Appendix A: Vehicle Miles Traveled Mitigation Flow Charts

Valley Transportation Authority

VMT Based Impact Fee

In the process of developing the VMT Mitigation Program for Santa Clara County, we will need to ask some important questions and consider the following answers:

Agency Oversight & Funding

Who pays who?

- Project Applicant → Lead Agency

Who implements the mitigation action?

- Lead Agency

Program Criteria & Efficacy

What types of mitigation actions can be funded?

- Capital improvement projects

Monitoring

What is being evaluated?

- Capital Improvement Plan implementation

Who evaluates the mitigation action?

- Administering Agency

How frequently does evaluation occur?

- Fee program costs are updated annually and five year checks

CEQA Compliance

What is the CEQA mitigation potential?

- May allow for full mitigation for projects consistent with a General Plan for which the fee program was designed to mitigate a VMT impact in the General Plan EIR

Geography, Duration & Equity

Three key topics to be addressed through this project include:

- Defining the right geographic scale and boundary for a mitigation program,
- Understanding a project applicant's required duration of participation, and
- Understanding the equity-related impacts and trade-offs with respect to VMT reduction effectiveness.

VMT Exchange

- In the process of developing the Equitable VMT Mitigation Program for Santa Clara County, we will need to consider some important questions and answers:

Agency Oversight & Funding

Who pays who?

- Project Applicant → VMT Exchange Agent

or

- Project Applicant → VMT Exchange Agent → Mitigation Action

or

- Project Applicant → Mitigation Action

Who implements the mitigation action?

- VMT Exchange Agent or Project Applicant

Program Criteria & Efficacy

What types of mitigation actions can be funded?

- Capital improvement projects, programs, services, or operations & maintenance efforts

Monitoring

What is being evaluated?

- Depends on how a project's impact and mitigation is structured in the Mitigation Monitoring and Reporting Program to reduce the severity and magnitude of an impact. May need to evaluate mitigation action implementation and/or VMT reduction performance over time.

Who evaluates the mitigation action?

- VMT Exchange Agent

How frequently does evaluation occur?

- Dependent on how a project's impact and mitigation is structured in the EIR

CEQA Compliance

What is the CEQA mitigation potential?

- May allow for full mitigation depending on rigor of data collection and analysis, but depends on availability and lifespan of mitigation actions

Geography, Duration & Equity

Three key topics to be addressed through this project include:

- Defining the right geographic scale and boundary for a mitigation program
- Understanding the required duration of participation, and
- Understanding the equity-related impacts and trade-offs with respect to VMT reduction effectiveness

VMT Banks

In the process of developing the Equitable VMT Mitigation Program for Santa Clara County, we will need to consider some important questions and consider the following answers:

Agency Oversight & Funding

Who pays who?

- Project Applicant → Bank Administrator

or

- Project Applicant → Bank Administrator → Mitigation Action

or

- Project Applicant → Mitigation Action

Who implements the mitigation action?

- Banks (Implementing Agency)

Program Criteria & Efficacy

What types of mitigation actions can be funded?

- Capital improvement projects, programs, services, or operations & maintenance efforts

Monitoring

What is being evaluated?

- Depends on how a project's impact and mitigation is structured in the Mitigation Monitoring and Reporting Program to reduce the severity and magnitude of an impact. May need to evaluate mitigation action implementation, VMT reduction performance over time, and/or market price changes for VMT reduction over time.

Who evaluates the mitigation action?

- Bank Administrator, Bank, or other designated third party

How frequently does evaluation occur?

- Regularly—possibly every year

CEQA Compliance

What is the CEQA mitigation potential?

- May allow for full mitigation but depends on the VMT reduction performance of Bank strategies and market conditions affecting prices over time

Geography, Duration & Equity

Three key topics to be addressed through this project include:

- Defining the right geographic scale and boundary for a mitigation program
- Understanding the required duration of participation, and
- Understanding the equity-related impacts and trade-offs with respect to VMT reduction effectiveness

Appendix B: Equity Framework

Valley Transportation Authority

FEHR PEERS

Memorandum

Date: February 27, 2024

To: Robert Swierk, Deanna Bolio, Ian Lin, and Gretchen Baisa, VTA
Cc: Hilary Nixon and Serena Alexander, San José State University (SJSU)

From: Fehr & Peers

Subject: Equity Framework for the VMT Mitigation Program for Santa Clara County: Draft Equity (150) and Equity Priority Community (EPC) Definition (152)

SJ23-2220

Important Note to Readers: This is an internal-facing memorandum that describes an Equity Framework for the VMT Mitigation Program for Santa Clara County for VTA and SJSU staff who are familiar with transportation planning, and environmental concepts. This memorandum is providing the specifications of the equity framework such that it is possible for SJSU's Mineta Transportation Institute (MTI) to conduct its GIS-based spatial analysis and equity framework evaluation for different communities in Santa Clara County. These equity framework specifications will help with the VMT reduction analysis and specifications of the VMT mitigation program framework. This equity framework is integrated into the *Equitable VMT Mitigation Program for Santa Clara County: Engagement and Consensus Building Plan* in several keyways:

- Phase I engagement and consensus building is focused on identifying the VMT reduction strategies that the EPC population would like the program to fund.
- Phase II engagement and consensus building is focused on eligible VMT reduction strategies that reduce VMT, are cost effective, and consider EPC member preferences for:
    - Mitigation actions that reduce the amount of vehicle use through EPC areas (e.g., reducing pass-through travel and its associated noise and safety effects).
    - Mitigation actions that reduce the amount of vehicle use by EPC areas (e.g., reduces VMT generated by EPC areas).

This memorandum was reviewed and refined based on input from our subconsultants, community-based organization (CBO) partners and VTA staff. Their comments illustrate the varied expectations of this equity framework. Below are a few themes that we noticed and how we have addressed them in the equity framework later in this document (In the list below, 'selected' indicates what the team choose to incorporate into the equity framework):

- **Equitable VMT Mitigation Program (Selected) vs. Equitable Transportation System**: Per this project's goal, we are focused on developing an equitable VMT mitigation program framework that maximizes the equity outcomes associated with new land development projects that generate vehicle miles of travel (VMT). Although this Program can contribute positively to transportation equity if structured and implemented carefully, it cannot achieve a wholistic equitable transportation system on its own. Part of the reason for this is the specified scope of this VMT mitigation program framework. Specifically, a VMT mitigation program is limited to addressing the environmental effects of new land development. If there is not any excess VMT to mitigate, then there is not a need for a VMT mitigation program. Planning an equitable transportation system is a process with a broader scope that includes existing and new development.
- **Equity (Selected) in VMT Rates vs. Equality in VMT Rates**: The team discussed the difference between equity and equality; the focus of this equity framework is on the former. Santa Clara County residents, employees, and communities are not the same, there is great diversity in the demographic, economic, social, and geographic characteristics of each person, neighborhood, town, and city. As a result, an expression of equity is needed to account for the variation in the VMT rates within and between different communities. In contrast, equality is an expression of sameness in VMT rates and effectiveness of VMT reduction strategies which is not the condition for Santa Clara County (or any location for that matter). An equity based VMT mitigation program framework recognizes that the VMT rates of EPCs and non-EPC areas will differ, and the investment in VMT mitigation actions prioritize the best possible VMT rate for EPC areas. An equality based VMT mitigation program framework assumes VMT rates are equal between EPCs and non-EPC areas and the investment in VMT mitigation actions are equal between EPCs and non-EPC areas.
- **VMT Reductions for Some Populations (Selected) vs. VMT Reductions for All Populations**: Some team members felt that all populations should reduce VMT. However, some equity priority community (EPC) areas with existing low VMT rates resulting from lack of mobility and access to retail, social and job destinations could benefit from vehicle access to participate in the local economy and access services. Thus, the definition of an equitable VMT reduction strategy does allow an increase in VMT rates for EPC areas with a low VMT rate if the identified barrier is vehicle access.

- **Concentrated Geographic EPC Area Representation (Selected) vs. EPC Community Representation**: Identifying high concentrations of an EPC population by geographic area is needed for the VMT forecasting. Specifically, the EPC definition (described later) identifies the high concentration of an EPC population in a geographic area (based on transportation analysis zones).[1] In reality, the EPC community members live in high and low concentrations throughout Santa Clara County. Modeling the EPCs community members individually requires different travel modeling techniques that are beyond the scope of this project.
- **Technical Definitions for Modeling the Equity Framework (Selected) vs. Engagement Definitions of the Equity Framework**: Technical specifications are needed to conduct the VMT forecasting and VMT mitigation analysis. The engagement and consensus building meetings will focus on select portions of the equity framework to ensure a targeted, clear, and thoughtful conversation around the VMT reduction strategies is achieved with the EPC population.
- **Input vs. Decision Making (Selected: Both Addressed in the Engagement and Consensus-Building Plan)**: It is important to state how input will be used and who makes the decisions for this project. Clarifying who plays what role in the decision-making process for developing this VMT mitigation program framework is important. Both concepts are addressed in the Engagement and Consensus-Building Plan report.

Equity Framework Approach

An equity analysis can be developed in countless ways. The purpose of this equity framework is to develop a common language to use in this process of developing equity definitions (deliverable #150) and equity priority community definitions (152) for the framework of the VMT Mitigation Program of Santa Clara County. This memorandum presents the definition of an EPC area and equity definitions that will be collectively referred to as the equity framework for the VMT Mitigation Program of Santa Clara County:

- Definition of Equity Priority Community (EPC) Area;
- Definition of an Equitable Engagement Process; and
- Definition of an Equitable VMT Reduction Strategy.

[1] A travel model is used to generate the VMT forecasts. The smallest unit of the travel model is a transportation analysis zone, which aggregates residents and employees based on geographic location.

The team considered several established population definitions, and decided to use the equity priority community (EPC) definition as defined by the Metropolitan Transportation Commission (MTC). The definitions of an Equitable Engagement Process and Equitable VMT Reduction Strategies each consider the following questions (a summary of the possible options for these questions are presented in **Attachment A**):

- What aspects of equity to consider?
- What criteria by which to judge aspects of equity?
- How best to measure aspects of equity?

The equity definitions also consider the VTA's Stand Against Racism Statement, and Diversity Equity and Inclusion Priorities statement. Equity and equity priority stakeholder group definitions are intended to align with the unique context of Santa Clara County. The definitions will ensure that project steps and the resultant VMT mitigation actions would consider the highlight the preferences of the EPC population to reduce their VMT and/or the VMT through their communities. An equitable VMT mitigation program framework will also include equity specifications.

VTA Equity Statements

The definition of an equitable engagement process builds upon VTA's Stand Against Racism statement, and Diversity, Equity, and Inclusion Priorities statement. These statements are from the VTA's general manager. Of particular importance is the emphasis to focus on those with the greatest needs and barriers to achieve equal opportunity and equal access for all. While the VTA has several equity statements, it does not have an equivalent equity framework like the MTC (Equity Platform | Metropolitan Transportation Commission (ca.gov)). Such an equity framework (the definition and approach) is developed in partnership with EPC serving CBO's and other stakeholders, supported by significant research, and community engagement. This project could fit within and help inform such a VTA specific equity framework should it be developed.

VTA Stands Against Racism

For reference, an excerpt of VTA Stands Against Racism (VTA Stands Against Racism) (bold text added for emphasis):

> *But we know we can do more. We must commit on every level of the organization to principles and actions that will promote equity in our workplace, our planning, and our policies and practices:*
>
> - ***Identify barriers** to equitable outcomes, and promote solutions that create opportunities for all;*
> - ***Empower** marginalized communities;*
> - ***Listen to and strengthen partnerships with community-based organizations**;*
> - *Include all community members to maintain and enhance an environment where **all voices are heard**; and*
> - ***Maintain transparency in learning, teaching, and communicating effective practices** around equity and inclusion, to the community and staff.*

VTA Diversity, Equity, and Inclusion Priorities

Statement by Carolyn Gonot, VTA General Manager, regarding the agency's diversity, equity, and inclusion priorities (May 16, 2023 Public Statement) (bold text added for emphasis):

> *Diversity equity and inclusion are priorities at VTA. We are committed to **valuing every individual** for who they are. We believe in providing equitable opportunities to allow employees to thrive in their careers by embracing the inclusion of all backgrounds, cultures, and identities. The standards of diversity, equity, and inclusion give us a powerful ability to move our work forward. Those **standards apply to how we engage and support our broader community and how we treat our passengers, many of whom rely on our service as a lifeline**. At the same time, we want to ensure that our employees have what they need to feel supported and acknowledged as part of the VTA family. **We are committed to ensuring equal opportunity and equal access for all.***

Definition of an Equity Priority Community (EPC) Area for the Equity Framework

Six population definitions were considered for the VMT Mitigation Program Framework, with the Metropolitan Transportation Commission's (MTC's) equity priority community identified as the preferred definition because it offers a mix of disadvantaged community, low-income and ability criteria, and overlaps with or encompasses the other definition geographies. Further context and summary comparisons to alternative definitions are provided below.

