No restrictions.	
<b>19. Security Classif. (of this report)</b> Unclassified	<b>20. Security Classif. (of this page)</b> Unclassified	<b>21. No. of Pages</b> 87	<b>22. Price</b> N/A

## Acknowledgments

I extend heartfelt gratitude to the individuals who generously shared their transportation and life experiences for this project. Your insights and stories were fundamental to this project, and it is through your contributions that it has become a reality.

Special thanks are due to Pacoima Beautiful staff, with particular appreciation for Roxy Rivas, whose dedicated support, feedback, and guidance greatly enriched this project. I am deeply grateful to my advisor, Dr. Adonia Lugo, for her insightful mentorship and unwavering encouragement throughout this journey. I also thank Dr. Tierra Bills for her invaluable advice on survey design.

To all my friends, classmates, and colleagues at UCLA, your challenging discussions and shared knowledge have been a constant source of inspiration. Thanks to my sister, Nataly Rios, for her continuous encouragement and support, including her thoughtful feedback on the final draft of this report. Thanks to Madeline Wander for helping me refine my research by sharing her expertise in transportation equity in the suburbs. Thanks to Lillian Liang for doing a final read and providing feedback.

Thank you to the UCLA Institute of Transportation, the Lewis Center for Regional Policy Studies, and the Dwight D. Eisenhower Transportation Fellowship for their generous funding support for this project.

The Institute of Transportation Studies at UCLA 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. This work was also completed on the traditional and ancestral lands of the Tataviam. The shared histories and ongoing realities of Indigenous peoples here and around the world inspire me to strive toward a more just future.

## Disclaimer

This report was prepared in partial fulfillment of the requirements for the Master in Urban and Regional Planning degree in the Department of Urban Planning at the University of California, Los Angeles. It was prepared at the direction of the Pacoima Beautiful as a planning client. The views expressed herein are those of the authors and not necessarily those of the Department, the UCLA Luskin School of Public Affairs, UCLA as a whole, or the client.

# Lost Hours, Lost Opportunities

## The Toll of Extreme Travel on Lower Income Communities in the San Fernando Valley

A comprehensive project submitted in partial satisfaction of the requirements for the degree of Master of Urban & Regional Planning

Project Lead: Alejandra Rios Gutiérrez

Client: Pacoima Beautiful

Faculty Chair: Dr. Adonia Lugo

2024

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# Executive Summary

This comprehensive report investigates the multifaceted impacts of extreme travel for people in the San Fernando Valley, particularly focusing on lower-income groups. Through a collaborative effort with Pacoima Beautiful, an environmental justice organization, the study examines the social, economic, health, and environmental consequences of prolonged travel, aiming to inform policy and planning initiatives.

The research identifies extreme travel as a phenomenon extending beyond work commutes to encompass travel to all destinations. Contributing factors include limited affordable housing, job opportunities, and transit options, exacerbating transportation challenges in urban areas like Los Angeles.

Pacoima Beautiful predominantly serves Latinx communities in the northeastern San Fernando Valley, characterized by socioeconomic disparities compared to the broader Los Angeles County. This demographic context underscores the urgency of addressing transportation inequities.

## Key Findings:

1. **Transportation Challenges:** Participants highlighted significant transportation barriers, especially for those dependent on public transit. Long travel times and reliance on cars impact access to essential services like employment, healthcare, and amenities, with many expressing frustration over limited mobility options.
2. **Health and Social Impacts:** Extreme travel negatively affects both physical and mental health, with concerns ranging from air pollution exposure to exhaustion and stress. Participants reported missing out on social activities and personal care, exacerbating feelings of isolation and impacting relationships with family and friends.
3. **Economic Impacts:** Extreme travel imposes financial burdens, with participants citing high vehicle-related expenses and limited access to affordable transportation alternatives. These economic challenges contribute to financial strain and hinder opportunities for socio-economic advancement.
4. **Causes of Extreme Travel:** The primary drivers of extreme commuting emerge from housing affordability constraints and land use patterns. Participants emphasized the need for systemic solutions beyond transportation infrastructure improvements to address these underlying issues and alleviate travel burdens.

## Recommendations:

This research provides insights into the impacts of extreme travel on people's social, economic, and health well-being, providing valuable insights for Pacoima Beautiful (PB) to inform planning and policy strategies. To address the complex challenges posed by extreme travel, the report proposes a series of targeted interventions across five fundamental principles:

1. **Transportation Cost Reduction:** Offer financial assistance for vehicle-related expenses and expand mobility programs to alleviate transit costs for low-income individuals.



2. **Transit Service Improvements:** Advocate for enhanced bus service reliability and accessibility, particularly in underserved areas like the San Fernando Valley.
3. **Access to Social and Recreational Spaces:** Promote transit routes connecting residents to public parks and social gathering spaces, fostering community engagement and well-being.
4. **Air Quality Improvements:** Advocate for policies to reduce emissions from polluting activities and educate the public on risk mitigation strategies to minimize health impacts.
5. **Housing and High-Quality Job Access:** Address systemic issues contributing to extreme travel by increasing access to affordable housing near essential destinations and supporting creating high-quality jobs closer to where people live.

# Introduction

While the average commuting time to work for people in the US is typically under an hour, extreme travel times of over three hours are rising. Extreme commutes are a growing trend nationally and globally, particularly in urban areas ([Bai et al., 2020](#); [Blumenberg & King, 2019](#)). Factors such as limited access to affordable housing and high-quality job opportunities contribute to this rise. In the sprawling landscape of Los Angeles, many individuals, especially those in lower-wage jobs, face this reality, often compelled to seek housing that demands long commutes to access employment and other essential services. ([Glaeser & Kahn, 2004](#)) In collaboration with Pacoima Beautiful, this report examines how people might be impacted by experiencing extreme travel. This project investigates how extreme travel affects social, economic, and health factors for low-wage workers in the San Fernando Valley. Considering the varying types of trips people make daily to meet their needs, this research expands by including non-commuting travel rather than commutes to and from work.

This project focuses on mobility justice needs and includes an environmental justice perspective in examining how extreme travel might exacerbate environmental health outcomes. The research findings are intended to aid Pacoima Beautiful in providing more information on the policy and planning needs of the communities they advocate for and collaborate with, particularly in anticipation of LA Metro's planned East San Fernando Valley Light Rail Transit Project.

## Context & Literature Review

This research investigates extreme travel, which is determined by how much time someone spends traveling to the places where they need to go. Other terms typically used to describe similar types of traveling include long-distance commutes, extreme commutes, and mega commutes. Long-distance commuting typically refers to the distance traveled to work per day, while extreme commuting describes the time spent traveling to work daily. Mega commutes encompass both criteria for long-distance and extreme commutes ([Bai et al., 2020](#); [Marion & Horner, 2007](#)). Given Los Angeles' urban landscape, this report focuses on studying travel in terms of time rather than distance. It expands on studying extreme commutes by including other types of travel to destinations besides trips to and from work.

Most of the existing academic research focuses on understanding extreme or super commutes. We can use this research to help define extreme travel. Some research proposes a 60-minute one-way commute to define extreme ([Vincent-Geslin & Ravalet, 2016](#)), while others use a 90-minute threshold ([Cuff, 2011](#); [Sullivan, 2007](#)). The US Census Bureau adopted the 90-minute definition for one-way travel, equating to a total of 180 minutes, which has since become the standard definition used in US-based research ([Marion & Horner, 2007](#)).

According to the US Bureau of Labor Statistics, the average person living in the US spends 40.75% of their day sleeping and other personal care activities, 5.13% eating and drinking, 7.88% on household chores, and 33.38% working. These typical daily activities take 87.14% of the 24 hours a day, leaving the average person with only about 3.09 hours for all other activities, including traveling to the places they need to go ([US Bureau of Labor Statistics, 2022](#)). Table 1 below illustrates these calculations. Based on these time allocation estimates, this report defines ‘extreme travel’ as spending 180 minutes or more per day traveling to destinations.

*Table 1: Time allocated to activities*

Activity	Average hours per day	% of 24 hours
Sleeping and other personal care	9.78	40.75%
Eating and drinking	1.23	5.13%
Household activities (including cooking, cleaning, and other household chores)	1.89	7.88%
Working	8.01	33.38%

Source: US Bureau of Labor Statistics, 2022

Researchers identify housing affordability access and land use patterns as primary contributors to extreme commuting in the Los Angeles region ([Bai et al., 2020](#); [Cuff, 2011](#); [Marion & Horner, 2007](#)). The job-housing ratio is another top contributor to extreme travel patterns. People living in an area with a low job-housing ratio are likelier to experience extreme commuting ([Bai et al., 2020](#)).

While much research on extreme travel primarily focuses on identifying individuals subjected to this behavior, explaining the growing trends in extreme commuting, and understanding the reasons behind it, this project takes a different approach. Instead, it seeks to investigate the individual and community impacts of extreme travel, an aspect that has historically been overlooked, especially in terms of qualitative research methods.

### San Fernando Valley

The area of study for this project encompasses the San Fernando Valley (SFV or “The Valley”), a suburban region within Los Angeles County with a population of approximately 1.8 million

residents. The demographics of the SFV are diverse, representing a wide range of cultural and ethnic backgrounds. However, this research places particular emphasis on the northeastern side of the Valley, where communities served by Pacoima Beautiful are situated. These include Arleta, Pacoima, City of San Fernando, Sylmar, Sun Valley, Panorama City, and adjacent areas. The population in this part of the Valley is predominantly composed of Latine first- and second-generation migrants, many of whom are monolingual Spanish speakers.

To provide a deeper understanding of the region, Table 2 below organizes demographic data, shedding light on key demographic indicators such as age, ethnicity, income levels, educational attainment, and language proficiency. Most notably, Pacoima-Arleta, Sylmar, Sun Valley, and Panorama City have a significantly lower rate of people with a high school degree or higher when compared to similar data points for SFV and LA County. These neighborhoods also have a lower per capita income rate. Pacoima has the lowest rates among the group, with 46% of the population having a high school degree or higher and a per capita income of \$13,780 ([Los Angeles City Planning, 2021](#)).

*Table 2: Comparative demographic points for LA County, San Fernando Valley, and Pacoima-Arleta*

	<b>San Fernando Valley</b>	<b>LA County</b>	<b>Pacoima-Arleta</b>	<b>Sylmar</b>	<b>Sun Valley</b>	<b>Panorama City</b>
<b>Population</b>	1,826,028	10,014,009	103,252	78,862	88,772	142,294
<b>% Latine</b>	42%	48%	44%	36%	32%	34%
<b>Per Capita Income</b>	\$43,530	\$43,171	\$13,780	\$20,402	\$17,834	\$17,395
<b>% with a high school degree</b>	83%	81%	46%	66%%	63%%	65%

Source: Los Angeles City Planning Interactive Health Atlas ([Los Angeles City Planning, 2021](#))

By focusing on the northeastern side of the San Fernando Valley, this research aims to tailor interventions and initiatives to address the specific challenges and aspirations of the communities PB serves.

### Pacoima Beautiful

Pacoima Beautiful is an environmental justice organization primarily supporting San Fernando Valley (SFV) communities. PB was founded in 1996 as a beautification collective action project. Over time, it expanded into an environmental advocacy organization that promotes healthy communities. PB's current projects demonstrate the range of initiatives they undertake, including Cool Streets, the Shut Down Whiteman Airport campaign, and the Green Together Collaborative.

The Cool Streets project aims to mitigate the urban heat island effect in Pacoima by applying cool pavement coatings to streets, playgrounds, and parking lots, thereby reducing surface temperatures and improving community health and resilience to extreme heat ([Climate Resolve, n.d.](#)).

Additionally, Pacoima Beautiful spearheads the “Shutdown Whiteman Airport Campaign,” advocating for the closure of Whiteman Airport due to its detrimental effects on the Northeast San Fernando Valley community, demanding immediate actions to mitigate noise and safety concerns while advocating for a clear pathway to closure with community input ([Pacoima Beautiful, n.d.](#)).

Furthermore, PB leads the Green Together Collaborative (GTC), partnering with public and private entities to create a safe, healthy, and climate-resilient community in Pacoima and Sun Valley, California. Through grants, GTC implements green infrastructure projects such as solar panels, electric vehicle charging stations, park enhancements, electric buses, pedestrian improvements, and tree planting while prioritizing community engagement to prevent displacement and ensure transparency ([Pacoima Beautiful, 2023a](#)).

# Research Design & Methodology

## Community-Engaged Research Process

This project aims to incorporate a community-engaged research process by aligning with Pacoima Beautiful’s vision of creating safer and cleaner communities through collective action.

An effective community-engaged research process necessitates continuous relationship-building with Pacoima Beautiful (PB) and the communities that they serve ([Boj Lopez et al., 2024](#)). I visited the PB office throughout the research process, engaging in meetings and conversations with PB staff, members, interns, and volunteers. In addition to these visits, I volunteered in events and projects hosted by PB, including helping prepare the site for a mural and volunteering for their Earth Day event in April 2024. I regularly met with my point of contact at PB, Roxy Rivas, to ensure mutual agreement at each step of the research. The project proposal, recruitment plan and materials, data collection protocols, analysis, and recommendations were reviewed and discussed in collaboration. Finally, PB volunteers, research participants, and other interested community members shared the findings and recommendations at a community event in May, where I presented my findings and initial recommendations. About 30 people attended the session.

Figure 1: Community engagement event at PB; May 24, 2024



## Research Objectives

This project investigates the impacts of extreme travel on lower-income people. The study centers particularly on people with ties to the San Fernando Valley.

The primary question examined:

- How are social, economic, and health outcomes impacted for people experiencing extreme travel?

Secondary questions examined:

- Why does this type of travel behavior happen?
- Are there significant differences between people who are car-dependent and those people who are transit-dependent in terms of extreme travel?

The results from the data collected can provide evidence that might indicate that experiencing long travel times significantly affects people's lives, what parts of their lives are more affected (social, economic, health, or environmental outcomes), and how they might adapt to these travel conditions.

## Methodology

I collected the data for this project through interviews and a survey. The interviews are the primary data collection method, allowing in-depth conversations and documenting first-hand experiences. The survey serves as a secondary data collection method to understand overall

travel behavior better and support the analysis of the interviews. This section describes the data collection process, what these methods measure, and their limitations.

## Interviews

### Measurement

The interviews collect information on people's experiences with these types of trips, their problems, and how they adapt to these concerns. Specifically, the data collected from the interviews assisted in testing the research questions described previously. The results from the analysis of the interviews can help find answers to the research questions. Moreover, the data gathered from the interviews can guide policy and planning recommendations. The protocol used for the semi-structured interviews can be found in Appendix A.

### Data

I collected 14 interviews between February and April 2024. The target population for the interviews included people who:

- are 18 years or older,
- live, work, or study in the San Fernando Valley,
- regularly travel for more than three hours in total per day,
- and earn a household income of less than \$75,000

The household income thresholds for eligibility were set in consultation with PB. The goal was to identify people living in poverty. PB requested that the project expand its focus beyond people and households categorized as "low-income" using federal and state definitions of poverty. This project considers "lower-income" populations whose income falls below 80% of the local area median income. Since I did not ask about household size, PB suggested using \$75,000 or less as our income threshold. This amount approximates the California's Department of Housing and Community Development (HCD) threshold for poverty ([Division of Housing Policy Development, 2024](#)). PB also requested that the interview participant pool be limited to people who live or actively visit the San Fernando Valley since PB does most of its work in this region.

To increase accessibility, interviewees could participate virtually over Zoom or in person. Only two interviews were in person. I interviewed nine people in English and five people in Spanish.

Pacoima Beautiful assisted in recruiting participants through their network, including contacting community partners, sharing information about the project on their social media accounts, and inviting me to participate in community events between February and March. We also recruited some participants through word-of-mouth once interviews had started. I offered monetary incentives to encourage participation in the interview and compensate for the time and knowledge shared. Each interview participant received a \$35 gift card.

The data collected from the interviews was analyzed using a thematic analysis process where I coded the data and grouped responses to identify key themes.

## Survey

### Measurement

The survey gathers information on the impacts of travel behavior for people who live in the LA metropolitan region. The survey includes questions on origin-destination, modes of travel, and time spent traveling in addition to household and person data questions, such as income, the location of residence, household size, employment status, and social characteristics. The data collected from the survey supports the interview findings to answer some of the research questions highlighted previously. The survey allows for comparison between people who experience extreme travel and those who do not. The survey protocol can be found in Appendix B.

### Data

The targeted number of survey participants was 100. Participants could take the survey digitally in English or Spanish. Recruitment for the survey came through various channels, including my own social media accounts, Pacoima Beautiful's social media accounts, and physical distributions of flyers at three events hosted by PB and two tabling events hosted by other organizations.

*Figure 2: (left) Image from a tabling event at La Plaza's Cesar Chavez Family Day, March 17, 2024.*

*Figure 3: (right) Image from Pacoima Beautiful's Mercado Pacoima, April 13, 2024.*





We provided monetary incentives to encourage participation in the survey. We invited participants to take the survey and sign up for a raffle to win one of five \$75 gift cards. People did not need to complete the survey to sign up for the raffle. The gift cards were distributed in April to five winning participants. For accountability, I shared a video of the raffle selection process with all raffle participants. The data from the survey was analyzed using descriptive statistics.

## Findings & Analysis

### Interviews

#### Participant Profiles

##### **Marta**

Marta lives in Palmdale with her parents. She recently graduated from Cal State Northridge. She previously spent a lot of time in the Valley but currently works in South LA. Marta uses Metrolink and Metro rail to get to work, with her daily travel time to and from work totaling up to 5 hours.

##### **Alberto**

Alberto lives in Pacoima and works in the service industry in Tujunga. He lives with his wife and kids. He relies on transit and other people giving him rides. Alberto has health problems that prevent him from driving and require frequent doctor visits. He typically spends between 4 and 6 hours per day traveling to the places he needs to go.

##### **Paola**

Paola lives with her husband and two sons in Palmdale. She starts her days by walking her son and driving her daughter to school. Picking up and dropping them off takes about 80 minutes of her day. Paola then travels to the San Fernando Valley with her husband. Her husband drops her off at a bus stop so she can take the bus to complete her trip to work in Tujunga. To get

back home, she takes transit to meet up with her husband and drive back home. Sometimes, she has to wait for her husband to get off from work. Paola spends about 5 hours traveling for work and childcare every weekday.

##### **Lupe**

Lupe lives with her parents in Acton, CA, near the Antelope Valley, and works in Pacoima. On her way to work, she also drives her sister to school in the Valley. Lupe relies primarily on her car because the place where she lives is not very accessible by transit. She spends between 2.5 and 3 hours commuting.

##### **Fer**

Fer lives in Van Nuys with their parents and sister. They don't drive, so they rely on transit and other people to get around. Fer works close to Van Nuys in Pacoima, but they spend nearly 3 hours per day taking transit and waiting for the bus during transfers.