The population definition uses the MTC's Equity Priority Community (EPC) definition, which incorporates race, income, language proficiency, age, access to a vehicle, household size, ability status, and rent-burden criteria in Santa Clara County, as noted in **Table 1.** An EPC is defined as a census tract whose population:

- Exceeds both threshold values for Low-Income AND People of Color shares, OR
- Exceeds the threshold value for Low-Income AND also exceeds the threshold values for three or more variables (#3 to #8).

VTA has requested the addition of the Alviso neighborhood in San José because it is a low-income community that is identified in other screens like AB 1550 low-income communities definition. These equity priority community definitions may be refined in the final VMT Mitigation Program Framework specifications based on a co-creation approach with EPC serving community-based organizations.

Table 1: MTC Equity Priority Community Demographic Factors & Definitions

Demographic Factor	Demographic Factor Definition	Concentration Threshold
1. Race (People of Color)	People of Color populations include persons who identify as any of the following groups as defined by the Census Bureau in accordance with guidelines provided by the U.S. Office of Management and Budget: American Indian or Alaska Native Alone (non-Hispanic/non-Latino); Asian Alone (non-Hispanic/non-Latino); Pacific Islander Alone (non-Hispanic/non-Latino); Black or African-American Alone (non-Hispanic/non-Latino); and Other (Some Other Race, Two or More Races, non-Hispanic/non-Latino); and all Hispanic/Latino persons.	70%
2. Low Income (<100% Federal Poverty Level)	Person living in a household with incomes less than 200% of the federal poverty level established by the Census Bureau.	28%
3. Limited English Proficiency	Person above the age of 5 years, who do not speak English at least "well" as their primary language or had a limited ability to read, speak, write, or understand English at least "well", as defined by the U.S. Census.	12%
4. Zero-Vehicle Household	Households that do not own a personal vehicle.[1]	15%
5. Seniors 75 Years and Over	Self-explanatory.	8%
6. People with Disability	The U.S. Census Bureau defines disability as: Hearing difficulty- deaf or having serious difficulty hearing (DEAR); Vision difficulty- blind or having serious difficulty remembering, concentrating, or making decisions (DREM); Ambulatory difficulty- having serious difficulty walking or climbing stars (DPHY; Self-care difficulty- having difficulty bathing or dressing (DDRS); Independent living difficulty- because of a physical, mental, or emotional problem, having difficulty doing errands alone such as visiting a doctor's office or shopping (DOUT).	12%
7. Single-Parent Family	Families with at least one child. To determine whether or not single-parent families exceed tract concentration thresholds, the share of single parent families is calculated as a share of all families regardless of whether or not they have any children.	18%
8. Severely Rent-Burdened Household	Renters paying > 50% of income in rent. To determine whether or not severely rent-burdened households exceed tract concentration thresholds, the share of severely rent-burdened households is calculated as a share of all households regardless of occupancy status (renter or owner).	14%

Notes.
1. Given that this criterion must be coupled with low-income and at least two other criteria, it is considered appropriate to include here despite the perception that its inclusion may otherwise seem antithetical to VMT reduction efforts.

Source: MTC Plan Bay Area 2050 Equity Priority Communities, available from: https://bayareametro.github.io/Spatial-Analysis-Mapping-Projects/Project-Documentation/Equity-Priority-Communities/.

An additional benefit of using this definition is that MTC has and will use the EPC definition for funding or support transportation solutions in the San Francisco Bay Area via its:[2]

- Active transportation programs
- Mobility hubs pilot program
- Innovative deployment to enhance arterials – shared automated vehicles (IDEA SAV)
- The affordable housing and sustainable communities program
- Community Action Resource & Empowerment (CARE) program
- Safe & seamless mobility quick-strike program
- Community based transportation plans

In addition, the MTC definition of EPCs is also used in determining funding for projects under the State Affordable Housing and Sustainable Communities (AHSC) Program.

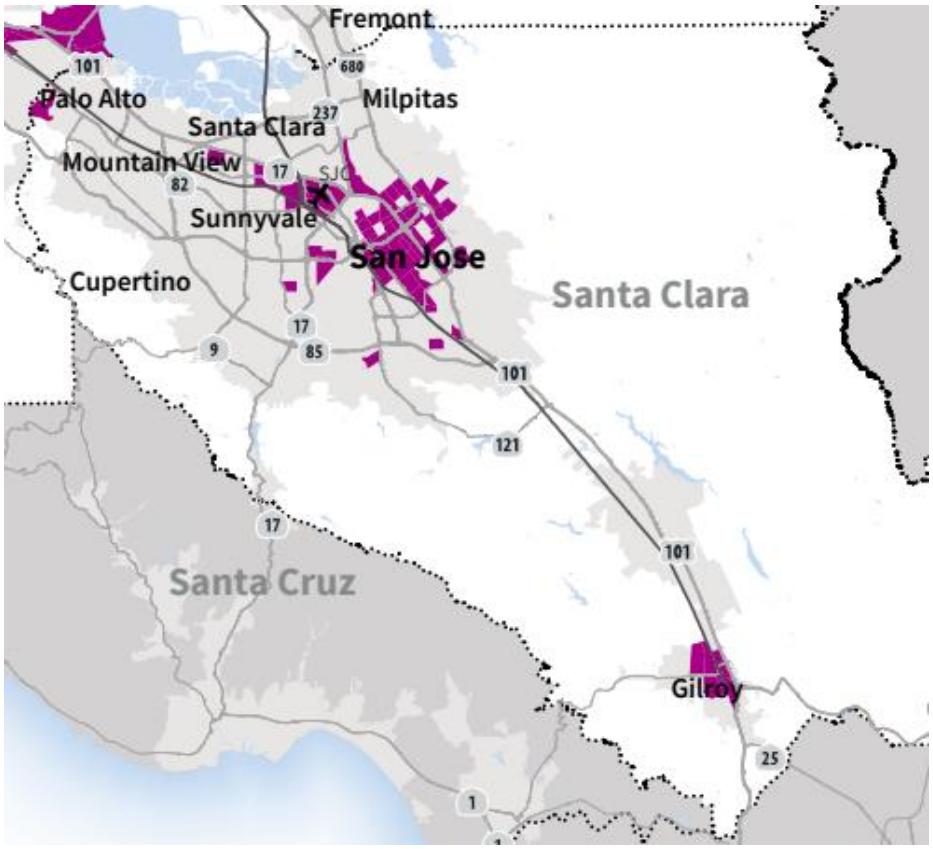

Figure 1. *MTC Equity Priority Community Location in Santa Clara County*

[2] Refer to this website for more details on how the EPC framework is used in funding transportation projects: Equity Priority Communities | Association of Bay Area Governments (ca.gov)

These programs provide funding and policy structure that could be expanded for the VMT Mitigation Program and thus increasing the benefits experienced within EPCs. Lastly, of the definitions considered, MTC's EPC covers the largest area and, except for Alviso, Morgan Hill, and portions of Gilroy, aligns with AB 1550 geographies (see definition of AB 1550 in first bullet below).

Other population definitions considered relative to MTC's equity priority communities:

- AB 1550 Low-Income Communities: Identifies populations vulnerable to climate change impacts, defined as the census tracts and households, respectively, that are either at or below 80 percent of the statewide median income, or at or below the threshold designated as low-income by the California Department of Housing and Community Development's (HCD) Revised 2021 State Income Limits. AB 1550 aligns with MTC's equity priority communities, except for Alviso, Morgan Hill, and portions of Gilroy.
- SB 535 Disadvantaged Communities: Identifies populations subject to relatively high amounts of pollution, defined as the 25% highest scoring census tracts in CalEnviroScreen 4.0, census tracts previously identified in the top 25% in CalEnviroScreen 3.0, census tracts with high amounts of pollution and low populations, and federally recognized tribal areas identified by the Census in the 2021 American Indian Areas Related National Geodatabase. This is a subset of AB 1550 geographies.
- California Healthy Places Index: Positive index of communities' health attributes, defined via an index based on 25 community characteristics, like access to healthcare, housing, and education. Due to limited coverage in Santa Clara County, this definition would result in too narrow of a population definition.
- Executive Order 13985: This federal executive order defines terms like underserved communities, equity, inclusion, and accessibility.
- Caltrans Transportation Equity Index (EQI) Documentation: An index of populations to be prioritized for transportation investments, defined via an index based on transportation-specific and socioeconomic indicators of disparate/low transportation access. The EQI is more of a screening tool than a definition of protected populations used for an equity analysis. However, the EQI could inform the final VMT Mitigation Program Framework.

Definition of an Equitable Engagement Process for the Equity Framework

An equitable engagement process definition is a process that exemplifies the following:

- Pursue racial and social equity by disaggregating travel analysis by race and transparently discussing disparities with the community.
- **Listen to, understand needs, and strive towards co-creation and shared ownership of the VMT mitigation program framework with EPCs**.[3]
- Have the VTA **acknowledge the history of disinvestment and other governmental actions affecting Equity Priority Communities** as well as how that history hinders or enhances **people's daily lived experience**, travel patterns, and opportunities.
- **Develop engagement materials that are understandable to the target audience**, meeting people where they are, and using relatable examples to improve understanding and craft a clear, easy-to-follow narrative.
- Evaluate the current state of VMT and travel patterns in neighborhoods throughout the county, EPC, and non-EPC areas, and **develop VMT reduction strategies that most benefit EPC areas**.
- Clearly **inform EPC populations and other stakeholders about the relative VMT reduction benefits of implementing housing and land use strategies**, active transportation, or other public infrastructure investments, to help shape the VMT reduction strategies included in a program framework.
- Identify current infrastructural, institutional, and other **strengths and gaps** to more sustainable transportation options, emphasizing local context.
- Listen and collaborate with each community to understand their lived experience, priorities, and strategies and **solutions to reduce existing disparities and maximize benefits of the future VMT mitigation program.**

[3] In this context, co-creation is the practice of not only collaborating with stakeholders but integrating the diverse experiences and insights of participants to create a countywide VMT mitigation program framework focused on those with the greatest needs and barriers.

Definition of an Equitable VMT Reduction Strategy for the Equity Framework

The equitable VMT reduction strategy hinges on understanding the distribution of VMT rates between and within different areas of Santa Clara County and identifying which VMT rates need to be reduced to achieve desired VMT targets. The six metrics below identify the most important VMT rates to modify:[4]

1. No excess VMT would be generated by the new development in Santa Clara County.
2. EPC areas with low VMT rates would decrease, maintain, or increase their average VMT rate.
3. EPC areas with high VMT rates would decrease their average VMT rate.
4. Non-EPC areas with low VMT rates would decrease their average VMT rate.
5. Non-EPC areas with high VMT rates would decrease their average VMT rate.
6. Non-EPC areas would decrease their average VMT rate.

Put simply, Goal 1 identifies the overarching need to reduce VMT countywide. Goals 2 through 6 identify VMT reduction objectives for different populations within Santa Clara county. Though desired outcomes may differ for EPC and non-EPC areas, overall, the non-EPC areas and county as a whole must reduce their VMT rates.

Like other countywide VMT mitigation programs, this Equitable VMT Program for Santa Clara County would achieve:

1. No excess VMT would be generated by the new development in Santa Clara County

Knowing that VMT rates vary throughout the county, we can illustrate the distribution of VMT rates in a graphical form with the vertical axis being the number of transportation analysis zones and the horizontal axis being the VMT rate (refer to **Figure 2**). From left to right, there are very few low VMT rates, a peak of common VMT rates, and very few high VMT rates. The VMT mitigation actions would collectively reduce the excess VMT associated with new development incrementally to the left towards the VMT threshold resulting in a leftward shift in the VMT distribution. The remaining gap between the VMT threshold and the excess VMT rate reduced is

[4] In this context, a "Low VMT" community has a VMT rate below a baseline value while a "High VMT" community has a VMT rates above a baseline value.

due to the existing VMT rates being too high to achieve the VMT threshold – other VMT reduction actions would be needed to address the excess existing VMT.

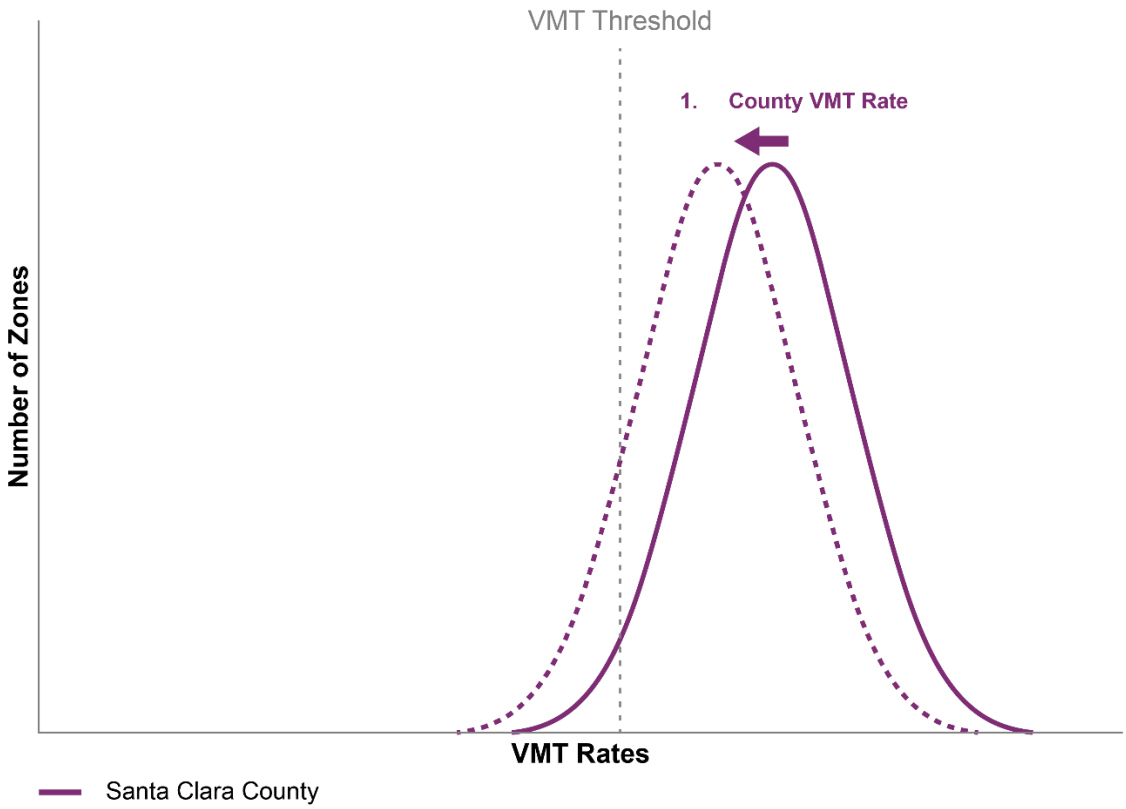

Figure 2. Illustration of Equitable VMT Reduction Strategy Definition (1) for Santa Clara County

Similar to the countywide VMT distribution (refer to **Figure 2**), both the non-EPC and EPC areas will have a range of VMT rates and the VMT reduction strategies will be applied to different portions of the VMT distributions (refer to **Figure 3**; vertical axis is the number of transportation analysis zones and the horizontal axis is the VMT rate). The equitable VMT reduction strategies definition highlights the direction of desired change in the VMT rates for EPC and non-EPC areas. Thus, the equitable VMT reduction strategies definition highlights the desired direction of change for the EPC and non-EPC area low and high VMT rates:

2. EPC areas with low VMT rates would decrease, maintain, or increase their average VMT rate.
3. EPC areas with high VMT rates would decrease their average VMT rate.
4. Non-EPC areas with low VMT rates would decrease their average VMT rate.
5. Non-EPC areas with high VMT rates would decrease their average VMT rate.

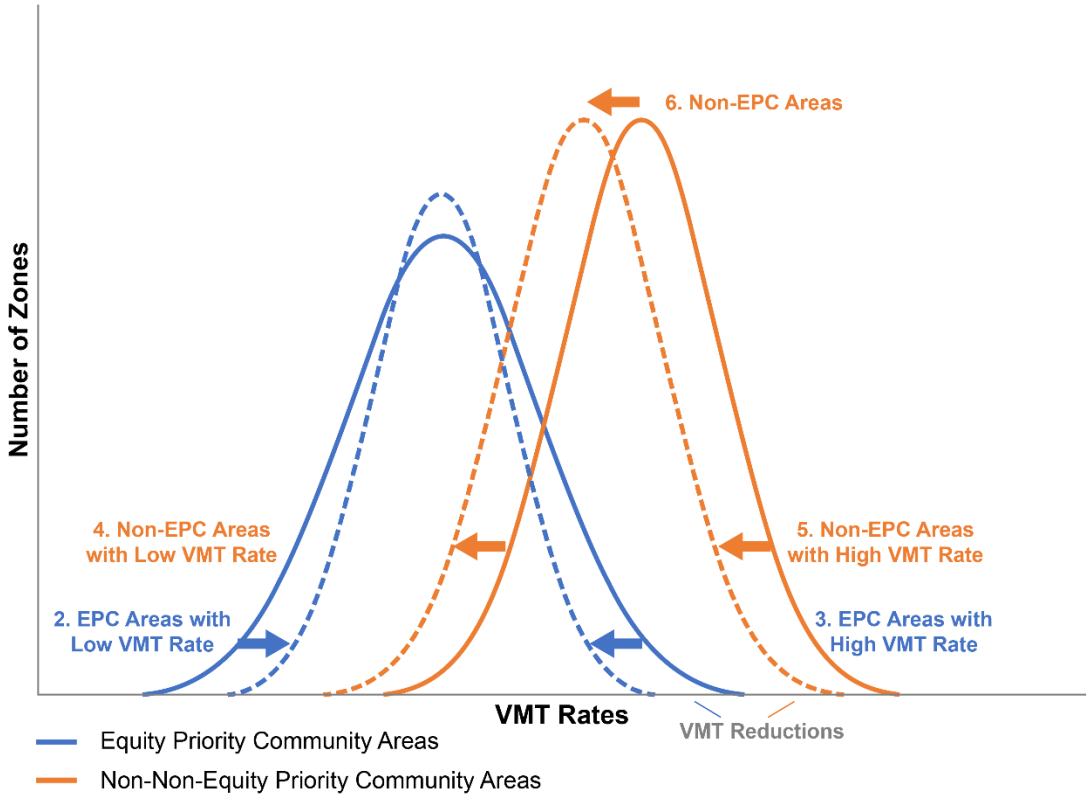

Figure 3. Illustration of Equitable VMT Reduction Strategy Definitions (2 to 6) by Community and VMT Rate

Items 2 to 5 of this definition acknowledge that the travel considerations and equity considerations vary by community and VMT rate (i.e., low VMT rate versus high VMT rates) (refer to **Table 2** for a tabular organization of these definitions).

Table 2: Equitable VMT Reduction Strategies Definition by Community and VMT Rate

	VMT Rates	
Community	**Low VMT Rate**	**High VMT Rate**
Equity Priority Community Area	2. EPC areas with low VMT rates would decrease, maintain, or increase their average VMT rate.	3. EPC areas with high VMT rates would decrease their average VMT rate.
Non-Equity Priority Community Area	4. Non-EPC areas with low VMT rates would reduce their average VMT rate.	5. Non-EPC areas with high VMT rates would reduce their average VMT rate.

Source: Fehr & Peers, July 2023.

Given that the EPC areas only generate approximately 15 percent of the total project generated VMT for Santa Clara County, some portion of the VMT mitigation actions would thus need to reduce non-EPC area VMT rates; hence item 6 expresses the countywide VMT outcome for non-EPC areas:

6. The non-EPC areas would decrease their average VMT rate.

Item 2 allows for the possibility that VMT mitigation for EPC areas with low VMT rates could increase VMT rates, but items 1 and 6 make it clear that the non-EPC area and the county overall must reduce its VMT rates.

Attachment

Attachment A: Questions and Options for Equity Definitions

Attachment A

FEHR PEERS

Questions and Options for Equity Definitions

This technical memorandum is an informational resource, provided to support review and development of the Equity Framework for VMT Mitigation Program of Santa Clara County. This content is valuable to consider because, in recent years, our transportation planning process has put increasing emphasis on environmental justice issues related to the urban and natural environment, human health, and the social and economic welfare of communities. Environmental justice principles ensure protected populations receive a fair allocation of resources and benefits and protection from a disproportionate burden of transportation projects, programs, and policies. An equitable approach acknowledges the historical and existing context of inequality and systemic racism and commits to undoing historic harm and addressing existing disparities. Inequities still exist in transportation systems and land use patterns, ranging from the locations of rail transit stations, the amount of vehicular traffic that passes through neighborhoods, the populations that are exposed to vehicular collisions, to the simple presence or absence of sidewalks in neighborhoods. Addressing such realities requires a targeted approach, focused on those populations and communities historically excluded and impacted and those that continue to face unequal outcomes.

The Equitable Engagement Process, and Equitable VMT Reduction Strategies definitions each consider the following questions:

- What aspects of equity to consider?
- What criteria by which to judge aspects of equity?
- How best to measure aspects of equity?

Attachment A

FEHR PEERS

The options associated with each question is based on options identified in a focused primary literature review.[1] The questions and options for each equity definition are documented in annotated outline below. There are many equity definitions to draw from. Below is a summary list of possible options to the key questions. Some of the options are beyond the scope of this project, but are worth considering with additional research and resources.

Each equity definition considered the following questions:

- What aspects of equity to consider?[2]
    - PROCESS
        - Option 1: Legal protections and accountability
        - Option 2: Procedural equity with respect to public awareness and participation (Selected for equitable engagement process definition.)
    - INPUT
        - Option 3: Transportation finance and construction value (e.g., dollars spent).
    - OUTPUT
        - Option 4: Miles of roadway built; transit service hours, etc.
    - OUTCOME
        - Option 5: Social and economic impacts of transportation
            - Examples: Residential location, transportation mobility, and access to jobs and services for different populations
        - Option 6: Environmental impacts of transportation on quality of life and health
            - Example: Effects of air quality and safety
            - Example: Vehicle miles traveled (Selected for equitable VMT reduction strategy definition.)

[1] Cairns, Shannon, Jessica Greig, and Martin Wachs. Environmental Justice: A Citizen's Handbook. Berkeley, CA: UCB Institute of Transportation Studies, 2003.

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[2] Sanchez, T. W., R. Stolz, and J.S. Ma, Moving to Equity: Addressing Inequitable Effects of Transportation Policies of Minorities. Cambridge, MA, The Civil Rights Project at Harvard University, 2003

- What criteria by which to judge aspects of equity?
    - HORIZONTAL EQUITY (positive measure[3])
        - Option 1: Focuses on the distribution of impacts and benefits within comparable individuals and groups by income, social class, mobility needs, or other strata. (Selected for the definition of an equitable VMT reduction strategy.)
    - VERTICAL EQUITY (positive measure)
        - Option 2: Focuses on the distribution of impacts and benefits between individuals and groups by income, social class, mobility needs, or other strata. (Selected for the definition of an equitable VMT reduction strategy.)
    - EQUITY OF OPPORTUNITY (normative measure[4])
        - Option 3: Assumes everyone should have a basic level of access to transportation activity centers regardless of special needs or financial limitations. A basic level of access includes access to different transportation modes, education, employment, and services like major shopping centers, financial institutions, and hospitals; however, the decision to travel to these locations depends entirely on the individual. (This analytical method is beyond the scope of this project.)
    - EQUITY OF OUTCOME (normative measure)
        - Option 4: Takes equity of opportunity one step further to ensure equity priority communities succeed in meeting their basic level of access. An equity of outcome analysis involves a detailed understanding of transportation needs and characteristics for different communities in addition to the unique attributes of desired destination such as job type, and stores within major shopping centers. (This analytical method is beyond the scope of this project.)

An illustration of horizontal and vertical equity is shown in **Figure A-1**.

[3] Positive equity analysis measures describe what the distribution is.
[4] Normative equity analysis measures use equity criterion to evaluate whether the distribution is good or bad.