**Mariana**

Mariana lives with her husband and kid in Little Rock, CA. She works in the Valley for the service industry. Her family wanted to invest in a home, but the only places they could afford were in the Antelope Valley. Mariana's daughter rides with her every morning to get to school in Pacoima. Mariana takes her to school in the Valley instead of someplace closer to their home because it's easier for her to drop off and pick her up close to her job. For example, if her daughter gets sick, she can easily pick her up, which would be more complicated if her daughter was in school closer to home. Mariana spends between 3 to 4 hours traveling every day.

**Sofia**

Sofia lives in Reseda with her parents, brother, and husband. She works many jobs, including education, research, and mutual aid. Sofia volunteers a lot of her time for mutual aid work, which leads her to drive for long periods every day. For example, she drives over two hours to pick up free meals in Vernon and later delivers them to people facing housing insecurity in the Valley. Sofia is very dependent on her car to do the type of work she wants to do. The time she spends traveling varies daily depending on what activities she needs to do; some days, she travels for 1-2 hours, and others, she spends up to 4 hours.

**Andrea**

Andrea lives in Reseda with her family and boyfriend. She works part-time in the service industry. Andrea is also an educator at a nonprofit and an artist who works different gigs on commission. A few months ago, she lost her vehicle in a car crash and has been relying on public transit. Andrea's

daily travel time increased significantly after losing car access, from 1-2 hours to 2-3 hours per day.

**Cristina**

Cristina lives in the Valley with her husband and three kids. Her life is currently very precarious since she recently lost her job. When she had a job, she could afford to pay someone to pick up and drop off her kids, but now she looks after them and travels daily to do so. She doesn't know how to drive, so she makes all her trips using transit. She spends over three hours traveling daily.

**Brenda**

Brenda lives in Sylmar with her two daughters. Her job as a house cleaner requires her to travel to many different destinations. She relies on her vehicle to meet her transportation needs. The time she takes to get to her job depends on the location relative to her house. The furthest place she travels to is West LA, and it takes her around 3 hours to get there and back.

**David**

David lives in East LA with a roommate. He is a full-time student and worker. David travels long distances to get to work and school. David's school is in the Valley, and his job is in South LA. He travels between 2.5 and 3 hours daily to work or school.

### Jessica

Jessica lives in a multigenerational household near Canoga Park and West Hills. She currently works two jobs that require her to travel to Culver City and various other locations in LA. She is also currently attending school in West LA. Jessica often tries to be multimodal by using a car and public transportation to get to some of her destinations, but she mainly relies on her vehicle to get to the places she needs to go on time. She spends between 2.5 and 3 hours traveling to her destinations every day.

### Sam

Sam lives in Koreatown and works in the Valley. They primarily travel by car to their

destinations. Sam can reduce their commute time by starting and ending their workday earlier. They spend at least 2 hours traveling per day, but this number rises depending on the amount of travel they have to do for work and traffic conditions, often spending over 3 hours commuting.

### Omar

Omar lives in Sylmar with his family. He works by LAX, so he relies on his car to get to work but enjoys taking transit to reach leisure destinations during his time off. He spends between 4 and 6 hours on the road every day.

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Table 3 provides an overview of the interview participants, including age, race, gender, income, and language used. Each person received a pseudonym to protect their identity.

*Table 3: Interview Participants*

Pseudonym	Age	Race/Ethnicity	Gender	Income	Language
Marta	18-29	Latina	Female	Under \$10,000	English
Alberto	50-59	Latino/Mexican	Male	Under \$10,000	Spanish
Paola	40-49	Latina	Female	Under \$10,000	Spanish
Lupe	18-29	Latina/Mexican	Female	\$35,000 - \$49,999	English
Fer	18-29	Latine	Nonbinary	\$50,000 - \$74,999	English
Mariana	30-39	Latina/Mexican	Female	\$50,000-\$74,000	Spanish
Sofia	30-39	Native American Latina, White	Female	\$50,000 - \$74,999	English
Andrea	18-29	Latina	Female	\$25,000-\$34,000	English
Cristina	40-49	Latina	Female	Under \$10,000	Spanish
Brenda	50-59	Latina	Female	\$10,000 - \$24,999	Spanish
David	30-39	Latino	Male	\$25,000 - \$34,999	English
Jessica	18-29	Asian	Female	\$10,000-\$24,999	English

Sam	18-29	Black, Asian	Other	\$50,000-\$74,000	English
Omar	40-49	Latino/Mexican	Male	\$35,000 - \$49,999	English

## Unpacking Causes for Extreme Travel

The interviews provided many insights into why people spend so much time traveling and commuting. I categorized the causes of extreme travel into five main themes: job opportunities far from home, proximity to community, unplanned changes to daily life, housing affordability, and environmental justice concerns. Appendix C: Table 7 in the appendix breaks down the themes identified to answer this question tied to excerpts from interview participants.

### Job opportunities far from home

Most participants explained their reasons for extreme travel by centering on the location of their jobs. Some participants, particularly those in office-type jobs, have specific career goals in mind, but the jobs they want to meet these goals are typically not available closer to home. Some participants mentioned a desire to do advocacy work within their current communities but having to do work elsewhere since there are limited well-paying jobs near home.

*“What I realized is that for my major sociology it often serves underserved communities, and all of the underserved communities tend to be in the Valley and South Central. So that’s why I have to really travel a lot farther, just because Palmdale doesn’t have that many organizations, and if they do, realistically, they don’t pay as well.” -Marta.*

Some people with more privilege and flexibility in selecting a job were more likely to reject a job closer to home that met their career goals and interests but offered insufficient pay.

*‘I just didn’t see that the pay matched all of the work that they wanted [...] it didn’t really transfer to the amount of pay, even though it was closer to home.’ -Marta.*

Some people who also reported finding jobs that matched their interests but were further away were likely to reject the job. This implies that people typically have a threshold for how long a commute they are willing to tolerate.

*“So I used to go to Loyola Marymount and I looked on campus for a job, and I thought about going back to work there because I had connections to some of the faculty and staff who were there. It was a job that I really thought aligned with my experience and my expertise. But I ended up not even bothering to apply because I just, like, even if I didn’t get it, I wasn’t able to be able to drive there, or even just have a commute on the bus that I’m just not willing to commit to” -Fer.*

Other participants feel that their current jobs offer some level of security, so they have no desire to look for employment elsewhere. A couple of people described long tenures at their current workplaces. They experience a lot of flexibility offered by those jobs to go to doctor’s

appointments or pick up their kids, something they feel they would lose if they found a new job closer to home. The feeling of job security is especially true for individuals without a work permit because they have less ability to choose where they can work. Undocumented participants explained that if they find a job, they are unlikely to look for another one unless they are fired.

A couple of the interviewees described needing to travel for extended periods because their jobs require that they travel to different locations. For example, Andrea works part-time at a juice bar, is a teacher at a nonprofit, and takes on gig work as an artist. These jobs require her to travel a lot to reach her destinations. Other participants who share a similar job situation struggle to find jobs to fit their economic needs or career goals, forcing them to spend much time getting from one job location to another.

Participants who live in areas of the Antelope Valley mentioned that they struggle to find a job near their home due to a limited supply of jobs.

*“Since there are not many people in Palmdale [...] so the restaurants open a little later, they close earlier, they have fewer staff because they don’t have a lot of customers or things like that [...] We have not been able to find jobs here because jobs are very scarce. The people who have a job here, they take great care of it because the people, well, they are people who live here and have their job like, let’s say, safe and so they don’t let go of it. So it’s a bit complicated to find a job on this side” -Paola.*

### **Proximity to community**

Another common reason participants used to explain traveling for long times every day is people’s desire to live near their family, friends, and community. Most participants who used this reason also explained their inability to find a job they want or that pays well close to home. Job centers are often far from many of the places where participants want to live to be close to their loved ones.

*“So where we currently live is on a hillside, and it’s really rural, and the houses are like, they’re not right next to each other. So, I feel like being at home really brings me peace; it allows me to experience the peace that I need after a long day at work [...] I’m also really family-oriented. So I feel like being at home with my relatives; I like it. It does bring me a lot of love and is something I enjoy doing.” -Lupe.*

Many of these participants also hope to eventually find work closer to home to avoid losing community ties.

*“I prefer the Valley and am more familiar with it, so I feel more comfortable. I have friends that are there, and my mom even works over there too, and my dad used to work there. So I enjoy the Valley a lot more. I would prefer just working there instead if there’s an opportunity.” -Marta.*

## **Unplanned changes to daily life**

Three interviewees, Alberto, Andrea, and Cristina, described specific life challenges that forced them into extreme commutes. Alberto lost car access due to an emerging medical condition that prevented him from driving. Andrea lost her vehicle in a car crash and cannot afford a new one. Cristina recently lost her job and does not know how to drive. Since she lost her source of income, she now has to pick up and drop off her kids from school using transit instead of paying someone to give them a ride. These participants could not reduce the number of places they needed to get to; in fact, all three increased the number of trips they needed to take after losing access to a vehicle now that they relied on public transit to get around. They described a significant increase in the amount of time they take to reach the places they need and want to go. Unplanned life changes can significantly alter how people get around and increase the burden of already precarious situations.

*“Before December, I was traveling by car but got into a car accident. So right now, I only take transit, so it takes longer to get anywhere.” -Andrea.*

## **Housing affordability**

Several participants described limited options for affordable housing near their jobs as the primary reasons for an extreme commute. This was particularly true for people who wanted to own a home rather than rent one. These participants prioritized finding a home with an affordable mortgage for them, regardless of the location. Most of this group of participants formerly lived in the San Fernando Valley, but they could only afford to buy a house in less urbanized places like Lancaster and Acton in the Antelope Valley. They decided to move far from their jobs and communities because the rent they paid in the Valley was the same as, or often higher than, their new mortgage payments.

Other participants who rent with roommates or live with their parents, particularly younger adults, described the inability to afford to live closer to their work or school as a reason for having extreme commutes. These participants cannot afford to live independently in locations that would be more convenient for them to get to where they need to go.

*“I mean, I honestly can’t afford to live on my own. I have to pay my student loans [...] But then, getting a car would require me to invest in this, which would make me less able to actually move out. So I feel like I’m kind of in this weird spot where either I buy a car and live at home or move out and not be able to get a car.” -Fer.*

## **Environmental justice concerns**

One participant described a reluctance to move closer to their job due to concerns about increased pollution exposure. They explained that the neighborhood where their current job is located has much higher environmental hazard risk than their current neighborhood. Since only one participant mentioned this reason for their extreme travel, this suggests that most low-income individuals and families might see environmental hazards as something they cannot avoid when they look for a place to live.

## Extreme Travel Impacts

I asked interview participants how they felt that their extreme travel experiences affected different social, economic, health, and environmental factors and perceptions. I explain these findings below.

### Social Impacts

As Figure 4 illustrates below, all participants described some impact on social factors that they directly correlated with extreme travel. I identified two main categories to organize participant responses: missing out on activities and impacts on relationships. Appendix D: Table 8 in the appendix provides additional excerpts from the interviews.

Figure 4: Social impacts

	Marta	Alberto	Paola	Lupe	Fer	Mariana	Sofia	Andrea	Cristina	Brenda	David	Jessica	Sam	Omar	Total
<b>Social Impacts</b>															
<b>missing out on activities</b>															
socializing		X	X	X			X		X		X			X	7
exercising	X				X			X			X	X	X		6
other personal care (grooming, resting, etc.)		X	X	X		X	X	X	X		X				8
leisure activities	X	X			X		X			X			X		6
<b>time spent traveling affects relationships</b>															
limited time for quality time with family	X			X	X		X		X	X		X			8
fractured relationships with friends				X			X					X		X	4
inability to contribute to household chores	X	X			X		X		X		X		X		7

### Missing out on activities

People were asked to describe the activities they missed out on because so much of their time was allocated to traveling. Some of the activities listed here are not explicitly social activities, but they are included since participants shared them when asked specifically about the social impacts of extreme travel.

Eight people mentioned missing out on personal care activities, such as grooming and rest. Participants felt like they had limited time to take care of themselves as well as they would like to. Some participants mentioned previously having time to get their nails done or relax at home before switching to their current commute. Losing out on these activities can influence other outcomes like mental and physical health.

*“I don't have a lot of time for myself. And again, you know, the time for myself from like me exercising, or it's just me having a beer at a social event. Maybe even going out for dinner, or me reading a book, you know, I like to do all that, but I haven't really had the time to do that.” -David.*

Six people reported missing out on exercise. Many participants throughout the interview mentioned a lack of movement and exercise, and a couple of them associated it with social activity since some people like to exercise with friends. For these people, extreme travel limits their time for working out and spending time with friends.

*“I usually go to the gym as often as I can, but just with this new schedule, it set me back on certain things because I have emails to catch up with and meetings to do. My friend also works out, so we would try to align our schedules when she was able to so that we can go together, and just, you know, catch up and de-stress at the same time” -Marta.*

Six described missing out on leisure activities. Leisure activities include anything participants mentioned that they like to do for fun, relaxation, enjoyment, or personal satisfaction. When asked how often they get to engage in leisure activities, many participants shared that they rarely have time for them.

*“I think that once every 15 days, once or twice a month, nothing more. That’s the only time I have to do those things for fun with my family” -Mariana.*

Participants shared what activities they would like to do if they had more time. Most people described wanting more time to spend with their family and friends, while a few others wanted more time for relaxation, including reading a book, cooking, or knitting.

Seven people mentioned missing out on social activities. Many participants reported struggling to find time to join their friends and family for social activities. Some felt that after a long day of working and spending so much time on transportation, they were too exhausted to engage in social activities.

*“It’s so hard sometimes to take out 3 hours of your day and dedicate it to just sitting in a car by yourself, you know, and it’s so draining on your interactions with other people.” -Jessica.*

### Impacts on relationships

Participants were also asked to describe how spending so much time traveling every day impacts their relationships with family and friends.

Eight people described having very limited time to allocate for spending quality time with their family and friends. This is significant because twelve participants live with their families, so even though their social connections are close, people cannot establish enough time for meaningful connections.

*“So yeah, there’s just less time together and less energy that I have to fully be present with them.” -Lupe.*

Many participants felt like their schedules did not match those of their families and friends.



*“With friends, just because the days that they’re always available tend to be the days that I have to go to work on a Monday, or you know, when our schedules align, or if they also wanna hang out later, and then I’m like, ‘Oh, no, I have to wake up early at this time to go all the way over there’” -Marta.*

*“There are times where my mom will be like, ‘I haven’t seen you all week’ just because she leaves to work before I do, and I come back home by the time that they’re already getting ready for bed. So I think there are times where I feel like my time with my family is limited.” -Lupe.*

Participants with kids described particular discontent with the limited time they can devote to their children.

*“I can’t spend as much time with them as I’d like to be there with them as long as they need. Of course, it makes me feel a little bit frustrated... It frustrates me a bit because you can’t give them the necessary time” -Paola.*

Four people mentioned fractured relationships with their friends due to their limited time available for social activities. Participants felt like their connections with friends weakened since they started spending more time commuting. Some participants find it hard to see their friends and feel like this affects their relationships.

*“I’ve also had friends come over to visit me, and I feel like a lot of time is spent by traveling, and by the time that we’re together it feels like time goes by so quickly, and before we know it, it’s already dark and they have to leave. So I think that it does impact like my social life.” -Lupe.*

Another participant feels like their friends are frustrated with them for not being as available as they would like.

*“My friends are kinda you know, they started getting annoyed, and then it kind of affects our relationship a bit or being late to work and things like that affecting those relationships too.” -Andrea.*

Some participants described feeling isolated and disconnected from their friends and family since they live so far away. One participant described a preference for spending any free time resting. Another participant noted that living far away from your community might alienate people.

*“All of our family and friends live in the Valley. And also activities, parties, meetings, whatever. When we go and then come back at night and drive, and the next day I work early, so sometimes we prefer not to go, or if we go, sometimes we have to stay there with relatives to sleep and not return home. So we prefer not to go and also spend all this money. So much money, time and energy that we do not have.” -Mariana*

*“People like our friends who’ve been displaced to Lancaster... You know, being in touch and staying together in some way, even if we’re physically, like, geographically very, very far apart. So that takes a huge toll on all the communities that I am a part of, and that I know of, because you’re just fighting to keep in touch or you’re just fighting to not be completely alienated.” -Sofia.*

Seven participants reported having less availability to contribute to household chores. Not being able to participate in household chores can impact household relationships. Many participants reported that they cannot contribute as much as they would like to household chores, errands, and caretaking activities. The response to this question varied by gender, where women tended to report that they take care of most of the household chores and caretaking tasks. People who live in households with many adults reported having an easier time dividing tasks among the rest of the household when they cannot complete them.

### Health Impacts

Figure 5 below demonstrates the health impacts from extreme travel reported by interview participants. I organized the information into three categories to differentiate between physical and mental health. Impacts on physical health were the highest reported by interviewees. I included a third category to capture other health-related indicators that did not fit into the physical and mental health categorizations. Appendix E: Table 9 in the appendix provides additional excerpts from the interviews.

Figure 5: Health impacts

	Marta	Alberto	Paola	Lupe	Fer	Mariana	Sofia	Andrea	Cristina	Brenda	David	Jessica	Sam	Omar	Total
<b>Health Impacts</b>															
<b>physical</b>															
exhaustion / fatigue	X	X	X	X	X	X	X		X	X	X	X	X	X	13
waking up very early	X	X	X			X				X		X	X		7
pain			X			X	X	X	X		X	X		X	8
lack of movement / sitting too long	X	X	X	X	X	X		X	X		X	X	X	X	12
unfavorable eating habits	X				X						X				3
exacerbating pre-existing conditions	X	X			X					X		X			5
<b>mental</b>															
anxiety				X	X	X	X	X							5
boredom	X		X											X	3
frustration/irritability		X		X	X	X						X		X	6
loneliness/isolation	X			X		X	X		X	X					6
stress	X		X	X		X	X	X			X			X	8
<b>other</b>															
lack of green spaces						X		X							2
limited access to healthcare services		X			X		X	X				X			5

### Physical Health

Regarding physical health, thirteen interviewees reported feelings of exhaustion and fatigue associated with their type of travel. For some participants, the exhaustion was exacerbated by waking up early. Participants reported having to wake up early to beat the morning rush to ensure they arrived at work on time. Some participants described parking near their jobs and attempting to take a quick nap before going to work.

*“About 7 to 7:30 am is the latest I leave my home to get ahead of the school traffic. I make a stop while I wait for traffic to pass, and if I arrive, for example, when I arrive early, then I have a little nap in the car [...] because I have to get up earlier to be able to avoid traffic. Well, then that makes me sleep a little less than I would like. But I have to put up with it.” -Brenda.*

Other people described waking up early to do errands before getting to work, including getting their kids ready and dropping them off at school.

*“Since my daughter is at school also in the Valley, so we get up very early, I leave her with her dad first for him to take her to school later, and then I head to work [...] my daughter, poor thing, I wake her up very early and she goes tired to school. She got used to it but I know it's tiring for her too.” -Mariana.*

Twelve participants reported experiencing a lack of physical activity from spending extended periods of time sitting every day between the hours they spent at work and in their car.

*“Since it's such a long commute, I have to be sitting down for 2 hours. So then, you know, I'm just sitting down, and it's exhausting, I mean, cause I have to go to work again and then sit down for another almost 5 hours, 4 hours cause I clock in from 9 to 3:30, so that amount of time I'm sitting down once again after I just got finished with sitting down in the whole commute. Then I have to do that all over again getting back home.” -Marta*

*“My body is very stagnant, like when I'm driving there's not a lot of movement. I think more than anything I feel tenseness around my neck, or my shoulder area. I think at some point I'm tired of sitting, too.” -Lupe.*

Eight people described feeling some type of pain in their bodies associated with their travel, such as neck pain, leg pain, wrist pain, and headaches.

*“When I'm driving, I have really sensitive wrists, I think because I type a lot in the office. So sometimes the position that I need to use when I'm using the wheel really hurts my hands.” -Jessica.*

Five people mentioned that their pre-existing conditions are exacerbated due to extreme travel.

*“It is affecting all that, because, well, my conditions is getting worse every day because my kidney no longer works. And the liver is the one that distributes energy throughout the body which removes toxins, bad and good toxins and I use a lot of my energy by traveling.” -Alberto*

*“When I'm driving it's like the hunched up position like the wheels, the way the wheels are configured kinda, or sometimes I also have pretty bad severe dry eye. So that's partially because, again, I work in an office. I'm looking at the computer for so long. But*

*then I also have to spend an additional 3 h of the day, 2 to 3 hours a day, like just watching the road, you know, so that definitely exacerbates those conditions.” -Jessica.*

Three interviewees reported adopting poor eating habits due to their travel routines.

*“I need to wake up really early and make sure I get enough sleep sometimes. I wouldn’t have breakfast in the morning, just because my body is just not used to eating super early, but then eventually get really hungry later in the day.” -Marta.*

### Mental health

In terms of mental health impacts, feelings of stress, anxiety, loneliness, and irritability were the most common symptoms reported. Participants described having feelings of frustration and irritability associated with driving, particularly if they were tired.

*“That second bus, the one that’s closest to my house. If I miss that bus by like this much, it makes me so angry. Yeah, it makes me really upset and just like the increase like a wait time. It’s really frustrating.” -Fer.*

*“I also just like get really frustrated sometimes being on the road because if I’ve had a really long day, I’m looking at a computer for so long. I’m literally not seeing sunlight or whatever. It’s very draining on your mental health and there have been.. I’ve had real breakdowns on the freeway before.” -Jessica.*

Participants who described feelings of loneliness and isolation linked their emotions to living far from many of their social circles.

*“You’re just fighting to keep in touch or you’re just fighting to not be completely alienated.” -Sofia.*

*“I have increased more so, the depression and loneliness part just because I can’t really go out. I don’t have too much time to do other activities besides work to then see families and friends that I don’t really see now.” -Andrea.*

One participant shared how their daughter might feel isolated from her friends because she goes to school in the Valley but lives in Little Rock.

*“She needs a lot and learn to relate to people, and right now, she is at an age where she already wants, maybe to be more with her friends, and she can’t, because we are here [in Palmdale], she understands, she doesn’t bother me or anything, but yes, I know that she might want to live closer with friends... She is alone, and that loneliness, I feel like it makes her more introverted.” -Mariana.*

A few participants mentioned boredom and under-stimulation in their daily lives, which were linked to spending so much time traveling alone.

*“It can be incredibly boring, just looking out the window sometimes when you’ve seen it over and over again, you know. What else could I be looking at besides the same trees that I’ve seen the other day or from last week.” -Marta*

*“I see it reflected on my husband because he does go down to the Valley every day. He comes and goes. And then he gets bored, he gets very bored. In fact, he tells me, ‘I would rather take the subway, but it is more difficult to travel like that.’” -Paola.*

Eight people reported feelings of stress associated with extreme travel. Participants described feeling stressed when sitting in traffic or when planning their trips for the following day. Feeling exhausted exacerbated stress for many. One participant compared the levels of stress of her extreme commutes to that of someone who works in a high-stress career.

*“It’s like I’m exhausted beyond what a day of rest could restore. And I don’t know what the answer to that is, you know, I think that’s just living, that’s literally living under capitalism, like everyone I know feels that exhaustion, like my mom talks about that pretty regularly, and she’s chronically under slept. She doesn’t have the same transportation issues that I do, but she works in a high stress environment. She works in an emergency room, and there’s no room for error in her work. She lives with that stress. And yeah, it’s just interesting, I’ve seen what a commute does that mirrors the impact of someone who’s worked in a very precise role in the emergency room that is known to be high stress.” -Sofia.*

Five interviewees described feelings of anxiety from spending so much time driving every day. A couple participants linked their anxiety to previous traumatic experiences, such as experiencing or observing serious car crashes, that now trigger anxiety.

*“Something happened to me recently where I came down with very strong anxiety; I had to go to a therapist because I felt very anxious about driving a lot. Because as you drive a lot, you see a lot of accidents. I already had an accident in the past, my car spun in the cold. I collided with a wall and it was very ugly. So I, well, I drove, I drove again and everything but when I started driving a lot, my head was like ‘something is going to happen to me. There is another accident.’ I was in my head like I was afraid I was going to crash. That I was going to kill myself driving.” -Mariana.*

### Other

Other health-related impacts included mentions of limited access to healthcare services and a lack of access to green spaces. Participants shared that they struggle to access green spaces and parks because they either lack enough time or they lack access to these spaces. Many participants do not live within walking distance of a park, so many of them reported that they do not regularly visit or want to visit a park. In terms of having limited access to healthcare services, participants shared that their healthcare providers can be difficult to access, especially if they rely on transit or if their clinics are too far from their homes.

*“My healthcare provider is Venice Family Clinic, which is very far from where I live. I have to go all the way to Venice. I was late for my appointment because it took me an hour to get there. And then, of course, I missed the appointment. [...] And like, yeah, to get to that appointment, I have to wait a long time. So that I don’t miss it, I’m gonna have to arrange my day and week to make sure that I make it.” -Sofia.*

## Environmental Impacts

Participants were asked a series of questions related to their exposure to air pollution. Figure 6 below illustrates the information collected from the interviews. I identified two main categories: air quality concerns and responses to air quality concerns. Appendix F:Table 10 in the appendix provides additional excerpts from the interviews.

Figure 6: Environmental impacts

	Marta	Alberto	Paola	Lupe	Fer	Mariana	Sofia	Andrea	Cristina	Brenda	David	Jessica	Sam	Omar	Total
<b>Environmental Impacts</b>															
<b>air quality</b>															
worried about pollution	X	X		X	X	X	X	X	X	X	X	X	X	X	13
<b>response to air quality concerns</b>															
avoidance / escapism	X									X				X	3
exposure mitigation		X	X				X	X		X			X	X	7

### Air quality concerns

Almost all participants reported feeling worried about the effects of prolonged exposure to pollutants. Some participants worry because they observe other people feeling the effects of bad air quality.

*“It worries me because, well, you see that sometimes other people get sick because they get asthma.” -Cristina.*

Other participants reported worrying about exposure to bad air quality when they noticed signs of air pollution, such as strong odors or smog.

*“This smell, that after many months of passing daily through there, I finally figured out it was there. I don’t know if there is a place, a factory or something, or because a lot of traffic gathers there. So many cars. But I do worry when I pass by there.” -Mariana.*

*“Yes, yes, it worries me, there is a mill here where they grind, well I don’t know what they do, but there is a lot of smoke. I try not to go out when I see a lot of smoke.” -Alberto.*

### Responses to air quality concerns

Participants were asked if they took any measures to mitigate the long-term effects of exposure to air pollution. Seven people mentioned taking measures to mitigate risks, while three people reported that they prefer not to think much about the long-term effects of pollution. Most people

who reported taking any mitigation strategies mentioned rolling up their windows while driving on busy roads or wearing a mask while walking outside.

*“I do tend to wear a mask if I’m walking, especially if I know I’m gonna be walking past busy streets. I don’t know how much it helps, but I keep a lot of air purifying plants in my apartment. and the other thing is I try to run if I can, to keep my lungs functioning as best as they can.” -Sam.*

Several participants, even some who might wear a mask or roll up their windows when traveling, mentioned that they avoid thinking about the impacts of long-term exposure to air pollutants. Many participants do not check air quality levels regularly and only worry about air quality levels when they observe signs of pollution.

*“Well, if I start to think about it, I’m going to worry then, I better not think about it as not to worry... And as I tell you, that if I start thinking about it, I’ll go crazy.” -Brenda.*

A couple of participants felt that focusing on reducing emissions from other sources is more critical than reducing air pollution created by vehicles.

*“They need to close down the coal factories, our cars are minimal” -Omar*

*“Areas that I drive around and like the warehousing are places that I go to that are highly industrial areas. And, that’s where you know, these supply chains they end up kind of pushing them into communities, like you know, Vernon obviously borders Huntington Park and other neighborhoods in Southeast LA. They are heavily impacted by warehousing and industrial zones. So to me, it’s all connected.” -Sofia.*

### Economic Impacts

Figure 7 below shows that interview participants reported experiencing significant economic impacts of extreme travel. Appendix G: Table 11 in the appendix provides additional excerpts from the interviews.

Figure 7: Economic impacts

	Marta	Alberto	Paola	Lupe	Fer	Mariana	Sofia	Andrea	Cristina	Brenda	David	Jessica	Sam	Omar	Total
<b>Economic Impacts</b>															
<b>transportation costs</b>															
transportation expenses are a burden		X	X			X	X	X	X		X	X			8
car expenses are high			X	X		X	X				X	X	X	X	8

### Transportation costs

Eight people explicitly described the costs associated with transportation as a burden. People often have to make tradeoffs between being able to pay for transportation expenses or other things.

*“We can no longer save for, as I told you, for a vacation or to buy something we want or to invest in, for example, in classes for my daughter.” -Mariana.*

*“I considered delaying buying a car just because of the financial impact alone, like I know that it’s not just purchasing the car, but it’s like the monthly insurance, the gas. If anything comes up that you need to fix in the car. So yeah, I feel like it’s not actually the most economically feasible.” -Fer.*

Participants without a car in precarious financial situations find it difficult to pay for transportation and have to cancel appointments or call off from work if they cannot make it on time by transit and cannot secure another mode of transportation.

*“Right now, since I don’t work, it’s more difficult for me to pay for transit, and sometimes I have to cancel my doctor’s appointments because I can’t pay for travel.” -Cristina.*

*“Sometimes, I get up late and have to pay for Uber. But It’s very expensive. It’s like \$30 to get there, and it’s not convenient for me to earn \$50 and use it mostly on Uber.” -Alberto.*

Of the people with access to a vehicle, eight people think that their car expenses are very high because of how much they have to travel. Some participants could not provide a good estimate of their vehicle expenses because they share the costs with other people in their household. Those who provided an estimate reported spending between \$300 to \$500 in monthly expenses for gas, maintenance, and insurance fees. One participant went from commuting by car to transit and found they could now use the funds typically allocated for transportation for other things.

*“Now that I take Metrolink, what I used to spend on gas is now spent on other things that I need to pay for.” -Marta.*

## **Future Imaginations: Participants’ Visions for the Future**

Participants provided recommendations and ideas for improving their travel experiences and general well-being in the interviews. Appendix H: Table 12 in the appendix provides excerpts from their responses. I identified three key themes in their descriptions of future imaginations: changes in public transportation systems, proximity to jobs, and access to neighborhood amenities.

### **Public transportation systems**

The top suggestion provided was to increase transit options. People with car access described frustration from relying so much on their cars or other people to give them rides. They also highlighted the costs associated with car ownership, concerning how long they have to travel and how much they have to use their car. Most participants mentioned a desire to take transit to get to places. Currently, participants, especially those relying more on cars, feel like the



car-centric built environment in the Valley constrains them. Some described their desired scenario as living in a neighborhood where they could easily walk to many of the places where they need to go, including connecting to transit stops or stations. Some interviewees described their perfect future mobility scenarios. For example, Mariana described learning about a transit expansion project that she is very excited about. She hopes it will provide more transportation options for many people living in Palmdale and nearby areas who make similar daily commutes to the SFV.

*“The trips are going to take a very short time because it’s going to be direct...We won’t pollute with so many cars.” -Mariana.*

Some people reported walking for over 20 minutes to reach a transit stop. Many participants described this as one of their top barriers to riding transit rather than driving or getting a ride from someone. This was particularly frustrating for a couple of participants who could not drive or did not have a license because other people’s availability restricted their mobility to give them a ride.

*“I wish we had a little more public transportation here [by where I live] because, like I tell you, our situation right now is that we have the car, only this one. So yes, it frustrates me a little bit because I have to depend on someone else to give me a ride.” -Paola.*

Participants also expressed a desire for more reliable and efficient transit services, including better frequency and convenient bus transfers. They often have to wait for a long time at bus stops to wait for the next bus and described frustration with bus delays that cause them to miss their connections. These riders observed how sometimes their connecting bus never arrives, so a bus that regularly passes every 30 minutes might take more than an hour to pass.

*“I wish it came more frequently. I wish there was, you know, that it was safer for pedestrians to walk. I wish there was a shorter distance. So not necessarily like I wish I had a job closer to me, but I just wish we weren’t so car-dependent.” -Fer.*

Some participants described their ideal scenario as one that included free transit. Cristina, who is undocumented and unemployed, reported struggling to afford transit and feared future fare hikes. She recalled how transit was free during the pandemic and how that brought some financial relief for her, and she wished for that policy to come back.

*“I would like public transportation to be free and also more frequent [...]. During the pandemic, it was free, but not anymore. They haven’t increased the fare now, but they might raise it, who knows.” -Cristina.*

Sofia, who works closely with unhoused and poor communities, described fares as a “poor people’s tax” since the fare evasion enforcement and policing policies create unnecessary harm to already vulnerable populations. Sofia’s future imagination includes policies that turn transit

stations into sanctuary spaces, providing safety to vulnerable populations, including migrants, unhoused people, and street vendors.

*“I guess my solutions to these things are like, you know, making public transit free, cause it’s a poor tax like that’s what the fare is, a poor people’s tax. They’re heavily policed. [...] Like obviously, Metro must be free [...] There needs to be universal access to things like public transportation. [...] I feel like making metro stops in places where there are resources available. [...] I think that the metro stations kind of need to be actual sanctuaries where people, like street vendors, know that they can be there and not get harassed, or people that are around, who live near these stations because of transportation aren’t just put in jail because they live in a tent, those things are not... that’s not the future.” -Sofia.*

### **Proximity to jobs**

Most participants provided some non-transportation solutions to improve their experiences. There was a mix of responses about their ideal home and job location scenarios. Some participants want to stay in their homes but wish to have a well-paying job closer to home.

*“Having more jobs available rather than people having to go all the way to LA, for a good paying job, you know, that would be ideal for me.” -Jessica.*

Other participants want to be able to access more affordable housing that allows them to live closer to their jobs.

*“Also like rent... if rent was cheaper there. I’ll definitely have, you know, I definitely would move out there.” -David.*

Participants expect to have much shorter daily travel times with both scenarios. A few participants who have jobs that can be done remotely described a desire for their jobs to offer more flexibility for working remotely since this would allow them to cut down on their weekly travel times significantly.

*“Having the ability to do more remote days would definitely help with minimizing my commute that I do. So having the option to have more remote days would be really, really helpful. Just because I don’t really see myself being able to move out there.” -Lupe.*

### **Neighborhood amenities**

Some participants described a desire for their neighborhoods to have added amenities that would allow them to meet most of their needs easily. People expressed a need for nearby grocery stores, laundromats, medical centers, and parks close to their homes. Many participants can only reach many destinations that meet their basic needs with a car. Some even described having little to no time for recreational activities, which are essential for maintaining good mental and physical health. Participants who described this option imagined spending less time traveling to essential destinations if they were easily accessible within their neighborhood.

## Interview Limitations

Considering the limited sample size, it is possible that the information from other perspectives of our target population may not have been fully represented. Given the data collection period from February to April 2024, the recruitment process resulted in a restricted participant pool. This project could benefit from a more comprehensive sample. Additional interviews might provide new and relevant information.

It is worth noting that most participant recruitment was conducted through PB networks, potentially introducing bias as many recruited individuals may be deeply invested in environmental justice issues, which may not be representative of the broader population. Additionally, the interviews cannot estimate how many people experience extreme travel behavior in the San Fernando Valley. Furthermore, offering a more substantial compensation incentive in future recruitment efforts may help address these limitations and ensure a more diverse and representative sample. It's important to note that this project does not aim to provide a quantifiable measure of the extent of extreme or lengthy commutes.

## Survey

### Findings & Analysis

We collected 140 responses with varying completion rates. Table 4 below shows the number of people who participated in the survey by their different levels of completion. Only 93 responses are included in the analysis. Not all 93 fully completed the survey. I removed participants who completed less than 50% of the survey from the analysis. A participant filled out the survey five times, providing different information for each entry. After a discussion with PB, we removed this participant's responses. The median response time for the survey was around 10 minutes. We recorded responses between January 27, 2024, and April 13, 2024. From the 93 responses kept for the analysis, six people completed the survey in Spanish, and 87 people completed the survey in English.

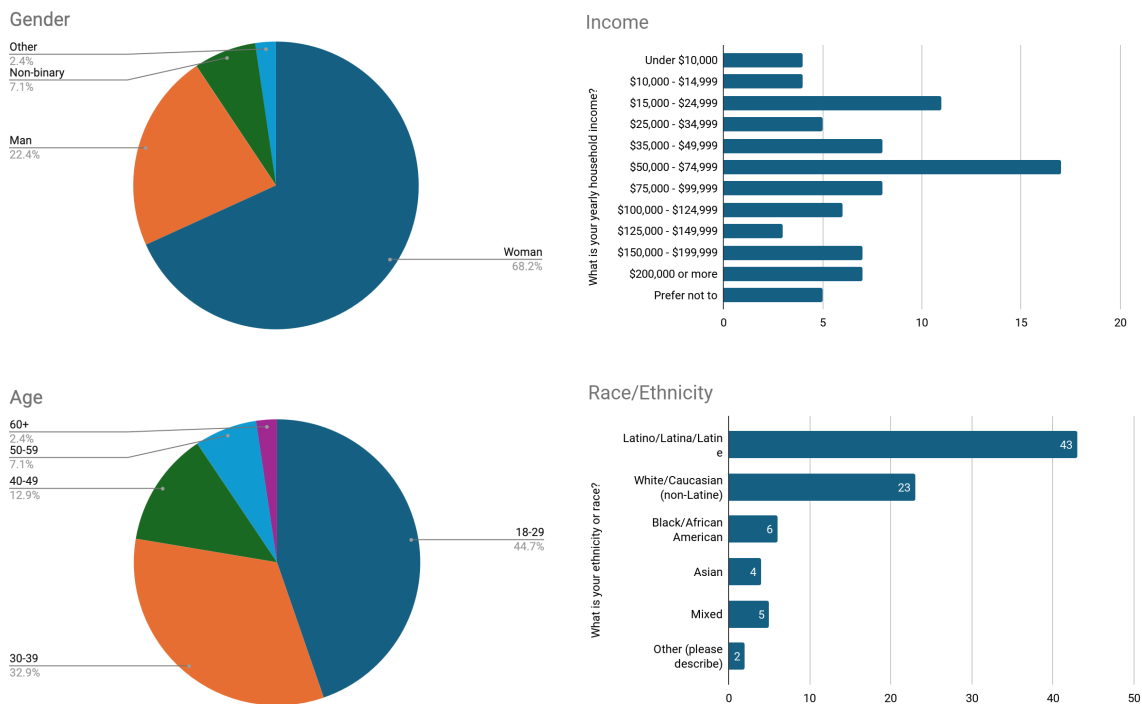
*Table 4: Survey Completion Rate*

Total collected	140
100% completion	89
50-99% completion	4
15-49% completion	14

Less than 15% completion	33
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The following charts (Figures 8, 9, 10, 11) present some demographics for the survey participants. Most participants were younger than 40, and about a third were women. In terms of race, a majority of Latino/Latina/Latine people filled out the survey. Finally, participation in terms of income was relatively diverse.