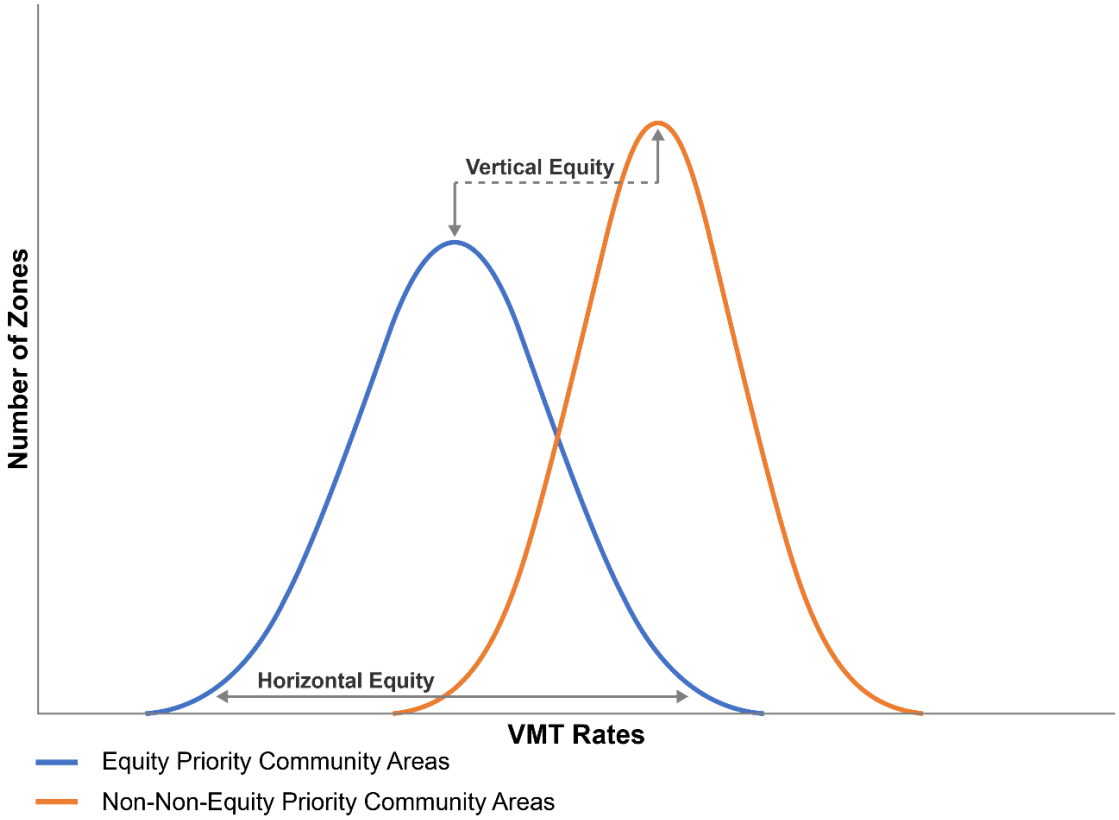

Figure A-1: Illustration of horizontal and vertical equity for VMT rates.

How best to measure this aspect of equity?

- Option 1: Local and network GIS accessibility measures (Selected for the equitable VMT reduction strategy definition.)
  - Example: The average VMT rates of the equity priority communities and the average VMT rates of the non-equity priority communities will be lessened.
  - Example: The lowest and highest VMT rates within equity priority communities or non-equity priority communities will be lessened.
- Option 2: Concentration curves and inequality measures (Beyond the scope of this project.)
  - GIS based measures with a ranking of the degree of inequality between different subgroups. However, concentration curves and inequality measures are limited to transferable resources such as wealth and income that are allocated to individuals versus resources that are made available to the community.
- Option 3: Social evaluation functions (Beyond the scope of this project.)
  - Weigh the utility of individuals to measure the overall social benefit. Easier to interpret but implementation and data requirements are demanding.

Appendix C: Research Scan of Statewide Practices in VMT Mitigation

Valley Transportation Authority

Project VTA Equitable VMT Mitigation Program
Task 1.5 - Scan of Current Research and Statewide Practices in VMT Mitigation
Description This workbook includes a matrix of existing to in-progress VMT mitigation programs evaluated and cataloged as of September 2023; program attributes may have changed since this scan was conducted.

Agency	Program Type	Program Title	Program Purpose	Program Description	Project Types	Status
City of Escondido	VMT Exchange Program	VMT Exchange Program	Implement local bikeway planned projects to reduce VMT in exchnage for impacts	The citywide exchange program is designed to fund local bikeway improvements as mitigation for land development projects.	Land Development	Adopted 2022, in operation
City of Petaluma	VMT Exchange Program	TBD	Implement local bikeway planned projects to reduce VMT in exchnage for impacts	The citywide exchange program is designed to fund local bikeway improvements as mitigation for land development projects.	Land Development	In-progress
City/County Association of Governments of San Mateo County (C/CAG)	Currently Undetermined - Likely a countywide VMT exchange with local mitigation impact fees	VMT/GHG Model Mitigation Program	Mitigate induced VMT from countywide transportation projects and to provide a framework for city-lead mitigation impact fees for land use projects	The countywide program is being desgined to mitigate VMT and GHG impacts of C/CAG's transportation projects and provide a program template that local agencies could adapt to mitigate impacts of land development projects. More detail is pending as options are still being considered.	Transportation and Land Development	In-progress
Contra Costa Transportation Authority (CCTA)	TBD	TBD	TBD	Countywide program to mitigate both land development and transportation project impacts. A wide range of mitigation strategies were examined, including workforce housing and mortgage/rental subsidies.	Land Development, Transportation	Completed, not yet adopted
Fresno Council of Governments (COG)	TBD	TBD	TBD	The program study is in its early stages. The Fresno Council of Governments (Fresno COG) is conducting a study regarding regional VMT mitigation programs that would be feasible for the Fresno County region. A VMT Bank, VMT Exchange, and VMT Impact Fee structure are all under consideration.	TBD	In-progress

Agency	Program Type	Program Title	Program Purpose	Program Description	Project Types	Status
Los Angeles Couty Metropolitan Transportation Authority (LA Metro)	TBD	VMT Mitigation Program	TBD	The program focuses on mitigation needs for projects on the State Highway System. This program will allow Metro to identify multi-modal elements to incorporate into highway projects or fund alternative projects or programs in support of reducing VMT and correlated greenhouse gas (GHG) emissions, furthering the region's sustainability efforts.	Transportation	In-progress
San Bernardino County Transportation Authority (SBCTA)	VMT Bank	TBD	Reduce VMT by increasing telecommuting, and selling VMT reduction credits for impacts	Countywide VMT bank program. A VMT Bank was identified as the preferred mechanism for funding and administering the regional mitigation program as it provides an avenue to take the IE Commuter Program, estimate VMT reductions associated with the program, and then sell those VMT reduction credits to projects that need VMT reductions. Studied several strategies that could mitigate impacts of SBCTA's transportation projects; identified the Telework program as the preferred strategy for a pilot program.	Transportation	Completed, not yet adopted
San Gabriel Valley Council of Governments (SGVCOG)	VMT Bank	TBD	Reduce VMT by implementing mitigation actions and selling VMT reduction credits for impacts	The VMT Bank was preferable over the VMT Exchange because some jurisdictions indicated that an average per VMT cost provides more certainty to the development community when planning a project. A feasibility study was conducted for a five-year pilot program to mitigate impacts from local development projects. The program will explore methodologies for jurisdictions to mitigate VMT impacts through implementing actions that reduce VMT.	Land Development	Completed, not yet adopted
Santa Cruz County	TBD	TBD	TBD	The program is in the very early stage of development. this effort is funded by a Caltrans grant to establish a VMT mitigation program for Santa Cruz County that will provide a regionally coordinated mechanism to mitigate development projects that cannot mitigate on-site, and simultaneously provide additional funding for active transportation and transit projects that help reduce VMT overall via a banking or exchange program.	Land Development	In-progress

Agency	Program Type	Program Title	Program Purpose	Program Description	Project Types	Status
Southern California Association of Government (SCAG)/Los Angeles Department of Transportation (LADOT)	VMT Exchange Program	Universal College Student Transit Pass (U-Pass)	Phase 1 - Increase transit ridership among students and reduce VMT in exchnage for impacts. Phase 2 - Reduce VMT by implementing mitigation actions in exchange for VMT reduction funds paid by development for impacts.	Focused study of transit pass (U-Pass) program as potential regional VMT mitigation strategy. U-Pass is a subsidized student transit pass program administered by LA Metro and is accessible to all students enrolled in at least one course at participating vocational, two-year, and four-year educational institutions throughout LA County. Phase 2 expands on the Phase 1 pilot to include analysis of more mitigation actions and further the discussions on administration and management of a bank/exchange.	Land Development	Completed, not yet adopted. Some developers are looking to this option via MOU with Metro (UPass provider)
Western Riverside Council of Governments	VMT Exchange Program	TBD	Implement local bikeway planned projects to reduce VMT in exchnage for impacts	This program will be designed as either a bank or exchange. It was originally focused on funding Transit Passes, but has expanded to include a lot of measures (transit, bike/ped infrastructure, etc.). Most recently, looking at land use through conservation or through development has gained traction; specifically land conservation in inefficient areas and land development in efficient areas. Ultimately, WRCOG has established that the program will begin as an exchange with the hope it will transition into a bank.	Land Development, TBD Transportation	Completed, not yet adopted

Source: Fehr & Peers, 2023.

Appendix D: Local Jurisdiction Web Survey

Valley Transportation Authority

Local Jurisdiction Web Survey

Equitable Vehicle Miles Traveled (VMT) Mitigation Program for Santa Clara County

Santa Clara Valley Transportation Authority
Solutions that move you

FEHR PEERS

November 2023

Local Jurisdiction Survey Results

Santa Clara Valley Transportation Authority

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Local Jurisdiction Survey

Goals

- Understand local VMT practices
- Interest in a cross-jurisdictional mitigation program

Survey Structure

- 19 questions (Q3,14, and 19 requested links to City policies; not shown here)
- 14 responses from 13 unique jurisdictions
- 100% response rate except on five questions
  - Only 10 of 14 answered Q3-7

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Local Jurisdiction Survey Results

Needs

- Local VMT generation/reduction data
- Off-site VMT mitigation for non-residential development
- VMT mitigation:
  - Access to vehicles?
  - Mobility services?

Challenges

- Limits of on-site VMT mitigation
- VMT mitigation uncertainty
- Rural locations and non-residential development
- Transit effectiveness
- Relationship between CEQA mitigation and equity

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Local Jurisdiction Survey Results

1

- What is your level of experience using VMT in the CEQA review process?

- High (1)
- Medium (8)
- Low (4)

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Local Jurisdiction Survey Results

2

- Adopted VMT threshold?

- Yes (10)
- No (3)

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Local Jurisdiction Survey Results

? 4

- VMT Metric?

- Total VMT (5)
- Total VMT per Service Population (3)
- Residential VMT per Resident (2)
- Home-Based VMT per Resident (6)
- Work Tour VMT per Employee (1)
- Home-Based Work VMT per Employee (6)

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Local Jurisdiction Survey Results

5-6

- VMT Threshold?

- 14.3% Below City Average (1)
- 15% Below County Average (4)
- 15% Below City Average (2)
- 15% Below Regional Average (2)
- 11.3% Below City Average (1)
- 0% Below City Average (1)
- 0% Below Regional Average (1)
- Net Zero (no new VMT)* (1)

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Local Jurisdiction Survey Results

7

- What type of vehicle?

- Light-duty vehicles (1)
- All vehicles (5)
- Not specified (4)

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Local Jurisdiction Survey Results

8

- VMT Screening Criteria?

- OPR Recommendations (5)
- Jurisdiction-Specific (4)
- Low VMT Map (1)
- No Screening Criteria (3)

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Local Jurisdiction Survey Results

? 9

- What percent of projects screen out of VMT analysis?

- Non-Residential – varies
  - 7 jurisdictions: 65-100%
  - 3 jurisdictions: 25-50%
  - Remaining 3 jurisdictions, 0% or N/A
- Residential – most, 65-100%

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Local Jurisdiction Survey Results

? 10

- Apply CEQA Streamlining?

- Yes (6)
- No (5)
- No, but interested (2)

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Local Jurisdiction Survey Results

11

- VMT monitoring?

- Process unique to each project (4)
- Annual reporting of trip counts relative to trip reduction threshold (4)
- Annual-to-3-year* reporting of trip counts relative to project trip generation (1)
- No process (2)

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Local Jurisdiction Survey Results

12

- VMT mitigation process?

- Require TDM Plans (2)
- Require TDM measures from VTA VMT Mitigation Tool (2-3)
- Require adjustments to project characteristics, network improvements, parking strategies, programmatic TDM (4)
- Impose Transportation Impact Fee (2)
- No process (2)

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Local Jurisdiction Survey Results

13

- Non-VMT impacts?

- CEQA process and impact categories (4)
- Qualitative review via TIA process (4)*
- Level of Service (4)
- Emergency Access (3)
- Hazards (2)

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Local Jurisdiction Survey Results

? 15

- Most useful VMT mitigation measures?

- Access to Vehicles (80)
- Mobility Services (58)
- TDM Programs and Incentives (45)
- Transit Services (40)
- Land Use Strategies (37)
- Active Transportation Facilities (34)

Valley Transportation Authority
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VMT Mitigation Measures

Mitigation Measure	Examples
Access to Vehicles	Carshare and rental car subsidies, or e-bike subsidies
Mobility Services	Implemented or expanded on-demand shuttle services, shared ride van services, or bike- and scooter-share services
TDM Programs and Incentives	Subsidized or free transit passes, subsidized or free passes for bike- and scooter-share services or on-demand shuttles; subsidized bike leasing; or commute trip reduction services (e.g., Guaranteed Ride Home Program).

VMT Mitigation Measures

Mitigation Measure	Examples
Transit Service Improvements	Increased transit service frequency, increased network coverage, implementation of transit-priority roadway treatments
Land Use Strategies	Transit-oriented development, increased job and residential density, increased density of housing near transit, implementation of trip-end facilities (e.g., bike parking), or Housing Relocation-Subsidy Program (HRSP)
Active Transportation Facilities	Expanded bike network, expanded pedestrian network, or improved street connectivity

Local Jurisdiction Survey Results

16

- What projects could benefit from a regional VMT mitigation program?

- Medium-Sized Development Projects (13)
- Larger Projects (12)
- Small Development Projects (10)
- Large Infrastructure Projects (10)
- Other (1)

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Local Jurisdiction Survey Results

17

- Top challenges or needs related to mitigating VMT?

- Measure Effectiveness Unclear (8)
- Measures Not Suitable (7)
- Limited Transportation Options (6)
- Challenging Land Use Patterns (5)
- Insufficient Funding (5)
- Lack of a VMT Policy (2)
- Lack of Good/Acceptable Data (2)
- Lack of Travel Model (2)
- Transportation Analysis Guidelines (1)

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Local Jurisdiction Survey Results

18

- What projects could benefit from a regional VMT mitigation program?

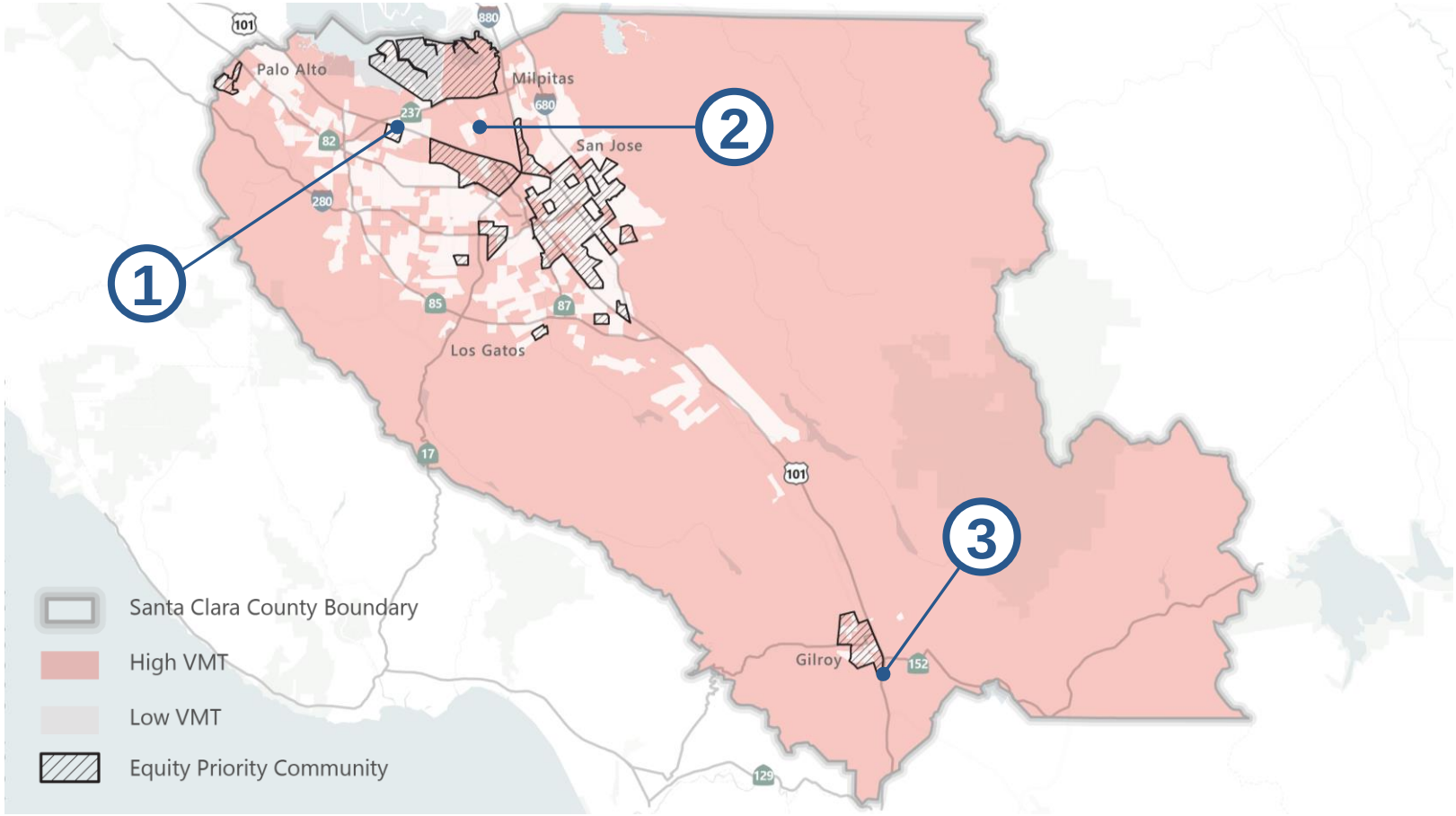
1. Sunnyvale: EV collision repair
2. Santa Clara: Townhouses
3. Gilroy: Warehouse
4. Mountain View: Large mixed-use
5. Los Gatos: Large mixed-use
6. Santa Clara County: Rural industrial

Valley Transportation Authority
Solutions that move you

Local Jurisdiction Survey Results

Example Projects

1. Sunnyvale: EV collision repair
2. Santa Clara: Townhouses
3. Gilroy: Warehouse



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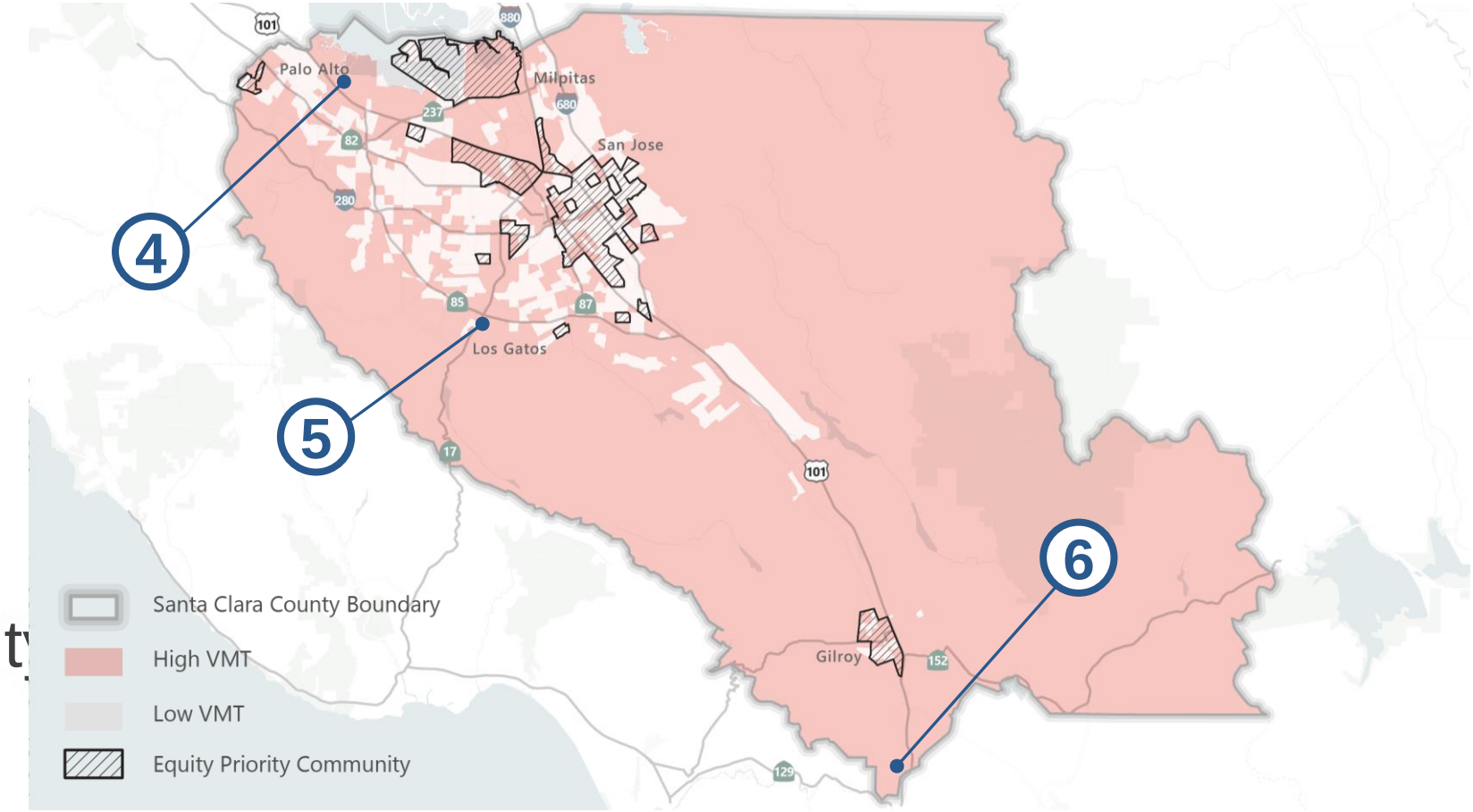
Local Jurisdiction Survey Results

Example Projects

4. Mountain View: Large mixed-use
5. Los Gatos: Large mixed-use
6. Santa Clara County: Rural industrial



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Local Jurisdiction Survey Results

Needs

- Local VMT generation/reduction data
- Off-site VMT mitigation needed for non-residential development
- VMT mitigation:
  - Access to vehicles?
  - Mobility services?

Challenges

- Limits of on-site VMT mitigation
- VMT mitigation uncertainty
- Rural locations and non-residential development
- Transit effectiveness
- Relationship between CEQA mitigation and equity

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Appendix E: Local Jurisdiction Focus Group Presentation

Valley Transportation Authority

Local Jurisdiction Focus Group

Equitable Vehicle Miles Traveled (VMT) Mitigation Program for Santa Clara County

Santa Clara Valley Transportation Authority
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FEHR PEERS

November 2023

Agenda

1. Welcome / Introductions (1:00)
2. Statewide Mitigation Practices (1:05)
3. Local Jurisdiction Survey Results (1:20)
4. Potential VMT Reduction Needed (1:45)
5. Wrap-Up (2:25)

Introductions

Santa Clara Valley Transportation Authority

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Introductions

- Thanks for joining us!

Campbell
Cupertino
Gilroy
Los Altos
Los Gatos
Milpitas
Milpitas
Monte Sereno
Morgan Hill
Mountain View
Palo Alto
Saratoga
San Jose
Sunnyvale
County of Santa Clara
Caltrans
VTA
+Project Team

Introductions

- Thanks for joining us!

Gilroy
Milpitas
Morgan Hill
Mountain View

Palo Alto
San Jose
Santa Clara
Sunnyvale

County of Santa Clara
Caltrans
VTA
+Project Team

Statewide VMT Mitigation Practices

Santa Clara Valley Transportation Authority

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Statewide VMT Mitigation Practices

- Programs Reviewed (13)
  - VMT Exchange (4)
  - VMT Bank (2)
  - VMT Fee (2)
  - In-Process (5)

ESCONDIDO
City of Choice

Valley Transportation Authority
Solutions that move you

Statewide VMT Mitigation Practices

- Project Types
  - Land Development (7)
  - Transportation (2)
  - Both (3)
  - Unspecified (1)

Source: MTC

Statewide VMT Mitigation Practices

- VMT Exchange
  - Only operating VMT exchange
  - Identify VMT reduction needed
  - Fund bicycle improvements to address VMT reduction needed

ESCONDIDO
City of Choice

Statewide VMT Mitigation Practices

- One operating VMT Exchange in the City of Escondido
- VMT Exchange is Most Common
- Most with a Defined Program Structure
- Most Not Adopted

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Questions?

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Local Jurisdiction Survey Results

Santa Clara Valley Transportation Authority

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Local Jurisdiction Survey

Goals

- Understand local VMT practices
- Interest in a cross-jurisdictional mitigation program

Survey Structure

- 19 questions
- 14 responses from 13 unique jurisdictions
- 100% response rate except on five questions
  - Only 10 of 14 answered Q3-7

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Local Jurisdiction Survey Results

Needs

- Local VMT generation/reduction data
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- VMT mitigation:
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  - Mobility services?