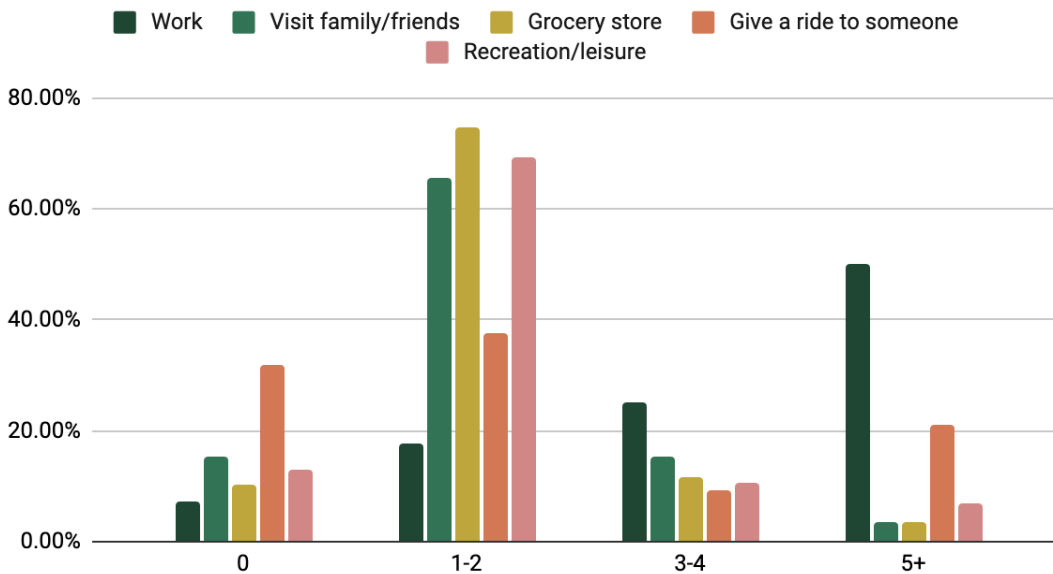
Figures 8, 9, 10, 11: Survey participant demographics by Age, Gender, Income, Race/Ethnicity, respectively



The survey results indicate that 50% of people travel to work five or more times per week. The remaining participants, including those who did not travel to work, traveled to work less than five days per week. For other destinations included in the survey, most respondents traveled to those destinations 1-2 times per week. This might imply that most of the time spent traveling in a typical week is for work. Figure 12 summarizes these findings.

Figure 12: Number of trips per week by destination

## Number of trips per week by destination



However, when we look at the travel time to non-work-related destinations, we observe that some trips take a long time. Figure 13 below illustrates this observation. Most notably, 36% of respondents take more than 45 minutes to get to their family and friends, meaning people tend to live far from their loved ones. Similarly, 31% of respondents take more than 45 minutes to reach recreation and leisure destinations. Neither indicates a majority of respondents, but this might stipulate that people cannot visit their family and friends or engage in recreational activities as often as they want. They may not be willing to spend so much time traveling or need more time for additional trips. Further analysis is necessary to determine why people travel less often to non-work destinations.

*Figure 13: Travel time to destination for select non-work destinations*

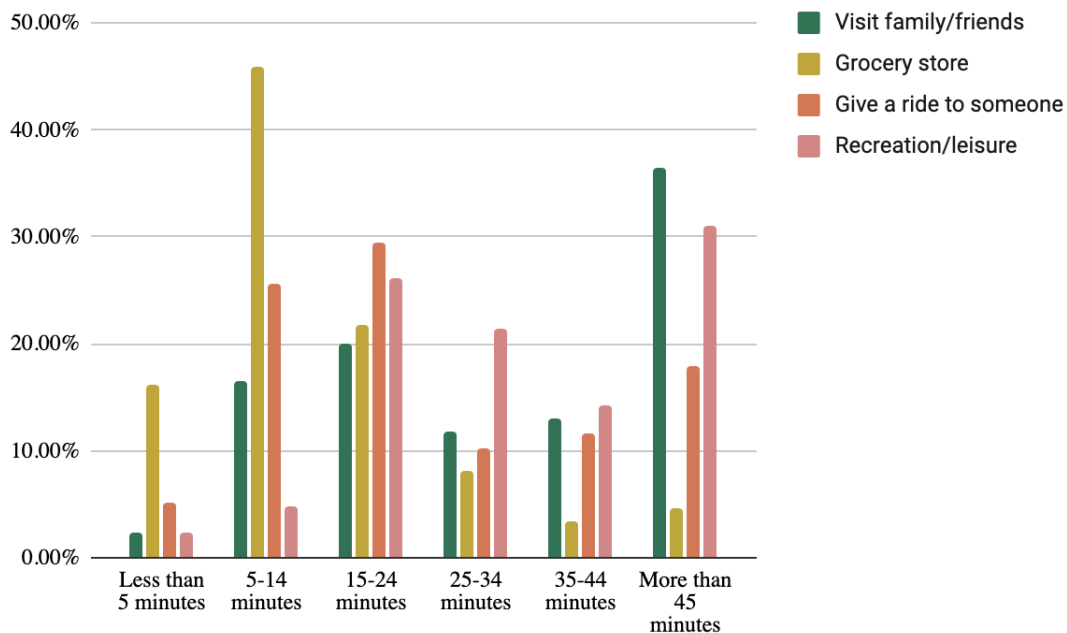


Table 5 below shows how respondents felt about a set of statements. The first statement asks participants to assess if they think they are missing out on other activities because they devote so much time to traveling to destinations. The responses provide some evidence that people would like to spend more time on other activities unrelated to work. By adding people who 'agree' and 'strongly agree' with the statement, 68% of respondents felt they miss out on activities they like to do because they spend a lot of time traveling. This means that most people, regardless of how long their commutes are, feel they lack enough time for activities that might provide them joy or rest.

Table 5: Survey statement responses - all responses

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
I feel like I miss out on other activities that I'd like to do because I spend too much time traveling to destinations	36.05%	32.56%	11.63%	13.95%	5.81%
I feel like the time I spend traveling every day negatively affects my physical health	8.24%	23.53%	24.71%	22.35%	21.18%
I feel like the time I spend traveling every day negatively affects my mental health	23.53%	25.88%	17.65%	25.88%	7.06%
I am concerned about how prolonged exposure to air pollutants due to the time I spend traveling might impact my health	30.59%	29.41%	25.88%	10.59%	3.53%
I take measures to minimize health risks and discomforts during my travel, such as using air conditioning, wearing a mask, employing compression socks, engaging in regular exercise, or other measures	18.82%	40.00%	17.65%	20.00%	3.53%

The rest of the statements deal with how people feel about travel behavior affecting their health. 43% disagree or strongly disagree, compared to 31% who agree or strongly agree, that the time they spend traveling negatively impacts their physical health. In terms of mental health, 49% feel like the time they spend traveling negatively affects their mental health, while 32% disagree or strongly disagree. Additionally, a majority of respondents feel concerned about their exposure to air pollutants having an impact on their health. 58.2% of respondents also indicated that they utilize measures to reduce health risks associated with travel.

These results are significantly different from the interview analysis. For example, all interviewees mentioned experiencing negative impacts on both mental and physical health. Additionally, only some interview participants reported taking measures to minimize health risks and discomforts. The different participant pools might explain this discrepancy. Only 23% of survey participants reported experiencing extreme travel, while interviewees described daily travel times exceeding 3 hours.

Table 6 below shows the results of the statements for only the people who reported experiencing extreme travel times. These responses are more congruent with the interview findings. 95% of participants reported missing out on other activities because they spent so much time traveling. 65% agree or strongly agree, compared to 15% who disagree or strongly disagree, that the time they spend traveling negatively impacts their physical health. Similarly, 65% agree or strongly agree, compared to 15% who disagree or strongly disagree, that the time they spend traveling negatively impacts their mental health. Additionally, the percentage of people who feel concerned about prolonged exposure to air pollutants is 8 points higher than

the aggregate survey data. Finally, the percentage of people who reported taking measures to mitigate health risks associated with travel is 13 points lower than the aggregate survey data.

Table 6: Survey statement responses - extreme travel responses

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
I feel like I <b>miss out on other activities</b> that I'd like to do because I <b>spend too much time traveling</b> to destinations	60.00%	35.00%	0.00%	5.00%	0.00%
I feel like the <b>time I spend traveling</b> every day negatively affects my <b>physical health</b>	40.00%	25.00%	20.00%	5.00%	10.00%
I feel like the <b>time I spend traveling</b> every day negatively affects my <b>mental health</b>	45.00%	20.00%	20.00%	15.00%	0.00%
I am concerned about how <b>prolonged exposure to air pollutants</b> due to the time I spend traveling might <b>impact my health</b>	42.11%	26.32%	26.32%	5.26%	0.00%
I take <b>measures to minimize health risks and discomforts</b> during my travel, such as using air conditioning, wearing a mask, employing compression socks, engaging in regular exercise, or other measures	15.00%	30.00%	35.00%	20.00%	0.00%

These results might indicate that extreme travel does produce disparate negative impacts, but a larger response pool is needed to reach conclusions.

## Survey Limitations

Recruiting participants for the survey proved challenging, making it difficult to achieve a statistically significant sample within the project's time constraints. Initially, the survey targeted individuals living, working, or studying in the San Fernando Valley. However, after discussions with PB staff, we broadened the criteria to include residents of the Greater LA region, aiming to increase participant numbers. Nevertheless, compared to County-wide demographics, the surveys collected do not fully align to indicate a representative population sample. For example, although LA County's gender split is roughly equal, the survey received responses disproportionately skewed toward women (68%). The broadening of the sample opened up the possibility for comparative analysis between those with longer daily commutes and those with shorter travel times. However, a thorough comparative analysis was difficult due to the final sample size. Given more time and resources, redefining the survey's focus solely on individuals experiencing extreme travel could yield a more extensive dataset, enabling a comprehensive examination of how extreme travel impacts communities. Moreover, the survey was available on the internet to anyone in the world, and although respondents needed to confirm their eligibility, there is a possibility that people with no relationship to Los Angeles completed the survey, introducing response bias.

## Recommendations

Based on the insights gathered from interviews and surveys, the following recommendations are proposed to enhance planning strategies and policy interventions, ultimately aiming to improve



the travel experience and overall well-being of individuals facing long commutes. I structured these recommendations around five fundamental principles: Transportation Cost Reduction, Transit Service Improvements, Social and Recreational Space Access, Air Quality Improvements, and Housing and High-Quality Job Access.

## **Reduce Financial Burden From Transportation Expenses**

### 1. Offer Financial Assistance for Low-Income Individuals and Families to Alleviate Vehicle Costs.

In the interviews, people who drive discussed feeling burdened by how much they spend on their vehicles. Spending significant time on the road results in elevated car expenses. Participants spend much of their monthly income covering gas, insurance, and maintenance fees. Providing information on existing programs that can help reduce vehicle expenses, such as California's Low-Cost Auto Insurance Program, might provide some relief. PB could also advocate for improvements to State financial assistance programs that help lower personal vehicle costs, including gas subsidies. ([Blumenberg & Pierce, 2012](#); [Klein, 2024](#); [Ong, 2002](#))

### 2. Expand Universal Basic Mobility programs to provide financial relief for transit-related costs.

Interviewees, especially transit-reliant ones, expressed a need for more affordable transportation options. Providing access to programs in LA, such as the Mobility Wallet component of the Universal Basic Mobility Program, can improve mobility outcomes by reducing financial barriers and increasing access to destinations ([Mitteenn, 2023](#); [Rodier et al., 2024](#)). The Mobility Wallet facilitates access to transit and alternative modes of transportation, including ride-hailing services, enabling people to reach destinations that may be challenging to access via existing transit options. PB can work with LADOT and LA Metro to assist with the recruitment for the upcoming county-wide Mobility Wallet pilot program to include people who face financial struggles and experience extreme travel.

### 3. Develop advocacy strategies to campaign for change in transit fares, including free transit options.

Participants who reported the greatest financial strain and relied on transit expressed a desire to reinstate Metro's fare-free program implemented during the COVID-19 pandemic. Participants also observed harmful tactics for enforcing fares. These policies can deter people from using transit services. PB could work with other community-based organizations and advocacy groups already working on fareless transit initiatives, such as ACT-LA and SAJE, to campaign for universal access to transit ([Strategic Actions for a Just Economy \(SAJE\) & Alliance for Community Transit \(ACT-LA\), 2023](#)). In the meantime, PB could use their existing education-sharing networks, including PB events, PB volunteers, and PB social media platforms, to inform people on how to sign up for existing programs, such as the Low Income Fare is Easy (LIFE) program ([LA Metro, n.d.-b](#)), that helps lower the cost of transit.

## **Work with Local Transit Providers to Expand Public Transportation Services**

1. Advocate for service improvements by increasing the frequency and reliability of buses.

Participants who reported using transit services shared that their travel time depends on the (in)efficiency of bus service. Frequent and reliable buses can reduce wait times, especially for late evening service, when making bus transfers and off-peak travel ([Taylor & Fink, 2013](#)). PB should encourage transit providers to allocate resources that translate into service improvements that reduce wait times and unreliability. Additionally, transit providers should consider adding additional transit stops to reduce the time people spend walking to the bus station, which will also reduce discomfort related to extreme temperatures.

2. Improve local transit options within the San Fernando Valley.

Many interview participants, especially residents of the SFV and those who regularly take transit services expressed a pressing need for expanded transit infrastructure across the SFV region. Additionally, some participants who rely on their personal vehicles were willing to reduce driving if better transit was available. There are plans to improve transportation in the Valley with the East Valley Light Rails Project and the Sepulveda Transit Corridor ([LA Metro. n.d.-c. n.d.-a](#)). However, PB can collaborate with Metro to identify and advocate for additional local transit lines. Access to existing transit lines can be improved by providing first-last mile solutions, so PB can work with Metro to expand programs like Metro Bike and Metro Micro in the SFV.

3. Promote plans to implement new transit options to connect people between the Antelope Valley, San Fernando Valley, and LA's urban core.

People living in the Antelope Valley area have the least access to transit options that connect them to essential services, so they must rely on personal vehicles to get where they need to go. Participants who live in the San Fernando Valley but who have to travel to other areas in LA want to use transit to reduce the mental and physical toll of driving. Still, most people find existing transit options insufficient to get all the places they need to when traveling between the Antelope Valley and SFV or SFV and other parts of LA. PB can work with Metro and other relevant transit agencies to develop a plan to expand service lines that address the transportation needs of low-income people throughout the LA region.

## **Increase access to spaces for recreation and social connection**

1. Add transit routes that conveniently connect people to public parks, recreation spaces, commercial districts, and other social gathering spaces.

Survey and interview participants indicated that engaging in social and recreational activities improves their social connections and health. People who spend many hours traveling every day miss out on these opportunities. PB can work with transit providers to ensure that places for

fun and enjoyment, like beaches, parks, restaurants, spiritual centers, and other gathering spaces, are easily accessible by transit. PB should also work with existing and new community partners to promote the use of existing public spaces, such as Bradley Plaza and Pacoima Wash ([Pacoima Beautiful, 2022, 2023b](#)). PB could evaluate access to these spaces through an audit that focuses on measuring factors affecting park access, including how well connected the parks are to transportation options and if the park amenities meet the needs of users, such as that of the people who might use the space as a resting stop before they continue with their commute. Furthermore, PB can work with planners to evaluate land use changes that might allow for more social and recreational spaces near the places where people live, work, and pass through during their commutes.

### **Reduce health risks associated with the exposure to pollutants**

#### 1. Reduce emissions from highly polluting activities in the area.

Most participants reported being highly concerned about the effects of exposure to air pollution. Reducing how many people drive and how much they drive can reduce pollution, but this recommendation depends on significant infrastructure and culture changes. PB can provide resources to decrease car dependency only if people have access to transportation alternatives that get them to the places they need to go. PB has already worked on many campaigns focused on reducing emissions in neighborhoods designated as Green Zones in the San Fernando Valley ([California Environmental Justice Alliance, n.d.](#)). Still, PB can expand its advocacy and campaign work to push for regional and state-level policies that focus on providing the right to clean air. These policies should focus on reducing air pollutants affecting people during their commutes and at home, including significant reductions or ending operations from stationary sources of pollution such as warehouses and freight, oil refineries, landfills, power plants, and airports within areas frequented by drivers and riders who are people of color or low-income ([California Environmental Justice Alliance, n.d.; Los Angeles County & Department of Regional Planning, 2024](#)).

#### 2. Develop education campaigns that inform the public about risk mitigation strategies to reduce long-term impacts from exposure to pollution.

Most participants stated concern about the effects of air pollution exposure, but many reported not taking any measures to reduce harm. Stricter air pollution regulation policies can take a very long time to implement. In the meantime, people should have access to resources that help them make informed decisions about caring for themselves. PB can use its existing platforms to share information with the public to inform people about ways to reduce exposure to bad air quality, such as regularly checking air quality levels around the places they frequent, wearing a mask when pollution is at unhealthy levels, rolling up the windows on the car in a highly congested area, or using air filters. PB can also promote citizen science methods for measuring air quality ([Lu et al., 2022](#)).

## **Improve housing access and job opportunities**

### 1. Increase access to affordable housing in the places where people want to live.

The research reveals that many participants are forced to live far from their desired locations due to housing displacement, resulting in lengthy commutes. These participants expressed a desire to relocate closer to their jobs or communities but were constrained by the limited availability of affordable housing options. To address this issue, PB can collaborate with LA City and LA County housing and planning teams to develop targeted policies and practices. These initiatives may include implementing zoning changes, such as mixed-use zoning policies, and developing affordable housing units in convenient neighborhoods near essential destinations like jobs and schools. PB could also assess innovative approaches that promote community ownership, such as community land trusts, which allow communities to choose what to build where they live based on their needs ([Harper, 2022](#)).