Challenges

- Limits of on-site VMT mitigation
- VMT mitigation uncertainty
- Rural locations and non-residential development
- Transit effectiveness
- Relationship between CEQA mitigation and equity

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Discussion

Santa Clara Valley Transportation Authority

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Discussion

- VMT Mitigation Ranking Results – Why are these the most attractive options? (Q14)
  - Access to vehicles
  - Mobility services

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Local Jurisdiction Survey Results

14

- Most useful VMT mitigation measures?

- Access to Vehicles (80)
- Mobility Services (58)
- TDM Programs and Incentives (45)
- Transit Services (40)
- Land Use Strategies (37)
- Active Transportation Facilities (34)

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VMT Mitigation Measures

Mitigation Measure	Examples
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Discussion

- VMT Mitigation Ranking Results – Why are these the most attractive options? (Q14)
  - Access to vehicles
  - Mobility services

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Discussion

- What challenges associated with collecting VMT data and monitoring VMT impact mitigation are most challenging for your jurisdiction? (Q11, Q12 & Q17)

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Local Jurisdiction Survey Results

11

- VMT monitoring?

- Process unique to each project (4)
- Annual reporting of trip counts relative to trip reduction threshold (4)
- Annual-to-3-year* reporting of trip counts relative to project trip generation (1)
- No process (2)

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Local Jurisdiction Survey Results

12

- VMT mitigation process?

- Require TDM Plans (2)
- Require TDM measures from VTA VMT Mitigation Tool (2-3)
- Require adjustments to project characteristics, network improvements, parking strategies, programmatic TDM (4)
- Impose Transportation Impact Fee (2)
- No process (2)

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Local Jurisdiction Survey Results

17

- Top challenges or needs related to mitigating VMT?

- Measure Effectiveness Unclear (8)
- Measures Not Suitable (7)
- Limited Transportation Options (6)
- Challenging Land Use Patterns (5)
- Insufficient Funding (5)
- Lack of a VMT Policy (2)
- Lack of Good/Acceptable Data (2)
- Lack of Travel Model (2)
- Transportation Analysis Guidelines (1)

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Discussion

- What challenges associated with collecting VMT data and monitoring VMT impact mitigation are most challenging for your jurisdiction? (Q11, Q12 & Q17)

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Discussion

- What are your needs and/or concerns related to VMT screening and the use of CEQA streamlining for VMT? (Q9 & Q10)

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Local Jurisdiction Survey Results

? 9

- What percent of projects screen out of VMT analysis?

Non-Residential – varies

- 7 jurisdictions: 65-100%
- 3 jurisdictions: 25-50%
- Remaining 3 jurisdictions, 0% or N/A

- Residential – most, 65-100%

Valley Transportation Authority
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Local Jurisdiction Survey Results

? 10

- Apply CEQA Streamlining?

- Yes (6)
- No (5)
- No, but interested (2)

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Discussion

- What are your needs and/or concerns related to VMT screening and the use of CEQA streamlining for VMT? (Q9 & Q10)

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Potential VMT Reduction Needed

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VMT Methods – VTA Travel Model

Land Use

697,400 new residents

262,180 new employees

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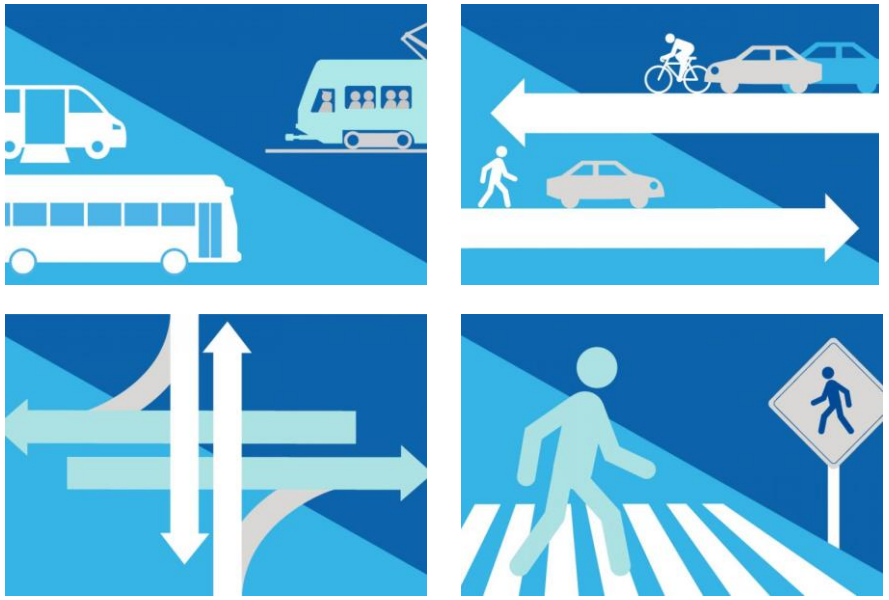
VMT Methods – VTA Travel Model

- Transportation Improvements
  - Transit
  - Express Lanes
  - Interchange Improvements
  - Expressway and Local Transportation Improvements



Source: VTA

VMT Metric

- Total VMT generated per service population
  - Daily VMT
  - All vehicle trips, vehicle types, and trip purposes
  - All land use types
  - Service population is residents and employees

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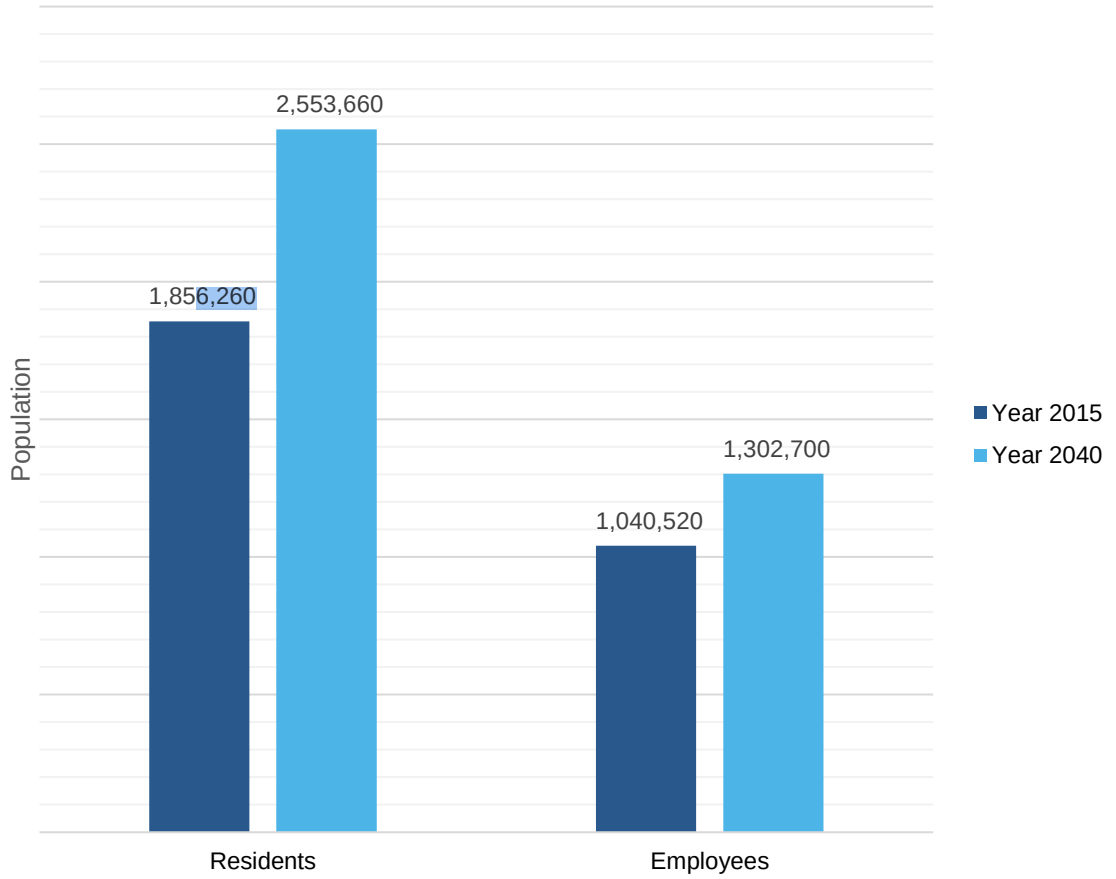
VMT Data

Santa Clara County Service Population



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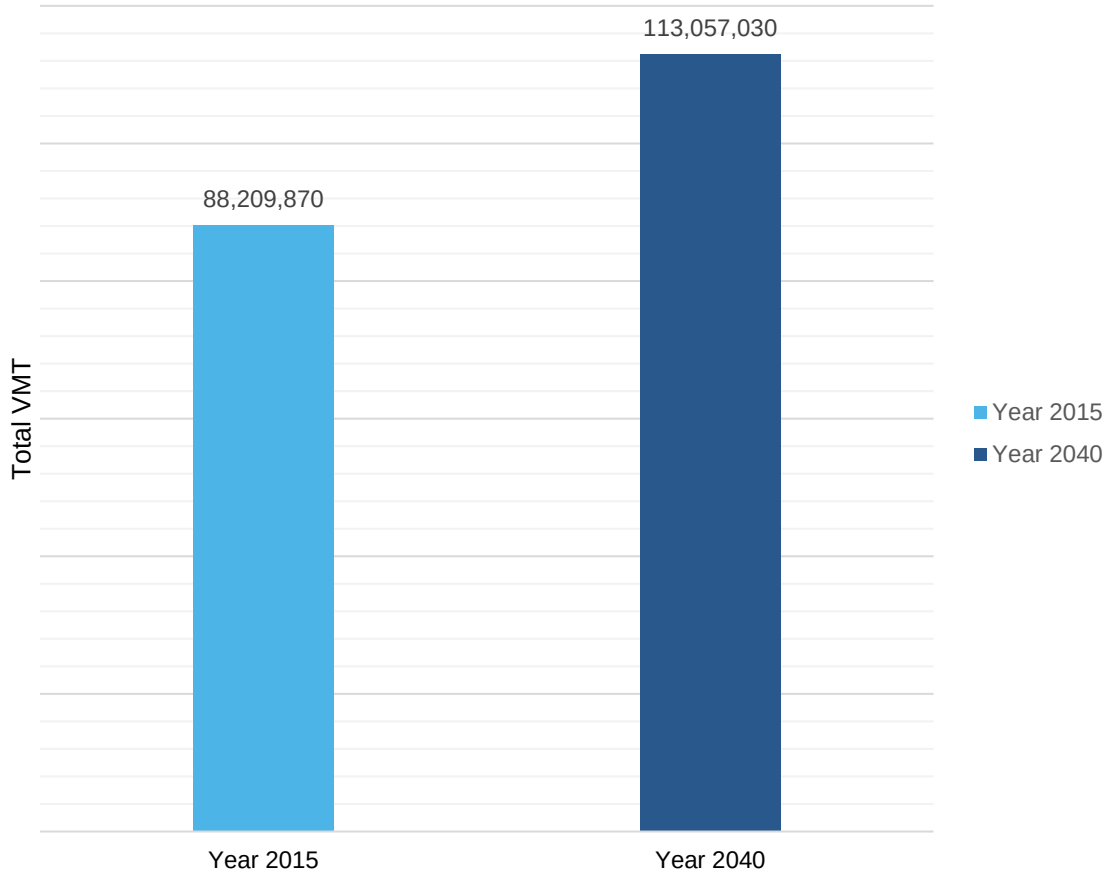
VMT Data

Santa Clara Countywide Total Daily VMT



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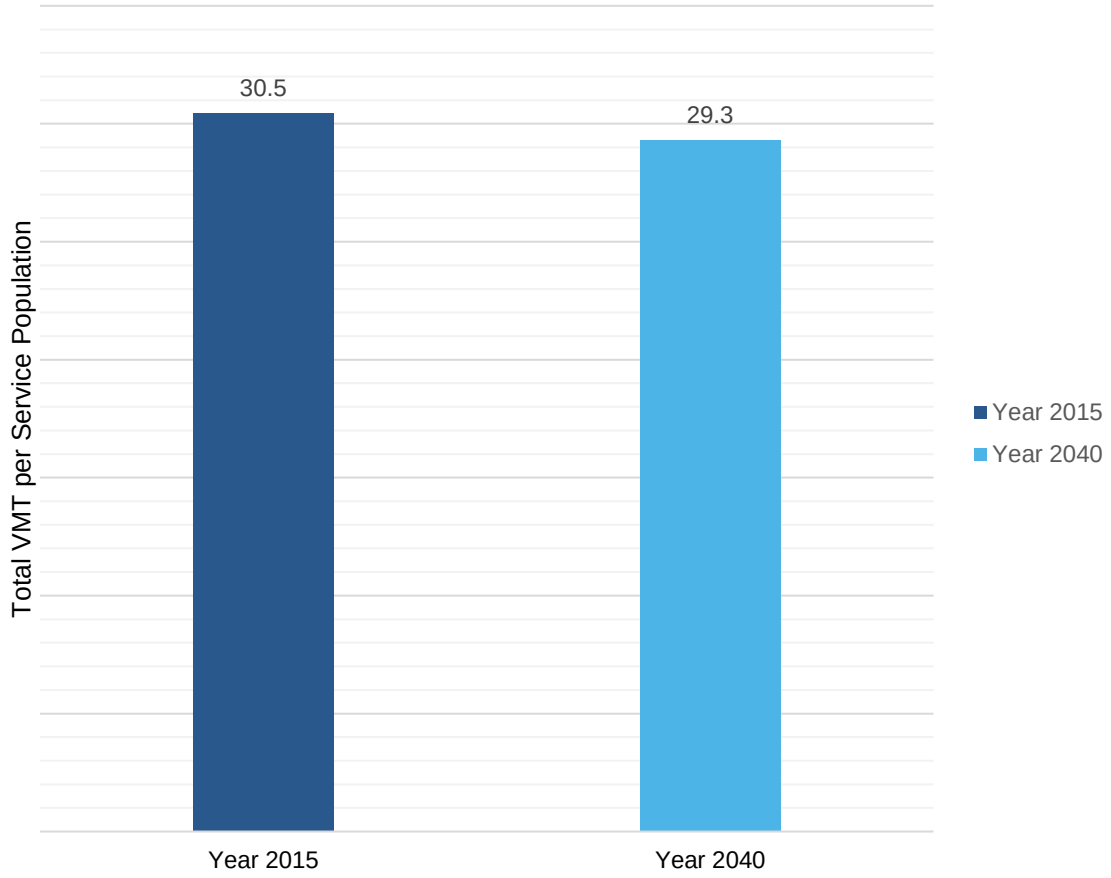
VMT Data

Santa Clara Countywide Total Daily VMT per Service Population



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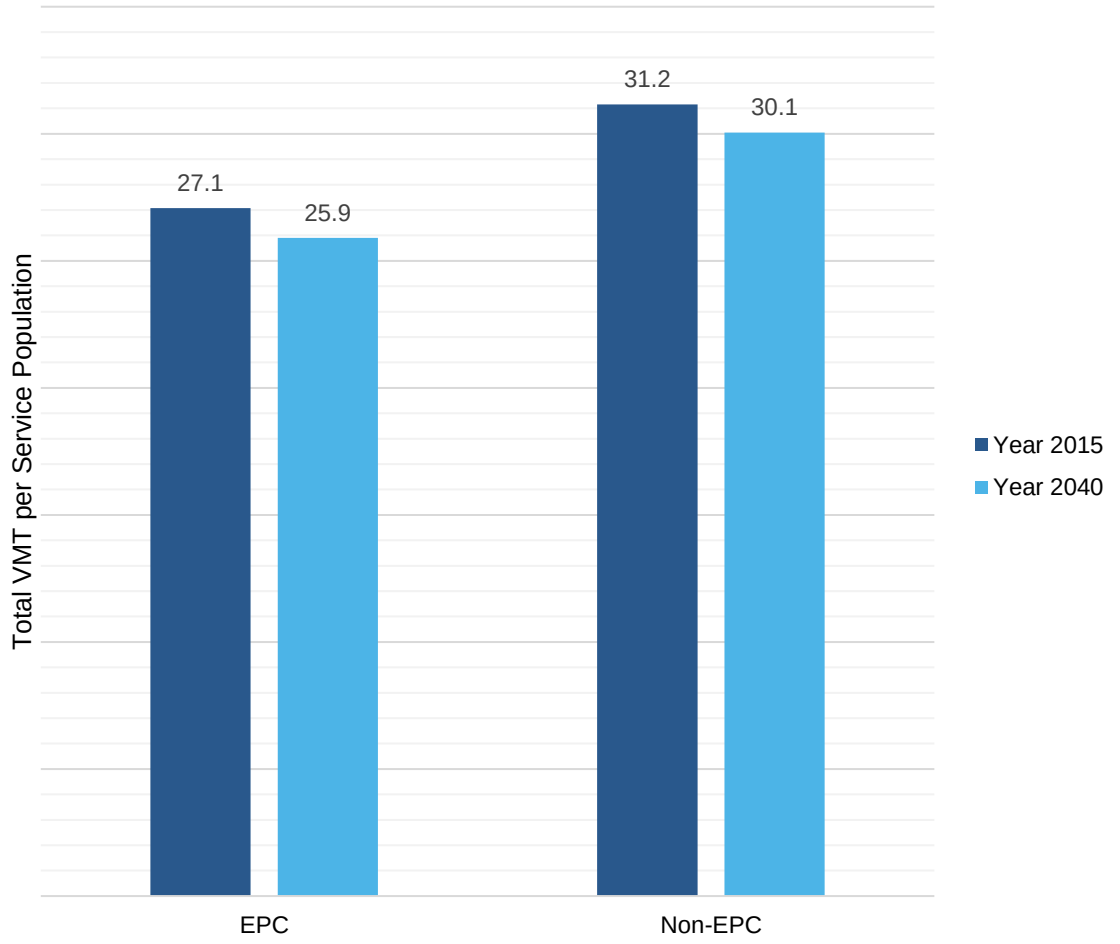
VMT Data

Total Daily VMT per Service Population for Non-EPC and EPC Areas



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Potential VMT Reduction Needed

We estimated how much VMT reduction would be needed under four different scenarios

	VMT Target set at 85% of Baseline Rate	VMT Target set at 70% of Baseline Rate
VMT Target applies only to future development	Scenario 1	Scenario 2
VMT Target applies to everything (both existing and future population and jobs)	Scenario 3	Scenario 4

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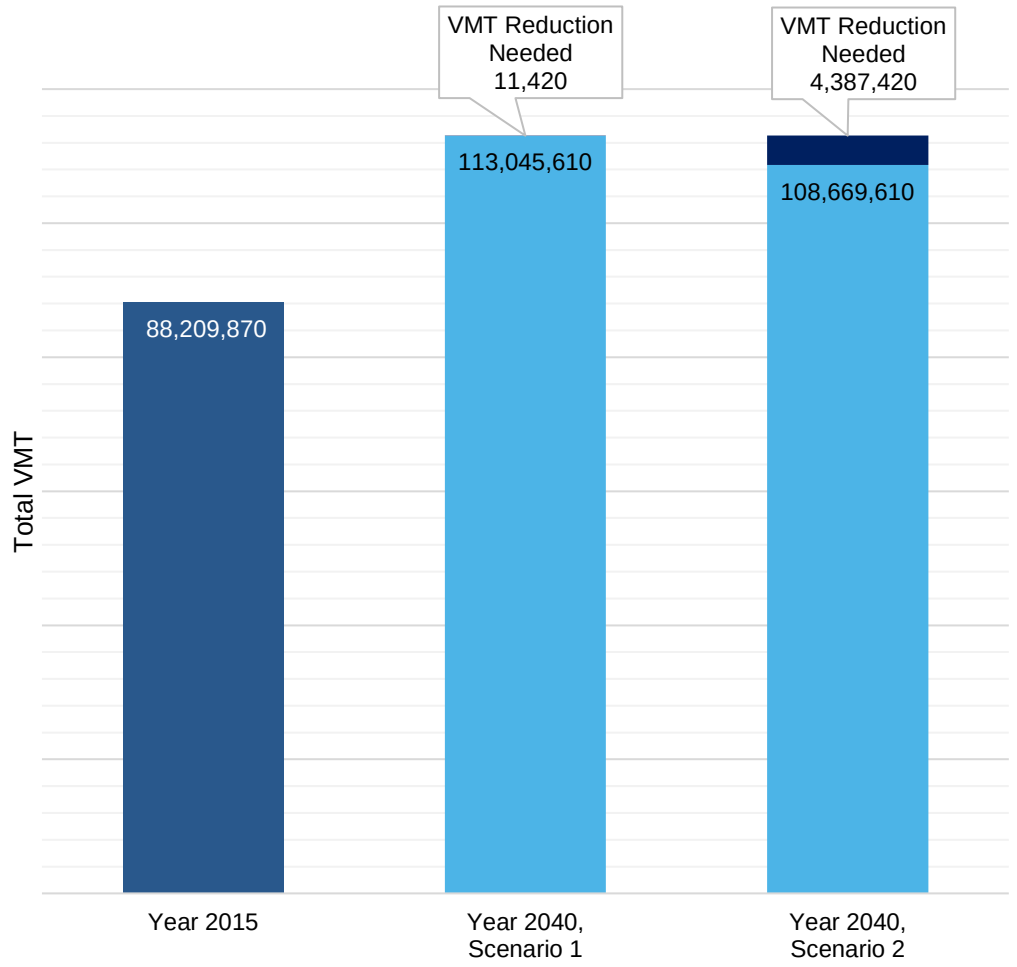
VMT Targets Applied Only to Future Development

Scenario 1:
Target = 85% of Baseline

Scenario 2:
Target = 70% of Baseline



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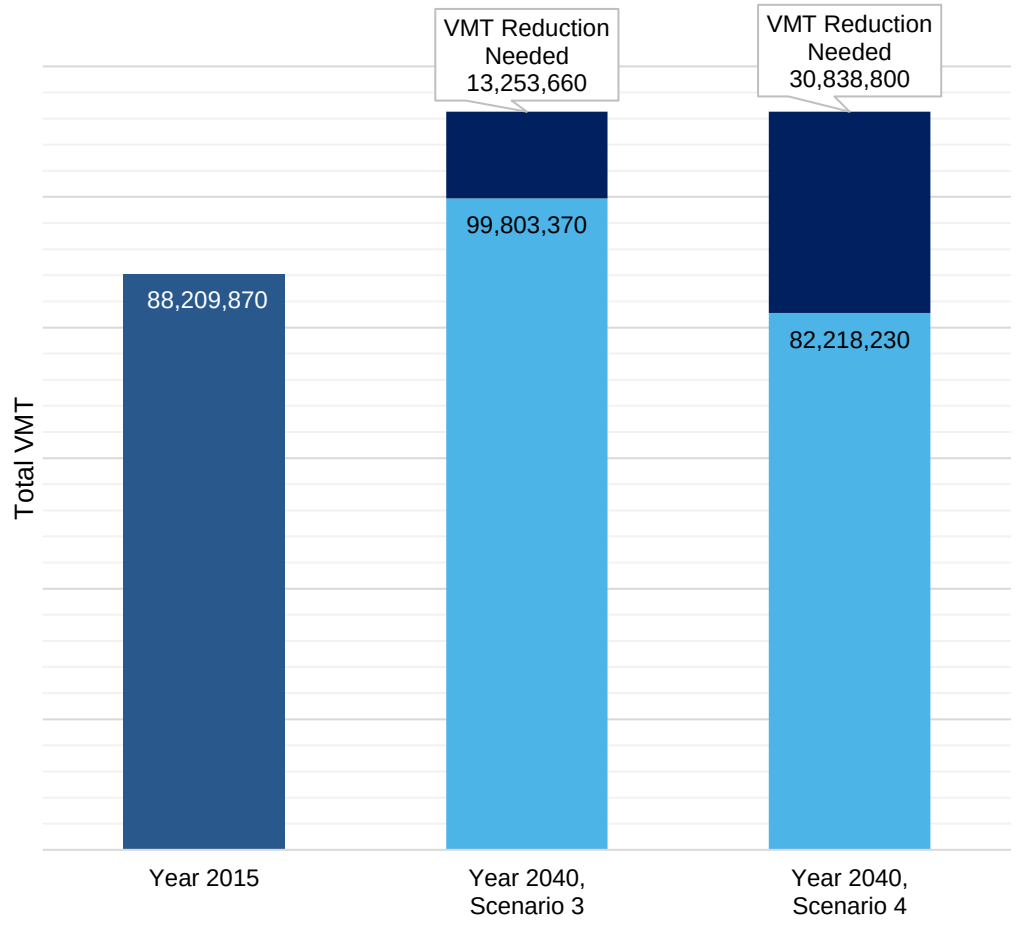
VMT Targets Applied to Both Existing and Future Development