### 2. Support the creation of quality jobs near the places where people want to live.

Participants already residing in their desired neighborhoods emphasized the critical need for more high-paying, quality jobs nearby. PB could support the creation of quality jobs by collaborating with labor unions in the area to ensure that both existing and future job opportunities closest to where people live offer livable wages.

## **Conclusion**

This report highlights the pressing need to address the effects of extreme travel on residents and frequent visitors in the San Fernando Valley area. The research reveals that extreme travel exacerbates adverse social, economic, health, and environmental outcomes. By investing in transportation infrastructure and implementing environmental protection policies, Pacoima Beautiful can begin to alleviate some of these impacts within the communities they serve. However, it is clear from the findings that effectively tackling these challenges extends beyond mere transportation and mobility justice. Meaningful solutions require a comprehensive approach that addresses broader systemic issues, including improving access to affordable housing, fostering quality job opportunities closer to residential areas, and promoting a better time allocation for rest, leisure, and social connection.

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<https://doi.org/10.1016/j.jtrangeo.2016.06.013>

# Appendix

## Appendix A: Interview protocol

### General

To get us started, I'll ask a few questions to get to know you a bit.

1. Can you tell me more about yourself?
  - a. *Prompt:* Where do you live?
    - i. How long have you lived in this area?
  - b. *Prompt:* Do you live alone or with others?
  - c. *Prompt:* Do you live with children?
  - d. *Prompt:* What's your profession/What do you do for work?
  - e. *Prompt:* Are you a student?

### Travel Trends

Now I'll ask you some questions about how you get around.

1. How do you typically travel during the week?
  - a. *Prompt:* What are your typical destinations?
  - b. *Prompt:* What modes of transportation do you use?
    - i. Do you ever use..
      1. Metro rail
      2. Metro Bus
      3. Metrolink
      4. Rideshare (Uber, Lyft)
      5. Walking
      6. Biking
      7. Personal vehicle
      8. Other
  - c. *Prompt:* How long are the trips? How many hours per day do you spend traveling/commuting?
  - d. *Prompt:* At what time during the day and on what days of the week do you travel to the destinations described?
  - e. If you live with children, how do you plan for getting them to the places that they need to be?
2. How do you typically travel during the weekend?
  - a. *Prompt:* What are your typical destinations?
  - b. *Prompt:* What modes of transportation do you use?
    - i. Do you ever travel by..
      1. Metro rail
      2. Metro Bus
      3. Metrolink
      4. Rideshare (Uber, Lyft)



5. Walking
  6. Biking
  7. Personal vehicle
  8. Other
- c. *Prompt:* How long are the trips? How many hours do you spend traveling on an average weekend day?
  - d. *Prompt:* At what time during the day and on what days of the weekend do you travel to the destinations described?

### **Vehicle Access**

Now I want to ask a few questions about car access

1. [IF THEY MENTION THEY USE A CAR IN THE PREVIOUS SECTION]
  - a. You mentioned you use a car to get around, do you always have access to a vehicle? Are you the only person that uses it or do you share it?
  - b. Do you need a car as part of your job? (ie. gardening, carrying things, etc.)
  - c. Do you ever feel like it's a burden to own a car?
  - d. What type of vehicle do you have?
  - e. How much do you spend on your vehicle per month, including gas, insurance, and maintenance?
2. [IF THEY DID NOT MENTION USING A CAR IN THE PREVIOUS SECTION]
  - a. Do you ever have access to a vehicle? Why or why not?
  - b. Are you planning to get a car in the near future? Why or why not?
  - c. Is it easy to access public transportation to get to the places where you need to go? Do you think the routes you have to take are efficient?

### **Extreme Travel**

Now I want to know more about why you have very long travel times

1. Can you explain why you spend so much time traveling regularly?
  - a. *Prompt:* Is it because you want to live close to your community/family, because you couldn't find an affordable home closer to your job, because you couldn't find a job near where you live, or because of something else?

### **Social Impacts**

The following questions deal with the social impacts that might arise from experiencing extreme travel.

1. Do you feel like spending so much time traveling reduces the time you can spend on other activities?
  - b. *Prompt:* Is there something you wish you could do if you didn't have to travel so much?
2. How often do you get to do activities not related to your job or your household (grocery shopping, caretaking, chores, errands)?
  - a. *Prompt:* Do you have time for leisure activities such as going to the movies, working out, going to a park, or visiting a museum? Or other activities such as

getting to engage with the local community, school committees, neighborhood associations, etc.?

3. Do you feel like you are able to spend as much time as you'd like with your family and friends?
  - a. Prompt: Do you feel like having an extreme travel or spending a lot of time traveling to your destinations affects your relationships? How so?

### **Health and Environmental Impacts**

In this section, I want to delve into the health impacts of your travel patterns, with a specific focus on environmental justice and broader environmental implications/ impacts.

#### ***Physical Health Impacts:***

- How does your travel influences your physical health?
  - Prompt: Are there any issues related to extended periods of sitting (such as back pain or circulation problems) or standing in transit for a prolonged time?
  - Prompt: Does it exacerbate any pre-existing health conditions?
  - Prompt: Have you noticed any health problems arising from your travel, such as issues related to asthma, cardiovascular disease, or weight-related concerns?

#### ***Mental Health Impacts:***

- In what ways does your travel affect your mental health?
  - [IF YES], please elaborate on any increased feelings of anxiety, depression, stress, loneliness, irritability, or if it has led to a decrease in sleep quality and increased fatigue.
  - Prompt: Does your travel impact your work-life balance?

#### ***Air Quality Concerns:***

- Considering the potential environmental impact of traveling, do you worry about heightened exposure to air pollutants during your extreme travel?
- How aware are you of the air quality along your travel routes?
- Have you ever checked air quality indices or received relevant information about pollution levels in the area where you travel?
- Are you concerned about the long-term health effects of consistent exposure to air pollutants during your travel?
- Have you noticed any visible signs of poor air quality, such as smog or strong odors, during your travel experience?

#### ***Access to Healthcare Services:***

- Does your travel limit your ability to access healthcare services promptly?
  - Prompt: Are you able to seek care as soon as needed, or do you often need to postpone appointments until you have more time?

#### ***Risk Mitigation Strategies:***

- Do you take any measures to minimize health risks or discomfort during your travel?
  - Prompt: This could include using air conditioning, wearing a mask, employing compression socks, engaging in regular exercise, or any other strategies you find effective.

### **Economic Impacts**

Now we'll turn to discussing the economic and financial impacts associated with your commuting trends.

1. Do you feel like the financial cost associated with your type of extreme travel makes it hard to make ends meet? (higher costs of gas, maintenance, transit, etc)
2. Have you ever rejected a job because it was too far?
3. Have you ever rejected a job that was closer to you but rejected it because the pay wasn't enough?

### **Household Impacts**

1. IF THEY LIVE WITH OTHERS:
  - a. Are you able to contribute to household chores as much as other members of the household?
  - b. How do you think people in your household are affected by your extreme travel?
    - i. Prompt: IF THEY HAVE CHILDREN: Do you think that your kids are impacted by your extreme travel?
      1. [IF YES] In what ways? How does that make you feel?

### **Transportation Futures**

Now that you have shared about how experiencing extreme travel affects your life and that of your household, I want to know about any ideas you have that could improve your well-being.

1. What would make your traveling easier?
  - a. Prompt: would you like to move closer to your job if you could find affordable housing?
  - b. Prompt: would you like to change your job if one that was closer was available?

### **Demographic questions**

Finally, I want to ask some demographic questions that might help me understand patterns or trends during the analysis process. Again, feel free to skip any questions you don't want to answer.

1. How old are you?
  - a. 18-29
  - b. 30-39
  - c. 40-49
  - d. 50-59
  - e. 60+
2. What is your race/ethnicity?
  - a. White/Caucasian
  - b. Black/African American
  - c. Latino/Latina/Latine

- d. Asian/Pacific Islander
  - e. American Indian
  - f. Mixed Race
  - g. Other (please list)
3. What is your gender identity?
    - a. Female
    - b. Male
    - c. Transgender female or transgender male
    - d. Other
    - e. Prefer not to say
  4. What is your household income?
    - a. Under \$10,000
    - b. \$10,000 - \$24,999
    - c. \$25,000 - \$34,999
    - d. \$35,000 - \$49,999
    - e. \$50,000 - \$74,999
    - f. \$75,000 - \$99,999
    - g. \$100,000 - \$149,999
    - h. \$150,000 or more

## Appendix B: Survey protocol

### Household demographics

1. How many adults live in your household? (including you)
  - a. 1 adult
  - b. 2 adults
  - c. 3 adults
  - d. 4 adults
  - e. 5 or more adults
2. How many children live in your household? (people under 18)
  - a. No children
  - b. 1 child
  - c. 2 children
  - d. 3 children
  - e. 4 children
  - f. 5 or more children
3. How many vehicles are in your household?
  - a. 0 vehicles
  - b. 1 vehicle
  - c. 2 vehicles
  - d. 3 vehicles
  - e. 4 or more vehicles
4. Are you the primary user of the vehicle?
  - a. Yes
  - b. No
  - c. Vehicle(s) shared equally with other people in the household
  - d. I don't drive
  - e. The household has no vehicles
5. What languages are spoken at home? [mark all that apply]
  - a. English
  - b. Spanish
  - c. Other (please list)

### Location

6. What is the nearest intersection to where you live? (i.e. the cross streets closest to your home. For example, Main St. and Orange Ave.)
7. What city do you live in?
8. What is the zip code of where you live?
9. What is the nearest intersection to where you work? (i.e. the cross streets closest to your work)
10. What city do you work in?
11. What is the zip code of where you work?

**Travel to work**

12. Thinking about your last trip to work, what mode of transportation did you use? [select all that apply]
  - a. Transit - Metro rail
  - b. Transit - Bus
  - c. Transit - Metrolink
  - d. Transit - Other
  - e. Personal vehicle - Alone
  - f. Personal vehicle - Drive with others in the car
  - g. Motorcycle
  - h. Bike
  - i. E-Scooter
  - j. Walking
  - k. Rideshare (Uber, Lyft, etc)
  - l. Carpool/Vanpool
  - m. Other
13. What time did you leave for work?
  - a. 1:00 AM - 4:59 AM
  - b. 5:00 AM - 9:59 AM
  - c. 10:00 AM - 11:59 AM
  - d. 12:00 PM - 3:59 PM
  - e. 4:00 PM - 5:59 PM
  - f. 6:00 PM - 10:59 PM
  - g. 1:00 AM - 4:59 AM
  - h. 11:00 PM - 12:59 AM

14. How long did your last trip to work take?
  - a. Less than 30 minutes

- b. 30-60 minutes
  - c. 60-90 minutes (1 hr - 1.5 hrs)
  - d. 90-120 minutes (1.5 hrs - 2 hrs)
  - e. 120-150 minutes (2 hrs - 2.5 hrs)
  - f. More than 150 minutes (more than 2.5 hrs)
15. What time did you leave work to head home?
    - a. 1:00 AM - 4:59 AM
    - b. 5:00 AM - 9:59 AM
    - c. 10:00 AM - 11:59 AM
    - d. 12:00 PM - 3:59 PM
    - e. 4:00 PM - 5:59 PM
    - f. 6:00 PM - 10:59 PM
    - g. 1:00 AM - 4:59 AM
    - h. 11:00 PM - 12:59 AM

16. How long did your last trip back home after work take?
  - a. Less than 30 minutes
  - b. 30-60 minutes
  - c. 60-90 minutes (1 hr - 1.5 hrs)
  - d. 90-120 minutes (1.5 hrs - 2 hrs)
  - e. 120-150 minutes (2 hrs - 2.5 hrs)
  - f. More than 150 minutes (more than 2.5 hrs)
17. How many times did you travel to work in the last week?
  - a. 5+ times
  - b. 3-4 times
  - c. 1-2 times
  - d. I did not travel to work this week but I sometimes do
  - e. I work completely remotely

**Travel to visit family and friends**

18. Thinking about your last trip to visit your family or friends, what mode of transportation did you use? [select all that apply]
  - a. Transit - Metro rail

- b. Transit - Bus
  - c. Transit - Metrolink
  - d. Transit - Other
  - e. Personal vehicle - Alone
  - f. Personal vehicle - Drive with others in the car
  - g. Motorcycle
  - h. Bike
  - i. E-Scooter
  - j. Walking
  - k. Rideshare (Uber, Lyft, etc)
  - l. Carpool/Vanpool
  - m. Other
19. How long did your last trip to visit your family or friends take?
- a. Less than 5 minutes
  - b. 5-14 minutes
  - c. 15-24 minutes
  - d. 25-34 minutes
  - e. 35-44 minutes
  - f. More than 45 minutes
20. How many times did you travel to visit your family or friends in the last week?
- a. 5+ times
  - b. 3-4 times
  - c. 1-2 times
  - d. I did not visit family or friends in the last week

**Travel to the Grocery store**

21. Thinking about your last trip to the grocery store, what mode of transportation did you use? [select all that apply]
- a. Transit - Metro rail
  - b. Transit - Bus
  - c. Transit - Metrolink
  - d. Transit - Other
  - e. Personal vehicle - Alone
  - f. Personal vehicle - Drive with others in the car
  - g. Motorcycle
  - h. Bike

- i. E-Scooter
  - j. Walking
  - k. Rideshare (Uber, Lyft, etc)
  - l. Carpool/Vanpool
  - m. Other
22. How long did your last trip to the grocery store take?
- a. Less than 5 minutes
  - b. 5-14 minutes
  - c. 15-24 minutes
  - d. 25-34 minutes
  - e. 35-44 minutes
  - f. More than 45 minutes
23. How many times did you travel to the grocery store in the last week?
- a. 5+ times
  - b. 3-4 times
  - c. 1-2 times
  - d. I did not travel to the grocery store in the last week

**Travel for Picking Up/Dropping Off Someone**

24. Thinking about your last trip to pick up or drop off someone, what mode of transportation did you use? [select all that apply] (for example, picking up your kids from school or giving a ride to a friend)
- a. Transit - Metro rail
  - b. Transit - Bus
  - c. Transit - Metrolink
  - d. Transit - Other
  - e. Personal vehicle - Alone
  - f. Personal vehicle - Drive with others in the car
  - g. Motorcycle
  - h. Bike
  - i. E-Scooter
  - j. Walking
  - k. Rideshare (Uber, Lyft, etc)
  - l. Carpool/Vanpool
  - m. Other

25. How long did your last trip to pick up or drop off someone take?

- a. Less than 5 minutes
- b. 5-14 minutes
- c. 15-24 minutes
- d. 25-34 minutes
- e. 35-44 minutes
- f. More than 45 minutes

26. How many times did you travel to pick up or drop off someone in the last week?

- a. 5+ times
- b. 3-4 times
- c. 1-2 times
- d. I did not pick up or drop off anyone in the last week

#### **Travel to recreational and leisurely activities**

27. Thinking about your last trip to a recreational or leisure destination, what mode of transportation did you use? [select all that apply] (for example, movie theater, concert, library, park, museum, etc.)

- a. Transit - Metro rail
- b. Transit - Bus
- c. Transit - Metrolink
- d. Transit - Other
- e. Personal vehicle - Alone
- f. Personal vehicle - Drive with others in the car
- g. Motorcycle
- h. Bike
- i. E-Scooter
- j. Walking
- k. Rideshare (Uber, Lyft, etc)
- l. Carpool/Vanpool
- m. Other

28. How long did your last trip to this recreational or leisure destination take?

- a. Less than 5 minutes
- b. 5-14 minutes

c. 15-24 minutes

d. 25-34 minutes

e. 35-44 minutes

f. More than 45 minutes

29. How many times did you travel to a recreational or leisure destination in the last week?

a. 5+ times

b. 3-4 times

c. 1-2 times

d. I did not travel to recreational or leisure destinations in the last week

#### **Overall travel**

30. Thinking about all your travel destinations in the last week, select all the types of places you traveled to:

- a. Work
- b. School
- c. Kids' school
- d. Grocery store
- e. Other errands (pharmacy, laundromat, hardware store, etc.)
- f. Leisure shopping (clothing shopping, bookshops, etc.)
- g. Recreation/Leisure (movie theater, park, library, museum, etc.)
- h. Doctor's office and other healthcare facilities
- i. Gym or other exercise facilities
- j. Friend or family member's home
- k. Other (fill in)

31. To the best of your ability, please provide an estimate of the average total amount of time you spend traveling daily

a. Less than 30 minutes

b. 30-60 minutes

- c. 60-90 minutes (1 hr - 1.5 hrs)
- d. 90-120 minutes (1.5 hrs - 2 hrs)
- e. 120-150 minutes (2 hrs - 2.5 hrs)
- f. More than 150 minutes (more than 2.5 hrs)

**Agree/disagree**

32. To what extent do you agree or disagree with the following statements
- a. I feel like I miss out on other activities that I'd like to do because I spend too much time traveling to destinations
    - i. Strongly agree
    - ii. Agree
    - iii. Neither agree nor disagree
    - iv. Disagree
    - v. Strongly disagree
  - b. I feel like the time I spend traveling every day negatively affects my physical health
    - i. Strongly agree
    - ii. Agree
    - iii. Neither agree nor disagree
    - iv. Disagree
    - v. Strongly disagree
  - c. I feel like the time I spend traveling every day negatively affects my mental health
    - i. Strongly agree
    - ii. Agree
    - iii. Neither agree nor disagree
    - iv. Disagree
    - v. Strongly disagree
  - d. I am concerned about how prolonged exposure to air

pollutants might impact my health

- i. Strongly agree
  - ii. Agree
  - iii. Neither agree nor disagree
  - iv. Disagree
  - v. Strongly disagree
- e. I take measures to minimize health risks and discomforts during my travel such as using air conditioning, wearing a mask, employing compression socks, engaging in regular exercise, or other measures
- i. Strongly agree
  - ii. Agree
  - iii. Neither agree nor disagree
  - iv. Disagree
  - v. Strongly disagree

**Cost**

33. How much do you spend on average on transportation-related expenses every week? (think about car maintenance costs, gas, parking fees, transit passes, rideshare services like Uber or Lyft, paying someone to give you a ride, etc)
- a. Less than \$5
  - b. \$5-\$19
  - c. \$20-\$34
  - d. \$35-\$49
  - e. \$50-\$64
  - f. \$65-\$79
  - g. \$80-\$95
  - h. More than \$95
34. How much do you spend on average on your car every month? (insurance, maintenance costs, gas, etc.)
- a. I don't have a car



- b. Less than \$10
  - c. \$10-\$39
  - d. \$40-\$69
  - e. \$70-\$99
  - f. \$100-\$129
  - g. \$130-\$159
  - h. \$160-\$190
  - i. More than \$190
35. How much do you spend on average on public transportation every month?
- a. I don't use public transportation
  - b. Less than \$5
  - c. \$5-\$19
  - d. \$20-\$34
  - e. \$35-\$49
  - f. \$50-\$64
  - g. \$65-\$79
  - h. \$80-\$95
  - i. More than \$95

**Personal demographics**

36. What is your ethnicity/race?
- a. Black/African American
  - b. Latino/Latina/Latine
  - c. Asian
  - d. Native Hawaiian or Pacific Islander
  - e. American Indian or Alaska Native
  - f. White/Caucasian (non-Latine)
  - g. Other (please list)
37. What is your gender identity?

- a. Female
  - b. Male
  - c. Non-binary
  - d. Other (please specify)
  - e. Prefer not to say
38. How old are you?
- a. 18-29
  - b. 30-39
  - c. 40-49
  - d. 50-59
  - e. 60+

39. What is your yearly household income?
- a. Under \$10,000
  - b. \$10,000 - \$14,999
  - c. \$15,000 - \$24,999
  - d. \$25,000 - \$34,999
  - e. \$35,000 - \$49,999
  - f. \$50,000 - \$74,999
  - g. \$75,000 - \$99,999
  - h. \$100,000 - \$124,999
  - i. \$125,000 - \$149,999
  - j. \$150,000 - \$199,999
  - k. \$200,000 or more
  - l. Prefer not to answer

40. Employment status
- a. Employed
  - b. Unemployed
  - c. Other (please specify)
41. Student status
- a. Student
  - b. Not a student
  - c. Other (please specify)
42. Occupation (fill in)

**Appendix C:**

*Table 7: Reasons for extreme travel*

<p>Theme 1a: Job opportunities far from home</p>	<p><b>Jobs in desired career fields are not available close to home.</b></p> <p><i>“What I realized is that for my major sociology it often serves underserved communities, and all of the underserved communities tend to be in the valley and South Central. So that’s why I have to really travel a lot farther, just because Palmdale doesn’t have that many organizations, and if they do, realistically, they don’t pay as well.” -Marta.</i></p> <p><i>“Before the job that I have right now, I was traveling to California City. Which is... I was doing a hundred 40 miles in total, like to go and come back. But that was only 2 times a week. I was doing like another restoration project up there. So I feel like I’ve got what I’ve really been interested in doing. It is like restoration work and working like with plants. Native plants. And I feel like. I’ve just been like seeking for those opportunities and those opportunities always tend to be like a drive for me.” -Lupe.</i></p> <p><i>“I know that in this area of Los Angeles is the closest to me geographically, where I could do like the kind of advocacy work that I wanted to do and like and like. That is where my career goals are.” -Fer.</i></p>
<p>Theme 1b: Job opportunities far from home</p>	<p><b>People feel their current jobs offer some security, so they don’t look for jobs closer to home.</b></p> <p><i>“I am comfortable there because, well, I opened that restaurant, I tell you, we have been there for 10 years.” -Alberto.</i></p> <p><i>“My parents have always done that as well. Like they work all the way in Palisades and Pacific Palisades, and so their commute is a lot longer, and I feel like they’ve established like their clientele over there, and they have, like the people that they work with, and they’re familiar with.” -Lupe.</i></p> <p><i>“Well, where I work, I don’t earn much, but for example, since I’m a waitress, I get tips and I use that for gasoline. And I still have my check, and in other jobs, it’s just going to be my check, and now since I don’t have an education, I know, I mean, there isn’t a job that maybe not finding a job where I can go or where I make a lot of money too. Well, that counts the income. And so I said, when my daughter is older, and all that, maybe I’ll look for a job closer.” -Mariana.</i></p>

<p>Theme 1c: Job opportunities far from home</p>	<p><b>Some jobs require people to travel to different locations constantly.</b></p> <p><i>“So it’s a little complicated, so I have like a part-time job at a juice bar, and then I work at a nonprofit as a teacher there, and then I have a bunch of side gigs. So that’s where it like, gets a little complicated. So I can do commissions like murals, things of that nature, and events. So a lot of little stops then”</i> -Andrea.</p> <p><i>“I work as a cleaning lady [...] my clients are all in different places”</i> -Brenda.</p>
<p>Theme 1d: Job opportunities far from home</p>	<p><b>Limited access to jobs near home.</b></p> <p><i>“Here [in Palmdale], we have not been able to get a job closer, because here jobs are a little scarcer [...] Since there are not many people in Palmdale. There are not many people. So the restaurants open a little later, they close earlier, they have few staff because they don’t have a lot of customers or things like that.”</i> -Paola.</p> <p><i>“Because I did think, I said, well, over time, I will look for work here and I’ll put her in school. But it is not so easy. Since I don’t know anyone there, I have to have a job where I have the schedule to pick up and drop off my daughter.”</i> -Mariana.</p>
<p>Theme 2: Proximity to community</p>	<p><b>Some people prioritize living closer to family, friends, and other loved ones.</b></p> <p><i>“But I do enjoy staying where I’m living at, just because I really like the community.”</i> -Marta.</p> <p><i>“So where we currently live is like on the hillside, and it’s really rural, and the houses are like they’re not like right next to each other. So I feel like being in being at home like really brings me peace, like allows me to like experience the peace that I need after like a long day at work [...] I’m also really family oriented. So I feel like being at home with my relatives I like it. It does bring me a lot of love and is something I enjoy doing.”</i> -Lupe.</p> <p><b>People hope to eventually find work closer to where their communities are.</b></p> <p><i>[On looking for a new job in the Valley instead of Downtown LA] “I prefer the Valley, and I’m more familiar with it, so I feel more comfortable. I have friends that are there, and my mom even works over there, too, and my dad used to work there. So I enjoy the Valley a lot more. So I would prefer just working there instead if there’s an opportunity.”</i> - Marta.</p>

<p>Theme 3: Unplanned changes to daily life</p>	<p><b>Changing circumstances might force people into very long commutes</b></p> <p><i>“Well, I can’t drive anymore, and the doctor won’t let me drive.” -Alberto.</i></p> <p><i>“So before December, I was traveling by car, but I got into a car accident. So right now, I only take transit, so it takes longer to get anywhere.” -Andrea.</i></p> <p><i>“I’m unemployed right now but it is hard to find a job since I also don’t have papers [green card]. [...] I also have to find a job that’s accessible by transit since I don’t know how to drive and I rely on the bus to take me to places.” -Cristina.</i></p>
<p>Theme 4a: Housing affordability</p>	<p><b>Limited options for home ownership near job centers.</b></p> <p><i>“First of all, we came here because the houses here are a little cheaper than there in the Valley. Rent there in the valley are much higher than here.” - Paola.</i></p> <p><i>“Well, as I told you, we wanted to try to have a house because we lived in a guest house where we paid 1,500 in rent, and we said, well, those 1,500, there are houses where you can pay that amount, and have a space, my daughter, have her own room because we didn’t have one before. I would sleep with my daughter in the bedroom and my husband in the living room.” -Mariana.</i></p> <p><i>“I bought the cheapest home I could find in LA County, and it was already in San Fernando.” -Omar.</i></p>

<p>Theme 4b: Housing affordability</p>	<p><b>High rent costs prevent younger people from moving away from their current homes, including leaving their parents' homes.</b></p> <p><i>"So I feel like I've just been trying to, I guess, find the foundation, or just like, become stable financially." - Lupe.</i></p> <p><i>"I mean, I honestly can't afford to live on my own. I like have to pay my student loans [...] But then, getting a car would require me to like invest in this, which would make me less able to actually move out. So I feel like I'm kind of in this weird spot where I'm like, either I buy a car and live at home." -Fer.</i></p> <p><i>"My rent is very cheap. It hasn't changed in over like a 5 years" -David.</i></p> <p><i>"Like, I think, for us, like the cost of driving and like maintaining a car, is like less than if we were to keep like renting, or like trying to find a house like in Boyle Heights." - Jessica.</i></p>
<p>Theme 5: Environmental justice concerns</p>	<p><b>Moving closer to a job might imply heightened pollution exposure in the new neighborhood.</b></p> <p><i>"Oh, and then now, like doing more work with air quality, I've become more aware of, like, what it is like, what air quality is, and it makes me a little bit more reluctant to move closer to my job." -Sam.</i></p>

**Appendix D:**

*Table 8: Social Impacts*

<p>missing out on activities</p>	<p>quotes</p>
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**socializing**

"And there was a couple of events that some of my friends would bring up. Hey, you should come, and I'll be like, Okay, what time is it? And it would always be later in the day, and that's what I didn't like dealing with. Oh, no, later in the day that's really late. So I have to drive all the way back in the dark, and I need glasses to see. So it was pretty frustrating. It's like I wish I can go, or my friends would ask me to hang out because they would. They live in the valley, so I would be like, oh, no, I'm sorry. I'm not able to, just because I need. I need to come, go back home. And then the next day wake up really early." -Marta

"Going to church... It is something that I had to stop doing so that I can travel to get to work." -Paola

"I guess. when it comes to like different opportunities or like social events. Like, there's times after work where my friends will be like, oh, this is happening like we should go. But then I think about like where I drive and how it's further away from like where I live. So then I decided not to join them just because it becomes like it just becomes a lot longer. And I've had situations where, like I just like pushed myself too much, and I'm driving tired, and that's just like no, it's not a good time. It's and it's not safe, you know." -Lupe

"I pretty much only get to do that stuff on the weekends... But it's just really hard" -Fer

"All of our family and friends live in the valley. And also activities or party meetings, whatever. When we go and then come back at night and drive. And the next day, I work early. So sometimes we prefer not to go, or if we go, sometimes we have to stay there with relatives to sleep. not to return.. so we prefer not to go. and also spend all this money, so much money, time and energy that we do not have." -Mariana

"there's so much things like that I could be doing my day to day like whether it's working out, you know, hanging out with friends and family just having fun, because since I do work a lot like I used to spend a lot of time also out besides, work like just enjoying my time. So going to nature and things like that now it's like lot more difficult" -Andrea

"I was only able to do that one activity, and I was hanging out with my friends and that was because of spring break, too. So it's not just like I usually can do that. I just had time in my hands, I know, like I had spring break during that period of time. So I think only did it once out of the whole month." -David

"because like they're so far away, but also the if I have to try to like fit, you know, like. fit it into my work schedule and my school schedule, and then add the time of driving. I'm just gonna like, go there and like it'll be like so late that, like, it's just, it's it's so hard to plan around everything, you know. But like Especially because a lot of my friends like I mentioned still live live in Long Beach, for example. So if I over there and it takes me like an hour to 2 h to like drive all the way over there. It's a huge time commitment, and it takes a lot of a like I have to be like. I can't" -Jessica

	<p><i>"it's so hard sometimes to like take out 3 hours of your day and like dedicate it to just sitting in a car by yourself, you know, and it it's so draining on like your interactions with other people." -Jessica</i></p>
<p><b>exercising</b></p>	<p><i>"like even though, like I do, start work not too early, but, like my whole morning, is kind of taken up by my commute that I can't really like, you know, have like a morning routine, like an exercise routine, or like, make myself a nice breakfast." -Fer</i></p> <p><i>"And I would also like to exercise, but I say, oh, no, not anymore. I'm too tired" -Mariana</i></p> <p><i>"there's so much things like that I could be doing my day to day like whether it's working out, you know, hanging out with friends and family just having fun, because since I do work a lot like I used to spend a lot of time also out besides, work like just enjoying my time. So going to nature and things like that now it's like lot more difficult" -Andrea</i></p> <p><i>"Well, what I like is knitting and doing other activities like sewing and exercise... I don't have time for them anymore" -Cristina</i></p> <p><i>"I usually go to the gym as often as I can, but just with this new schedule set me back on certain things because I have emails to catch up with and meetings to do... my friend also works out, so we would try to align our schedules when she was able to. So we can go together, and just. you know, catch up and de-stress the same thing" -Marta</i></p> <p><i>"I had to curt back on sleeping and also exercising. I'm a very physical person.. I also love cooking. And obviously, that's also, that's also not widely available for me to cook as much as I want to, because of the limited time I have." -David</i></p>
<p><b>other personal care (grooming, resting, etc.)</b></p>	<p><i>"it does limit me on certain things, on what I need to do, just because 'oh, I don't have time. I need to eat and shower and go to sleep.' It's just that routine that I have to have, so I wish I could have time. 'Oh, you know, let me just relax and enjoy my time being home'. But instead, it's I don't know if you heard of that saying that you visit your home, and you live at work" -Marta</i></p> <p><i>"I don't have a lot of time for for myself. And again, you know, the time time for myself. from like me exercising, or it's just me having a beer at a social. Maybe even going out for dinner, or even me reading a book, you know, like, I like to do all that but I haven't really have the time to do that." -David</i></p> <p><i>"But you know, take my dog for a walk and get his hair cut and have my appointments for myself as well, facial. I wanted to get my nails on, but it was just on rare occasions. That's usually the kind of activities I would do for myself" -Marta</i></p>

<p><b>leisure activities</b></p>	<p><i>"usually when I get back home I don't wanna go anywhere, just because it's late. And then I have to wake up really early because the metrolink the times are.. they don't run every 10 min, you know." -Marta</i></p> <p><i>"precisely that has been a problem because, well, sometimes my daughter wants, like lately she asks me that she wants to go to taekwondo And I know it's probably something she needs, but right now it feels hard to me." -Mariana</i></p> <p><i>"there's so much things like that I could be doing my day to day like whether it's working out, you know, hanging out with friends and family just having fun, because since I do work a lot like I used to spend a lot of time also out besides, work like just enjoying my time. So going to nature and things like that now it's like lot more difficult" -Andrea</i></p> <p><i>"Well, what I like is knitting and doing other activities like sewing and exercise... I don't have time for them anymore" -Cristina</i></p> <p><i>"It's not enough time for me. Yesterday I left work at 7 and arrived here at home, at 11, at 11." -Alberto</i></p> <p><i>"I think that once every 15 days. once or twice a month, nothing more. I can only those fun things with my family" -Mariana.</i></p> <p><i>"I don't wanna say that there are activities that I like couldn't do. I think they're just now things that I'm less willing to do I think, depending. If it's also it's possible to just go. What like go from work to that to like and whatever activity and make that part of my commute home. It's just like I don't have the energy or the drive to to like do that. But part of me is also thinking I still have to drive home after." -Sam</i></p>
<p><b>time spent traveling affects relationships</b></p>	



**limited time for  
quality time with  
family and friends**

*"Well, I can't spend as much time with them as I'd like to be there with them as long as they need. Of course, it makes me feel a little bit frustrated... It frustrates me a little because you can't give them the necessary time" -Paola*

*"I have a dog so to be with him as much besides. Oh, you know I'm coming home, and he goes to sleep with me, and I would feed him, or depending on the time that I will get home. So I don't really get to be with him or talk to my mom, because she would get home a little later than me, so it was already time for her to go to sleep, so we couldn't really catch up, or just with my parents in general." -Marta*

*"I'd I'd rather be doing other things to be honest cause, even though it's like, you know, unpaid work like volunteer labor. At this point like... I'd prefer like in my ideal, like I would be actually pretty rooted in my neighborhood like, I wish I could spend more time where I live. I would love to not drive" -Sofia*

*"I would like seeing friends, or even just like spending more time outside." -Sam*

*"My daily routine is sitting in traffic so I have limited time.. whether it be sitting down with the family member and talking to them about their day. or cooking for the family or even going out for a walk." -Omar*

*"so yeah, there's just less time together and less energy that I have to like fully be present with them." -Lupe.*

*"With friends, just because the days that they're always available tend to be the days that I have to go to work on a Monday, or you know, when our schedules aligns, or if they also wanna hang out later, and then I'm like, 'Oh, no, I have to wake up early at this time to go all the way over there', and it's the same thing for my parents. They work every single day, so, except on the weekends, but they're completely exhausted and don't really have much of the energy to really talk, and if we do, it's something, you know, really quick. Okay, now it's time to go to sleep. And I mean, my boyfriend works all the time. So there's sometimes that I would only see him on Fridays or on the weekend which isn't, I mean, I don't mind, but you know he is the one that works the most. But I noticed that that's how it usually is, for, like everyone that I'm close with" -Marta.*

*"Well, yes, it does affect them because, well, it is time that I could spend with my children, like, for example, on weekends when I have to work, because well, they go to school all week on my days off" -Paola*

*"there are times for my mom will be like, I haven't seen you all week. Just because she leaves to work before I do, and I come back home by the time that they're already like getting ready for bed. so I think there are times where I feel like our my time with my family is limited." -Lupe.*

*"it's hard to put aside time where I'm not like tired to see friends, I can see them but not not as much like I would. I would want to spend time after work with friends." -Fer.*

*"I do disconnect with them a lot of the times, because.. I don't know. It's just. It's hard to make time for your family and your friends, when like, there's so much work to do all the time." -Jessica.*

**fractured  
relationships with  
friends**

*"I think that I would spend more time in visiting friends or family but there's no way I can now" -Alberto*

*"I wish there were more ways to be able to support that outside of these, like kind of very of intense commutes and networks of survival that have kind of pushed people to have to seek out housing farther and farther out... People like our friends who've been displaced to Lancaster... you know, being in touch and like staying like together in some way, even if we're like physically, like, geographically, like, very, very far apart. So that takes a huge toll on all the communities that like I am a part of, and that like that I know of, because you're just fighting to like, keep in touch or like you're just fighting to like, not be completely alienated." -Sofia*

*"I feel like before used to be so much easier and like less time cause I do have family in LA, too that I would hang out with all the time. And now I don't really see them So it does affect me mentally and all that, because I'm just. I just feel like I'm just traveling, going to work and like before, even though I was working the same amount is just more. Now, the traveling is the different aspect now" -Andrea*

*"I've also had friends come over to visit me, and I feel like a lot of time is spent by travelling. and by the time that they're that we're together like it feels like time goes by so quickly before we know it. It's like already dark. And they have to leave. So I think that it does impact like my social life" -Lupe*

*"honestly, yes, mainly with friends, I feel like family, they're more understanding. But friends are kinda, like, like, you know, they get started getting annoyed and then it kind of affects our relationship a bit or being late to work and things like that like affecting those relationships, too." -Andrea*

*"it's somewhat affected me, cause obviously my roommate at least my roommate, he knows that he can't really like ask for a favor from me cause I'm at school. I'm commuting from like my long pathway from school to home" -David.*

<p><b>inability to contribute to household chores and caretaking</b></p>	<p><i>"I think my children get a little stressed. especially the smaller one because, the smaller one, well, he has autism, so he needs his therapies. So he does feel it because I have to leave him" -Paola</i></p> <p><i>"that the main thing is just not being able to contribute to like the travel needs... I also just think about like in my own, like community ecosystem or not community, but like a household ecosystem, like, if I were like a contributing commuter, I don't know like I can't really offer to give people a ride, you know, like pick up my sister from school, or like I don't know, pick up groceries on my way home like it's kind of just I come home, go to my destination and then back. I can't really like deviate from that route" -Fer</i></p> <p><i>"because there is like an urgency to like get to work at a certain time. There are times where I'm like where I might leave like my dishes. so yeah, definitely think that it impacts like my ability to contribute to my household like it puts it on like other people who I live with. Since I live with other people like, I can't just leave it there and always expect for it to be there when I get back" -Lupe</i></p> <p><i>"The house will always be there. If I clean it, the next day it's already dirty, so I say either I rest or I have a clean house" -Mariana</i></p> <p><i>"honestly right now, I don't really have too much energy to clean so probably not the most contribution for me" -Andrea</i></p> <p><i>"I've been kind of not doing my dishes because I'm so tired from commuting all the way from work to from school to home. So yeah, definitely been lacking on that. And I definitely feel like I could be doing more of that." -David</i></p>
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**Appendix E:**

*Table 9: Health Impacts*

**physical**

<p><b>exhaustion / fatigue</b></p>	<p><i>"after just dealing with the traffic, you can become just exhausted from it." -Marta.</i></p> <p><i>"So then just having my stress levels become even more higher when I do go over there, just because, you know, like I said, it's very far, and lack of sleep makes me have to be, I basically have to. It's that saying. "Fake it till you Make it" where I have to put on this personality that I have so much energy. But inside I'm exhausted." -Marta.</i></p> <p><i>"just being at work and doing whatever I had to do that week like I feel like I need time to just like recharge and be with myself. So I think it's more of a matter of like, do I have the energy to do the things that require that energy" -Lupe.</i></p> <p><i>"And well yes, it is kind of complicated, because my daughter, poor thing, I wake her up very early and she goes sleepy to school. she got used to it, she got used to it but know it's tiring for her too." -Mariana.</i></p>
<p><b>waking up very early</b></p>	<p><i>"So part of the reason I get there at 8 it's because I start an hour earlier than everyone else, because it's to have less traffic if I leave at 7, 7:15 to start work at 8. But if I leave at 8:30 to start work at 9 o'clock, then I would have to leave a 7:45. So just leaving 30 min earlier allows me to avoid traffic. Then that also means that I get to leave to go home at 4:30, which it still takes about an hour to get home. and if I were to be leaving at 5:30, I wouldn't get home up until 7 or later." -Sam</i></p> <p><i>"I usually have to wake up because I start work around 7:30. I usually wake up like maybe 5:30, and leave the house by like 6:10 [...] But since I started driving, I think I lose a lot of sleep to kind of having to wake up like pretty early in the morning to just like shower and get ready. And then, like also get on the road." -Jessica</i></p> <p><i>"About 7 to 7:30 is the latest I leave my home to get ahead of the school traffic. I make a stop while I wait for traffic to pass, and if I arrive, for example, when I arrive early, then I have a little nap in the car [...] because I have to get up earlier to be able to avoid traffic. Well, then that makes me sleep a little less than I would like. But I have to put up with it." -Brenda</i></p> <p><i>"Since my daughter is at school also in the valley, so we get up very early, I leave her with her dad first for him to take her to school later and then I head to work" -Mariana</i></p> <p><i>"I have to wake up a bit earlier, I had to wake up at 4 and leave by 5 in the morning because the train leaves at 6:20" -Marta</i></p>

pain

*"So something that I have done is that because I have back problems, and you know, I have to travel a lot. So I have to wait for the bus and get off, and I have to carry my laptop and all of the essentials that I need to work in the office. So instead, the first day I had a backpack, which was the worst decision ever. It was really heavy to carry and to deal with that I ended up buying a sort of rolling smaller suitcase, so now I could just roll, and then I could just pick it up as soon as I get on the train fast and easy, and now I don't feel any of the back pain from everything that I have what I would have to carry if I just had a regular backpack" -Marta*

*"I use compression socks because my feet swell from sitting for more than an hour" -Paola*

*"When I'm driving, like, I have really sensitive wrists, like I think like, because I I type a lot like in the office. So sometimes like the position that I need to use like when I'm using the wheel like really hurts my hands so occasionally, like, if it's really bad." -Jessica*

*"yeah, sitting down for so long.. You're you're gonna have back issues" -Omar*

*"I would experience pain from sitting down too long." -Andrea.*

*"I think my body has changed like quite a bit like it's definitely after driving for about an hour I will feel a back ache like in my, I feel it in my tailbone. And it doesn't go away. And also I feel it in my legs where I feel like the way that I'm sitting in the car, and I try to make adjustments for it. But now it's just I can come to expect it where I will feel this like ache in my legs, thighs, and lower back that does not go away. And I think that's part of yeah. It's like, change my body and in a short amount of time, I think I've only been doing this kind of like extreme driving for four years" -Sofia.*

	<p><i>"I personally think it has just in the way, because so, since it's such a long commute, I have to be sitting down for 2 h. So then, you know, I'm just sitting down, and it's exhausting, I mean cause I have to go to work again and then sit down for another almost 5 h, 4 h. Cause I clock in at 9 to 3 30, so that amount of time I'm sitting down once again after I just got finish with sitting down in the whole commute. Then I have to do that all over again, getting back home." -Marta.</i></p> <p><i>"for example, from sitting for more than 2 hours, my feet get swollen" -Paola</i></p> <p><i>"I try and stay active. I like doing like home work outs. I like running and I do recognize that like my body is very stagnant, like when I'm driving like there's not a lot of movement I think more than anything I feel like tenseness like around my neck, or like my shoulder area. I think at some point like, I'm tired of sitting too." -Lupe.</i></p> <p><i>"and I'm on the road, I sit down again. I don't move as much. So when I'm home, you know, again I go home and sit down again. I'm like so tired of sitting down." -David</i></p> <p><i>"my body is very stagnant, like when I'm driving like there's not a lot of movement. I think more than anything I feel tenseness around my neck, or my shoulder area. I think at some point like I'm tired of sitting, too." -Lupe.</i></p> <p><i>"I feel like I'm very tired and to dedicate time to my daughter and then also exercise, but I say, 'oh, no, not anymore' to working out because I'm just exhausted" -Mariana.</i></p> <p><i>" just sitting down for a long period of time. It definitely impacts my physical health. I feel like I'm not so active because I'm just driving all the time." -Jessica.</i></p>
<p><b>lack of movement / sitting too long</b></p>	<p><i>"when they get home. Yeah, I'm exhausted. I don't feel like doing anything. Working out the last thing I want to do." -Omar.</i></p>
<p><b>unfavorable eating habits</b></p>	<p><i>"like even though, like I do, start work not too early, but, like my whole morning, is kind of taken up by my commute that I can't really like, you know, have like a morning routine, like an exercise routine, or like, make myself a nice breakfast." -Fer</i></p> <p><i>"I need to wake up really early and make sure I get enough sleep sometimes. I wouldn't have breakfast in the morning, just because my body is just not used to eating super early, but then eventually get really hungry later in the day." -Marta</i></p> <p><i>"I don't want to skip eating, so I'll stop by somewhere to grab like quick, something quick to eat, but also again, I'm not eating the best things since I'm on a time crunch" -David</i></p>

<p><b>exacerbating pre-existing conditions</b></p>	<p><i>"I have back problems a little bit on my lower spine. So sitting down for a long time just is very uncomfortable. I always have to readjust and move in my chair a lot, and I notice I'm the only one doing it, even on the on the train or the bus and at work. I'm always just moving around because it's just. I'm not used to sitting down for so long, because when I was an intern I would do canvassing and an assistant, I'll be walking around. So just sitting down the entire time." -Marta.</i></p> <p><i>"when I'm driving it's like the hunched up position like the wheels, like the way the wheels are like configured like kinda or sometimes I also have, like, pretty bad like really severe dry eye. So that's partially because, again, like I work in an office. I'm looking at the computer for so long. But then I also have to spend like an additional 3 h of the day, 2 to 3 hours a day, like just watching the road, you know, so that definitely exacerbates those conditions." -Jessica.</i></p> <p><i>"The circulatory problem. It's inherited. this problem gets worse when I sit down to drive for long periods" -Brenda.</i></p> <p><i>"It is affecting all that, because, well, my conditions is getting worse every day because my kidney no longer works. And the liver is the one that distributes energy throughout the body which removes toxins, bad and good toxins and I use a lot of my energy by traveling." -Alberto.</i></p>
<p><b>mental</b></p>	
<p><b>anxiety</b></p>	<p><i>"I feel like having a vehicle has giving me the liberty to be able to move around and be able to like, pursue the job that I have, and fulfil the role that I have in my job. But I do also feel like commuting has become a burden where I feel like it does take up a lot of a lot of my energy that I built up for the day. It pushes my body in this like state of sometimes like anxiety because there are days where I'm like, I don't know if I'm a be there on time. I'm stuck in traffic. The cars aren't moving and so I feel like it puts me in that space of like anxiety and puts me in that space of like frustration." -Lupe.</i></p> <p><i>"something happened to me like recently where I came down with very strong anxiety, I had to go to a therapist because I felt, I felt very anxious about driving a lot. Because as you drive, a lot, you see a lot of accidents. I already had an accident in the past, my car spun in the cold. I collided with a wall and it was very ugly. So I, well, I drove, I drove again and everything but when I started driving a lot, my head was like 'something is going to happen to me. There is another accident. I was in my head like I was afraid I was going to crash. That I was going to kill myself driving." -Mariana.</i></p> <p><i>"I think driving has like impacted my health and my like sanity, and such in like a really negative way. I fear, you know, I have to be really conscious and aware, with the amount of driving that I do like being conscious of things around me. The longer you are on the road, the more trips you make, the more time you spend in your car, you know, I see accidents every day. Like really bad accidents, and I worry." -Sofia.</i></p>

<p><b>boredom</b></p>	<p><i>"it could be incredibly boring, just looking out the window sometimes when you've seen it over and over again, you know. What else could I be looking at besides the same trees that I've seen the other day, or from last week" -Marta</i></p> <p><i>"There's nowhere to go. You can't turn off but you're just sitting here."</i> -Omar</p> <p><i>"I see it reflected on my husband, because he does go down to the Valley every day. He comes and goes. And then he gets bored, he gets bored. In fact, he tells me, 'I would rather take the subway, but it is more difficult to travel like that" -Paola.</i></p>
<p><b>frustration/irritability</b></p>	<p><i>"I also just like get really frustrated sometimes being on the road. Because if I've had like a really long day, I'm looking at a computer for so long. I'm like not. I'm literally like not seeing sunlight or whatever. It's very draining on your mental health. and there have been like I've had, like real breakdowns on the freeway before. Like like I, I've been sitting in the car, you know. There's like a crash or something. It's like an hour and 30 min. I've it's like 6 Pm. I've been up since 5 am in the morning, and I just want to like pull over the side of the road and like sleep, or like Physically I can't believe that, like my body will allow me to continue driving until I get home, because, like my brain wants to like, shut everything down like at that moment, you know, and Like when I'm on the road. It gets so like suffocating sometimes that, especially when you've been working like long hours, like, I just, I just want to get it over with and like I wanna take a nap. But like the traffic isn't letting me, you know." -Jessica</i></p> <p><i>"that second bus, the one that's closest to my house. If I miss that bus by like this much, it makes me so angry. Yeah, I it makes me really upset and just like the increase like a wait time. It's really frustrating." -Fer.</i></p> <p><i>"When the buses take longer or they don't arrive when they should arrive, I get angry. I don't explode but I get angry." -Alberto.</i></p>



<p><b>loneliness/isolation</b></p>	<p><i>"like she needs a lot and learn to relate to people, and right now she is at an age where she already wants, maybe to be more with her friends, and she can't, because we are here (in Palmdale), she understands, she doesn't bother me or anything, but yes, I know that she might want to live closer with friends... She is alone and that loneliness, I feel like it makes her more introverted." -Mariana</i></p> <p><i>"So that takes a huge toll on all the communities that like I am a part of, and that like that I know. because you're just fighting to like, keep in touch or like you're just fighting to like, not be completely alienated." -Sofia</i></p> <p><i>"I definitely go home feeling a lot more tired after, like the drive. I would say also, I would say there is like a sense of loneliness from driving" -Lupe</i></p> <p><i>"I have increased like more so, like the depression and loneliness part just because I can't really go out. I don't have too much time to do other activities besides work to then see families and friends that I don't really see now." -Andrea.</i></p>
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	<p><i>"driving it's that's honestly a mental issue. If I could do anything else than stand in traffic, then it'll be a million times better." -Omar</i></p> <p><i>"So then just having my stress levels become even more higher when I do go over there, just because, you know, like I said, it's very far, and lack of sleep makes me have to be. I basically have to. Not that saying. Fake it till you Make it. where I have to put on this personality that I have so much energy. But inside I'm exhausted. I'm hungry and I'm tired. I'm already thinking about the way to get back home, and sometimes there's meetings or events that tend to be later in the day, and sometimes I have to remind them. Oh, you know I'm not able to attend, because you know, I leave at this time, which is frustrating, because then I feel that I'm missing out on that opportunity. But at the same time get back home. So it's just kind of a back and forth thing. And not being able, go to the gym. That was my way to really de-stress and feel good about. You know of myself. And now that I haven't really been on that routine, it's kind of it's really depressing in a way, cause you know, I built your endorphins and everything and this chemical balance. I started to fill that. But now I think that it's starting to go back or not go in the way that I wish it was before" -Marta</i></p> <p><i>"Leave a little earlier from my house to be able to get there, catch the bus that I have to catch so as not to be late for work. Because if I might sleep, for example, 10 to 15 minutes, I might leave my house later. That already delays me from catching the bus regularly. So that's kind of causing me a little bit of stress." -Paola</i></p> <p><i>"I believe that it's onle the stress that in the long term makes your body tired.. is exhaustion, it is a lack of energy from getting up early. You are sleepy all day and sometimes headaches, headaches caused by being tired. things like that that didn't happen before." -Mariana</i></p> <p><i>"but it's like exhausted beyond, like what a day of rest could restore. And I don't know what the answer to that is, you know, I think that's just living, that's literally living under capitalism, like everyone I know feels that exhaustion, like my mom talks about that like pretty regularly, and she's like chronically underslept. She doesn't have the same transportation issues that I do, but she works in a high stress environment. She works in an emergency room, and there's no room for error in her work. She lives with that stress. And yeah, it's just interesting, I I've seen what a commute does that mirrors the impact of someone who's worked in a very precise role in the emergency room that is known to be high stress." -Sofia.</i></p> <p><i>"I don't mind taking public transportation. So yeah, I'll take the Metro link. I'll jump on the bus for a couple hours. And honestly, it's just therapeutic. The 10 traffic is so stressful and haveing someone else driving it, t's a relief cause you're usually sitting in that traffic day in and day out" -Omar.</i></p>
<p><b>stress</b></p> <p><b>other</b></p>	

<b>lack of green spaces</b>	<i>"So going to nature and things like that. Now it's like a lot more difficult and getting there like in a good amount of time, because obviously with transit, just, you could spend a whole day in transit to get to one destination" -Andrea.</i>
<b>limited access to healthcare services</b>	<p><i>"the traveling part. it feels like it's a little harder, because on top of what the accident, all these.. how do you say like medical spots that we have to go to? They're all scattered around San Fernando Valley. So it's just kinda like, difficult." -Andrea.</i></p> <p><i>"so my healthcare provider is Venice Family Clinic, which is very far from where I live. I have to go all the way to Venice. I was late for my appointment because it took me an hour to get there. And then, of course, I missed the appointment. [...] And like, yeah, to get to that appointment I have to wait a long time. So that I don't miss it, I'm gonna have to arrange my day and week to make sure that I make it" -Sofia</i></p> <p><i>"But anyway, as I said, I don't have a way to travel by car. And that's why I was late one time to my appointment and they didn't want to see me" -Alberto.</i></p>

**Appendix F:**

*Table 10 Environmental Impacts*

**air quality**

worried about  
pollution

*"that's funny that you asked that because I had like a whole program that for Clean ambassadors, and I would have people like take their air monitors to a public transit stop. And I've done that before, like I've used an air monitor, and I noticed that like as soon as I step off the bus the PM levels spike." -Fer*

*"She could no longer work or she stayed to live here or she came to live here near her job, because the doctor told her that this change in pressure on her heart was affecting her. And she has one thing on her heart, so she couldn't keep doing it. I don't have anything, but I don't know if in the long-term it'll affect me, the air" -Mariana*

*"Yeah, sometimes I do think about it honestly, not too much. My family does have like asthma and bronchitis. So yeah, sometimes I think that could be related with it, you know affecting them more. And then with the weather changing, like. you know, usually the winter time, it's more harsh on them." -Andrea*

*"I'm constantly exposed to that type of air quality, you know... I live near a freeway. but also, too like I'm on the road, too. So the freeway. So I'm always constantly driving. So I know eventually I'm not breathing. I'm breathing some type of PM in my environment. So I mean, I don't really have a choice. I have to hit the road, and I, you know." -David*

*"so yeah, I think about it and I understand it. But I'm not saying I'm in terms of avoiding it.. But also I'm gonna try to do my best. If there's alternative to like minimize my driving, then I'm gonna for sure. Take it. But so far none of it has presented something to me." -David*

*"But now that I'm in like a car, I don't often worry about it.. in the summers, though, when it's just too hot and like I don't wanna keep the A/C on like going the whole time, or there's like I need a little bit of a breeze, and I do open the windows like the middle of the freeway. I do think like, Wow! What am I breathing in? But like not so much as concern that I have like being a pedestrian, or like being, you know, like someone living close." -Jessica*

*" I've always been like pretty like I've tried to be as health conscious as possible, and being someone who is also interested in sustainability like my first job out of undergrad was doing sustainable architecture. And like I got into that, because while I was in school, I started learning about sustainability. So like those 2 things just happen to align and I'm constantly thinking about it. But*

now that I work in [an environmental job] and we like are also doing this work again it's like constantly in my mind to be thinking about these things anyways." -Sam

"Yeah, definitely the way I've been able to tell is I'll look at signs like literally like street signs and stuff, and then, I'll see, like I'll wipe it clean, and then like, I might notice within like, a week or 2, there's a layer of soot and so like I've noticed I've done like kind of little tests like that, cause I'd be curious. I was like, oh, like you know, you're we're directly breathing up what the road, you know kicks up and so I've done that before and have been kind of it's not surprising, but it is amazing like how quickly that builds up. And I know people I know talk about this all the time where they're like, yeah, like, it's in my whatever's on the road is on my clothes. You know, and I've noticed this to like places that I've gone to and folks that I visited, and like more industrial areas like afterwards, like my breathing, is heavier and like I have to take a hot shower to be able to like cough up. you know, so like whatever that is, which I know is not good. So I've definitely noticed" -Sofia

"being outside waiting at the bus stop. And actually, like. you know, feeling, seeing all these cars pass by like you can, especially with the bus, like sometimes, if there's a long line for the bus, stop you know, you're at the back end and then all this smog just hits you in the face." -Andrea

"Yes, yes, it worries me here, like sometimes, there is a mill here where they grind, well I don't know what they do, but there is a lot of smoke. I try better not to go out when I see a lot of smoke," -Alberto

"I feel like that's something, i do think about like the environmental impact, I have in commuting and how I'm contributing to like the greenhouse gases. yeah, I think I would really like to do like one more remote day and be able to work from home 2 times a week to like stop, or like decrease some of the greenhouse gases that I know that I am contributing." -Lupe

"The smell is that after many months of daily passing by there. I figured out it was there. I don't know if there is a place, a factory or something, or because a lot of traffic gathers there. So many cars. But I do worry when I pass by there" -Mariana

"It worries me because well, you see that sometimes people get sick because they get like asthma" -Cristina



exposure mitigation

*"definitely wearing masks during transit right yeah, even with Uber cause just to be safe.. but not on my walks." -Andrea*

*"I would drive with masks on because the air quality I remember it was like summer of 2020 where there were fires and like the air quality was really bad. We're very concerned about like folks who had no other way of protecting themselves. So we like distributed fire safety kits, which, like included fire extinguishers. But it was like a lot of like masks. And people were like. Yeah, man, like when there's nowhere to go like you gotta just like literally, like, you know, like, put your fucking mask on and that was like, you know, people who didn't really wanna wear a mask would wear one then because it would really mess with people for weeks." -Sofia*

*"They need to close down the coal factories like our our cars are are minimal" -Omar*

*"the routes like the places where I go in my car and like stop at like, are mostly, you know, encampments where people live right next to DWP, and like being there for like a couple of hours, you end up like taking in what feels like a heavy like. It just feels like you're breathing in metal. So like I where I'm going and like, why, my tires end up like needing to be replaced like every freaking month is because it's going into like high industrial areas. So I think about, of course, like the cumulative impact of like, you know, my individually driving, which is like, not a great footprint and like, I am aware of that. And it's like, not great. But I think about like. Yeah, I guess I'm more inclined to think about like systems and like industries that are like have a far greater impact that need to be addressed. And so like, specifically like, we're in areas where those are like things that people actually are like thinking about every day because they're like, they get sick in ways that like can't be like understood. People have like encampment that we work with that like. Everybody again had asthma on that street, and, like, you know, live in an industrial area like right? Like next to DWP, like the the plant there in Van Nuys. And so you know, it ends up like that. Those are the things that are that are on my mind, and like you think about like how people were kind of forced to move there because it was like not directly on a residential street. But you know, it ends up like that to me is like such a strong example of the kind of environmental racism that like impacts people living in the valley. We're not thinking about it because they're like unhoused." -Sofia*

*"So areas that I drive around and like the warehousing like places that I go to are like highly industrial areas. And like, that's where you know, these supply chains like they end up kind of pushing them into communities, you know, like Vernon obviously borders Huntington Park and other like neighborhoods in in southeast. LA. That are like heavily impacted by the warehousing and the industrial mess and like. For so to me. It's like it's all connected. And I think I do think about like my own impact. But I was like, clearly like, you have to be looking at kind of systems. And like I, one thing I've I've noticed, too, is that like a lot of the environmental like the issues that we deal with are end up like. I, yeah, I, this is another. This is obviously a different kind of conversation. Around sanitation and stuff like that. But I always think about folks that we know who are like very much blamed for, like the environmental hazards or concerns, and it falls on like those that are like literally the poorest and like, yes, and I think about that a lot like you know, and think about how that burden*

	<p><i>gets the failures of systems obviously like the burden, and like the blame gets put on those with the least.. I think people who are like the most environmentally conscious. Honestly, I was like the people that I know that get blamed for this are literally the ones that are like doing their best to try to do what they can on an individual level." -Sofia</i></p> <p><i>"I honestly would love to do more of that kind of work like kind of do that in community where we are in the regular habit of testing like soil quality and air quality. Because that is something that like, I think you know, like we don't, I don't have a good understanding of, and it's something that I'm like. Well. I think problems like this must be solved collectively, which means we need a better like understanding as a community of like, where.. of how to measure these things and like how to be able to like track and monitor them." -Sofia</i></p> <p><i>"I do tend to wear a mask if I'm like walking, especially if I know I'm gonna be walking past busy busy streets. I don't know how much helps, but I keep a lot of like air purifying plants in my apartment. and the other thing is like I try to run if I can, to like keep my lungs functioning as best as they can" -Sam</i></p> <p><i>"Yes, because I feel when the air is bad, my my body feels it quickly. That's why I use a mask" -Alberto</i></p> <p><i>"I have to take pills for allergies, but they do make me sleepy, so I take those at night. Many times I wear a mask so that the air does not affect me." -Paola</i></p> <p><i>"When I go for a walk, if I use the mask to so as not to breathe so much cold air" -Brenda</i></p> <p><i>"If there's open open road, and traffic's not heavy. I'll probably put the window down a little bit, but I don't know. Then I'll go back to my thing of rolling up the windows But I guess it kinda helps. It gives me that peace of mind the air conditioner filters the air somewhat, so it helps a lot." -David</i></p>
<p>avoidance / escapism</p>	<p><i>"Well, if I start to think about it, I'm going to worry then, well, I better not think about it as not to worry... And I tell you, that if I start thinking about it, I'll go crazy." -Brenda</i></p> <p><i>"30 years ago I knew that living in LA, I was in have smoker lungs so like 30 years ago I just accepted the pollution in LA, it is what it is" -Omar</i></p> <p><i>"Not so much worry. But because I haven't really thought about it" -Marta</i></p>

**Appendix G:**

Table 11: Economic Impacts

**transportation costs**



<p>transportation expenses are a burden</p>	<p><i>"and sometimes I get up late and have to pay for Uber. But It's very expensive. It's like \$30 to get there and it's not convenient for me to earn \$50 and use it mostly on Uber" -Alberto</i></p> <p><i>"I consider delaying buying a car just because of the financial impact alone, like I know that it's not just purchasing the car, but it's like the monthly insurance, the gas. You know, if anything comes up that you need to fix in the car. So yeah, I feel like, it's not actually the most like economically feasible." -Fer</i></p> <p><i>"Well right now, yes, since I don't work, it's more difficult for me to pay for transit and sometimes I have to cancel my doctor's appointments because I can't pay for travel. I would like it to be free." -Cristina</i></p> <p><i>"I definitely have to pay a lot more, a lot closer attention to like my budget. And how I budget for things now. Especially in months when we have multiple events on weekends for work. Because then that I'm coming to the valley more than just my regular work schedule" -Sam</i></p> <p><i>"We can no longer save for, as I told you, for a vacation or to buy something we want or invest, for example, in classes for my daughter in something." -Mariana.</i></p>
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<p>car expenses are high</p>	<p><i>"it is a lot of maintenance, the tires, gas. Yes, it is an expense [...] Gas is like \$200 per week [...] about \$1,000 in yearly maintenance costs [and] \$300 for insurance [...] we can't save much right now; we are living day by day"</i> -Mariana.</p> <p><i>"I pay 106 a month on the most basic car insurance. You can buy I guess \$106 there. I pay about \$75 to fill up my gas. I do it every 5 days. That is probably like a full tank of gas. I think my car takes 14 gallons, and so that's \$75 every 5 days. So that's yeah, I guess. Like about a hundred for a week. Yeah. So car expenses are like \$500. but, because of all the driving I do, I have to replace my tires pretty often and that's \$60 every few months."</i> -Sofia</p> <p><i>"for gas, we spend about \$400-\$500 per month [...] for transit I spend \$40-\$50 [...] it gets hard for me sometimes because gas is so expensive right now"</i> -Paola</p> <p><i>"I, spend like around \$70, a week for insurance, a hundred for gas and then maintenance right now. I recently got my vehicle, so I feel like I haven't really spent much on maintenance. And it's covered in the vehicle deal that I purchased. So I would say, maybe around like 400 a month in total. Yeah, for like gas and insurance [...] I think I definitely spend a lot on gas and I feel like that it takes a chunk of my budget so I think it does impact me economically in that, In that way, I think, like gas has been really expensive."</i> -Lupe.</p> <p><i>"\$300. This is total in a month. Yeah, I'm adding, I'm adding insurance for the month, and I'm for every week it's what I spend money on gas"</i> -David.</p> <p><i>"Now that I take Metrolink [...] What I used to spend on gas is now spent on other things that I need to pay for."</i> -Marta</p>
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<p>time lost</p>	<p>"I'm usually leaving 2 h early before for wherever I need to get to, even though it should take 30 min to get there. I'm leaving like 2 h early." -Omar.</p> <p>"So part of the reason I get there at 8 it's because I start an hour earlier than everyone else, because it's to have less traffic if I leave at 7, 7:15 to start work at 8. But if I leave at 8:30 to start work at 9 o'clock, then I would have to leave a 7:45. So just leaving 30 min earlier allows me to avoid traffic. Then that also means that I get to leave to go home at 4 30, which it still takes about an hour to get home. and if I were to be leaving at 5:30, I wouldn't get home up until 7 or later." -Sam</p> <p>"There are times where I stay pretty late on campus to kind of avoid traffic. My last class that I stay on campus for is usually about 5 pm. On those days, at least for this quarter, I'll stay, maybe until like 8 or something like 7 to 8. Just to kind of not have to sit in traffic for like an hour" -Jessica</p> <p>"And even more so when I take 2 buses, there are not many buses. There is one that passes every half hour, the bus passes to go to the clinic only once. I have to board 2 buses. Well then. It takes more or less about 2 hours to reach the destination. Because if I take 2 buses, then I have to leave early to be there waiting for the bus, because my connecting bus sometimes passes every half hour." -Cristina.</p> <p>"like I go to very specific side residential streets, where there is usually parking and then I'll walk a couple of blocks [...] like street parking is a little bit difficult, especially on the weekends" -Sofia</p> <p>"I leave work at 2 and wait for my daughter. She leaves school at 3, I wait for her for an hour, and as soon as she comes out, well we drive back home" -Mariana</p> <p>"the longest is probably like 30, 40 min that I have to wait. Yeah, usually the wait is longer than the actual bus ride." -Fer.</p>
<p>job location</p>	
<p>reject jobs nearby because of low pay</p>	<p>"I just didn't see that it was all of the work that they wanted, it wasn't like it didn't really transfer to the amount of pay, even though it was close." -Marta.</p> <p>"It was also just a job that I wasn't really passionate about. I feel like I would have kind of endured the low paid had it been a job that I really cared about, you know." -Fer.</p> <p>"The commute to a job further away, and like in the dream world, I'm making 100 bucks more than a job closer. I would still be willing to make the commute. it just depends on, like, how big the difference is in pay." -Jessica</p> <p>"Yes, so that's why I'm currently working at the airport because it's paying more than what I would make at a job around me like even with losing hours. And I see that it's more of a positive. It's more positive in my life than working closer to home." -Omar</p>

<p>reject jobs because they are too far</p>	<p><i>"So before I got this job, there were other jobs that I was looking into, and I had a few interviews, but then I realized how far they were, or some of them I didn't answer, to which I know it doesn't sound good. But there was one in San Diego, and another one farther in downtown LA. So it was more. But you know that adds more time, and probably having to transfer from another bus to another bus. I already have to take 2 as it is. I don't want to take more than 2, so yeah, something that I have gone through." -Marta</i></p> <p><i>"So I used to go to the Loyala Marymont and I looked on campus for a job, and I thought about going back to work there because I had connections to some of the faculty and staff who were there. It was a job that I really thought aligned with my experience and my expertise But I ended up not even bothering to apply because I just, like, even if I didn't get it, I wasn't able to be able to drive there, or even just like have like a commute on the bus that I'm just like not willing to commit to" -Fer.</i></p> <p><i>"So I had an interview for another big juice bar. But it was further out. And then the Getty Museum wanted to hire me as well, and like is just too much right now for the timing wise so even with side gigs the side gigs I get for like events and things like that either sometimes in Santa clarita or there's, just too, out there. That's a lot of jobs I'd had to reject" -Andrea.</i></p> <p><i>"I think before it was like in theory, I could understand it. Now I have experience, and it makes sense. Just like Financial costs, the physical toll that it takes mental strain that comes with not even worrying like, Do I need to roll my windows up? Or like, how long is it gonna take to get there? But it's kind of draining to think about every day like saying I have to get in the car for an hour or kind of remembering that you need to rethink your schedule so that you can make things fit or like It's not always possible in every job to adjust your schedule so that you can avoid traffic." -Sam</i></p>
<p>unable to switch jobs (legal, health reasons)</p>	<p><i>"Where it is a little difficult for me because I still don't have... I am in the process of arranging my citizen status. And I don't have a permit to work. But where I can have a job, no. I mean, they are places where if I move jobs. Well, what they are going to pay me for is not worth it." -Mariana</i></p>
<p>unable to find a closer job</p>	<p><i>"We would have liked it more to live there in the valley since the jobs we have are there, but, as I repeat to you again, the rents are too expensive, and then that does affect our pocket a little more. So right now what we are trying to do is to get a job here which is not easy, it is not easy, but we are trying." -Paola.</i></p> <p><i>"We have not been able to find jobs here because jobs are very scarce. The people who have the job here, they take great care of it, because the people, well, they are people who live here and have their job like, let's say, safe and so they don't let go of it. So it's a bit complicated to find a job on this side" -Paola</i></p>

**Appendix H:**

*Table 12: Interviewee Recommendations–Future Imaginations*

<p>Theme 1a: Public Transportation Changes</p>	<p><b>More transit options</b></p> <p><i>"I wish we had better bus infrastructure, I sometimes get really frustrated at the fact that people do have to rely on cars and have to rely on that huge expense to be able to live a healthy and productive life." -Fer.</i></p> <p><i>"I don't know, for example, the other day, I was reading a news story that they have a project coming up. It seemed very good to me. I read it and even started researching on the Internet for when and the details, and they want to do that like a train which goes from here where I am, near where we live, from Palmdale to the Valley. The trips are going to take a very short time because it's going to be direct [...] We won't pollute with so many cars. It is a good option, that transportation that they are planning." -Mariana.</i></p> <p><i>"I'd love to be able to do what I do without a car, which is like a huge demand on this system being like I dare you to create, like public transit, routes that actually can connect different neighborhoods. Because right now, what we have is like what connects..It serves like a.. obviously doesn't serve like working-class people and their burden of time with current travel conditions" -Sofia.</i></p> <p><i>"My dream is to not own a car, basically kind of my goal, like, if I were ever to have an apartment or like rent it somewhere, that I lived close enough to be able to walk or just take the bus like I would love that, you know." -Jessica.</i></p> <p><i>"For me, like public transit, I don't mind doing public transportation. I don't. I kind of enjoy it. Like if I had like a train that went from LA, from Union Station, where I live now to Northridge, I'd probably take it." -David.</i></p> <p><i>"I think the Valley has been kind of overlooked as a place for investment. It's kind of like a lot of really suburban areas, but there's not a lot of good transit. There's not a lot of good transportation outside of a vehicle because it's so car-orientated here. But I think if we really expanded, you know, like the service, or like expanded, you know, the transit options that are available to people." -Jessica.</i></p>
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	<p><i>“the ideal would be a way to live where I didn't have to rely on cars and where I could use public transit if I needed to go somewhere further. But it was more accessible like readily available, and not everything required traveling such long distances.” -Sam.</i></p>
<p>Theme 1b: Public Transportation Changes</p>	<p><b>Reliable and efficient transit</b></p> <p><i>“Have a little more public transportation here [by where I live], because like I tell you, our situation right now is we have the car, only this one. So yes, it frustrates me a little bit because I have to depend on someone else to give me a ride.” -Paola.</i></p> <p><i>“I wish it came more frequently. I wish there was, you know, that it was safer for pedestrians to like walk. I wish there was a shorter distance. So not necessarily like I wish I had a job closer to me, but I just wish we weren't so car-dependent.” -Fer.</i></p> <p><i>“So probably having more bus drivers or more stops, like I said, sometimes the stops, you have to walk 20 min to a stop.” -Andrea.</i></p>
<p>Theme 1c: Public Transportation Changes</p>	<p><b>Free public transportation</b></p> <p><i>“I guess my solutions to these things are like, you know, making public transit free, cause it's a poor tax like that's what the fare is, a poor people's tax. They're heavily policed. For that, I've seen little ladies with their carts be arrested for fare evasion. It's insane. It's like that is like that has to be that's clearly a policy. Like obviously, Metro must be free [...] There needs to be universal access to things like public transportation.” -Sofia.</i></p> <p><i>“I would like public transportation to be free and also more frequent [...] During the pandemic, it was free but not anymore. They haven't increased the fare now, but they might raise, who knows?” - Cristina.</i></p>

<p>Theme 1d: Public Transportation Changes</p>	<p><b>Transit stations as sanctuaries</b></p> <p><i>"I feel like making metro stops places where there are resources available. Like you know, I'm biased because we do this every week where we like provide food and water and things like that for folks that are just like coming off of the orange line on Van Nuys, or who like live nearby. Whether you're, you know, in your apartment, or it's like a connection you're making. But I think that the metro stations kind of need to be actual sanctuaries where, like people, like street vendors know that they can be there, and not like get harassed, or people that are like around, who like live near these stations because of transportation like aren't just put in jail because they live in a tent like those things are not.. that's not the future." -Sofia</i></p>
<p>Theme 2a: Proximity to Jobs</p>	<p><b>More jobs closer to home</b></p> <p><i>"If it was closer, that's all I could really think about having a job that's closer to you." -Marta.</i></p> <p><i>"My commute would be this: like having work here on this side, get a job here in my neighborhood [...] But I think the most ideal thing would be to get a job closer. Yes, with a more flexible schedule so that I can be with my kids." -Paola.</i></p> <p><i>"Having more jobs available rather than people having to go all the way to LA, for, like, a good paying job, you know, that would be ideal for me." -Jessica.</i></p>
<p>Theme 2b: Proximity to Jobs</p>	<p><b>Affordable housing options closer to jobs or schools</b></p> <p><i>"It would also be an option to get [a job] there in the Valley [...] And that to rent a house they didn't have so many requirements because right now they ask for too many requirements that sometimes one doesn't have them. And then, apart from the requirements, if you don't have them, they ask you for too much money for one to be able to grab one apartment and that would be perfect if they didn't ask for so many requirements and didn't charge so much rent to be able to start living in the Valley." - Paola.</i></p> <p><i>"Also like rent.. Like if rent was cheaper there. I'll definitely have, you know, I definitely would move out there." -David.</i></p>

<p>Theme 2c: Proximity to Jobs</p>	<p><b>Flexibility for more remote work options</b>  <i>"Having the ability to do like more remote days, would definitely help with minimizing my commute that I do. So having the option to have more remote days would be really, really helpful. Just because I don't really see myself being able to move out there." -Lupe.</i></p>
<p>Theme 3: Neighborhood Amenities</p>	<p><b>Increase access to food, personal care services, and healthcare services</b>  <i>"In my area, having more like local like, you know, more groceries, closer, or laundromats, and like medical centers, if possible" - Andrea.</i></p>