Scenario 3:
Target = 85% of Baseline

Scenario 4:
Target = 70% of Baseline



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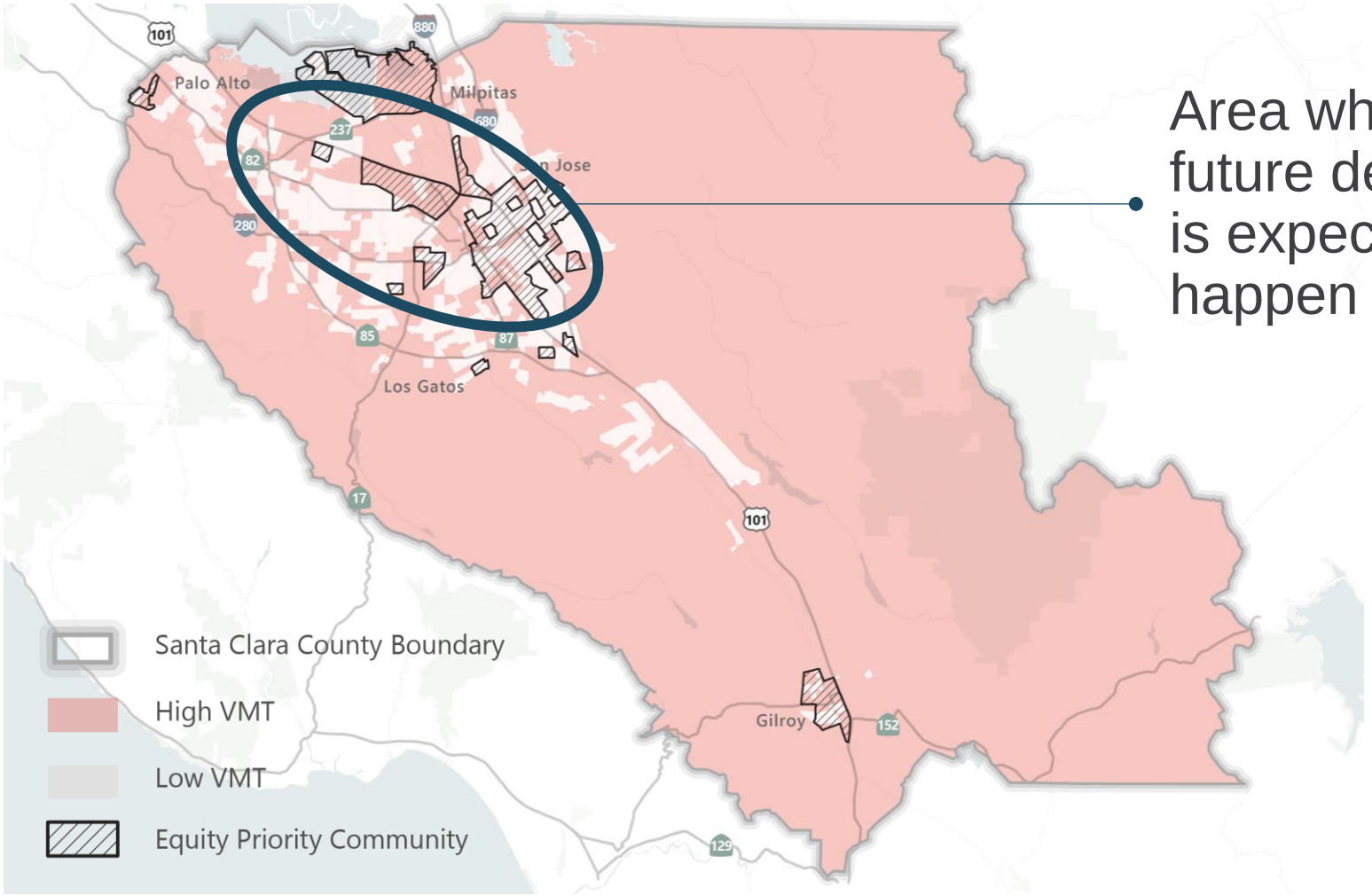
Solutions that move you

Observations about Future VMT

- Countywide VMT rates are expected to decline as population increases
- EPC areas tend to have lower VMT rates than non-EPC areas
- VMT rates in EPC areas are expected to decline somewhat faster than the VMT rates in non-EPC areas

Future Development Areas



Area where most future development is expected to happen

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Observations about Potential VMT Reductions

- Future development is anticipated to occur throughout the north-central county in a mix of high and low VMT areas
- Development that occurs in high-VMT areas is more likely to trigger significant VMT impacts and require mitigation
- As targets become more aggressive, more VMT reductions would be needed

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Questions and Discussion

Santa Clara Valley Transportation Authority

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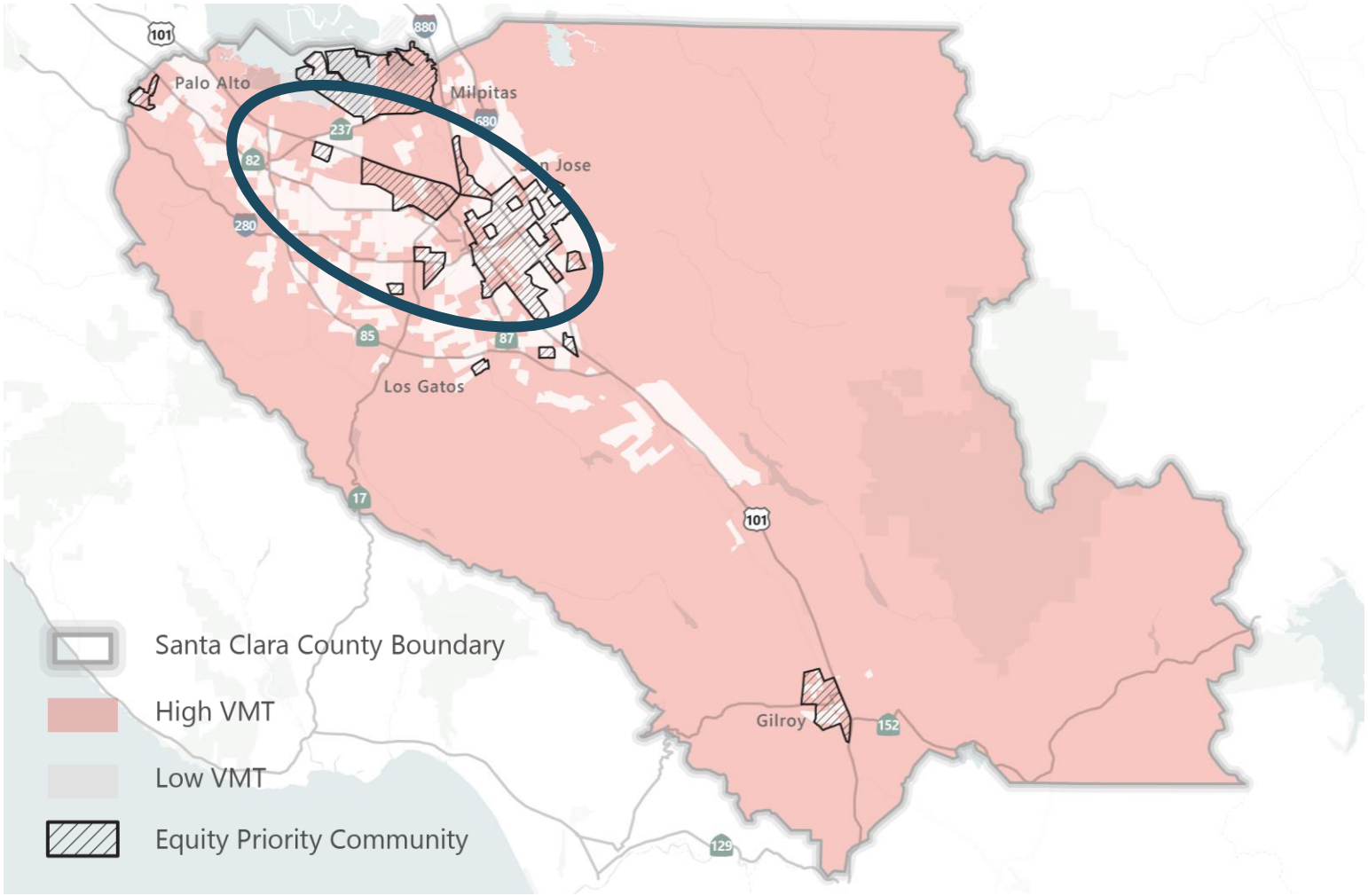
Questions about Potential VMT Reductions

- Target VMT Rate:
  - Should it be set at 85% of the Baseline Rate?
  - 70%?
  - Something else?

Potential VMT Reduction Needed



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Questions about Potential VMT Reductions

- Should VMT reduction strategies be focused in localized high-VMT areas?
- Should VMT reduction strategies be focused in EPC areas?
- How should the program consider that some EPC areas are low-VMT while others are high-VMT?

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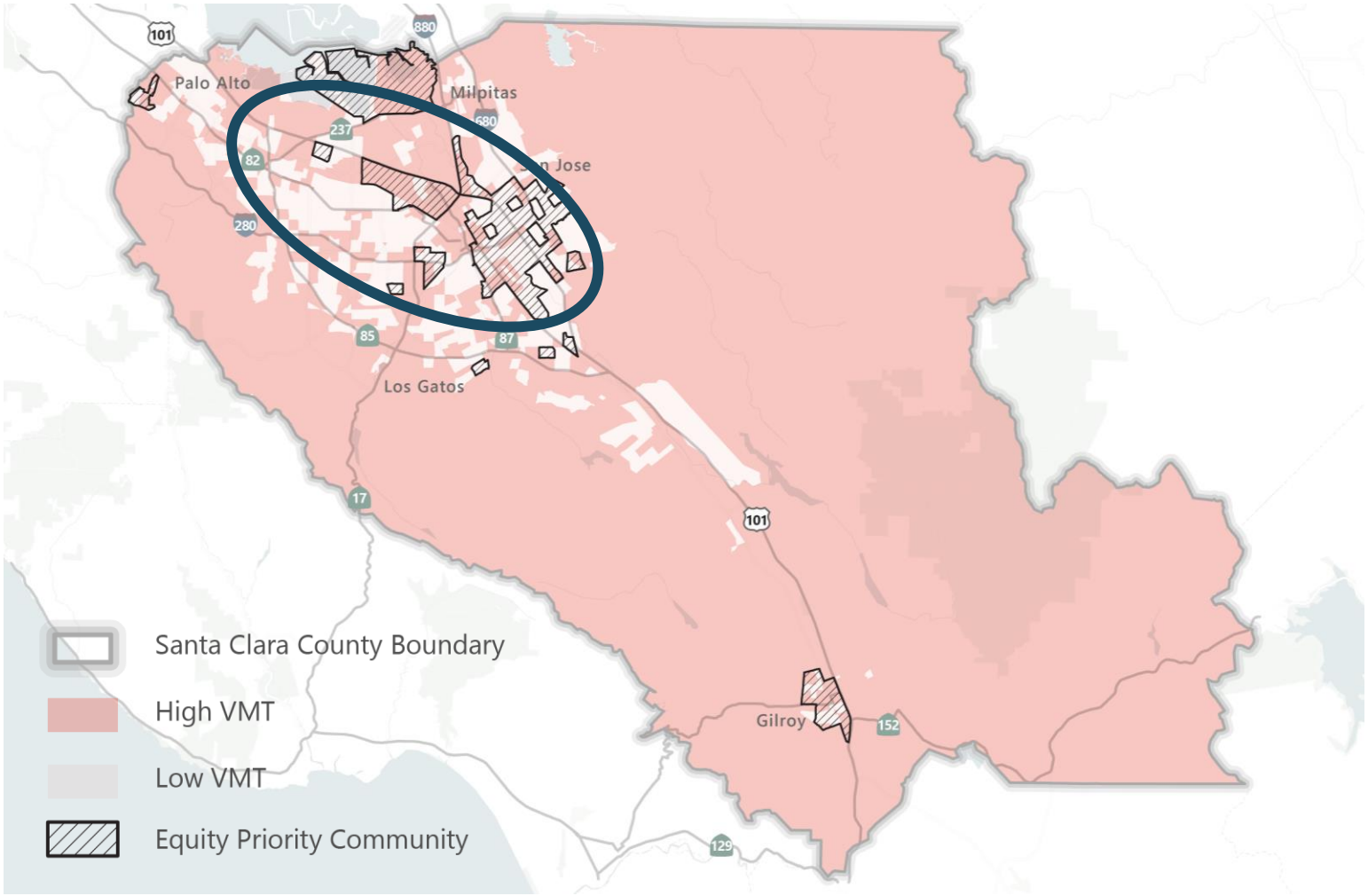
Potential VMT Reduction Needed



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Wrap up

Santa Clara Valley Transportation Authority

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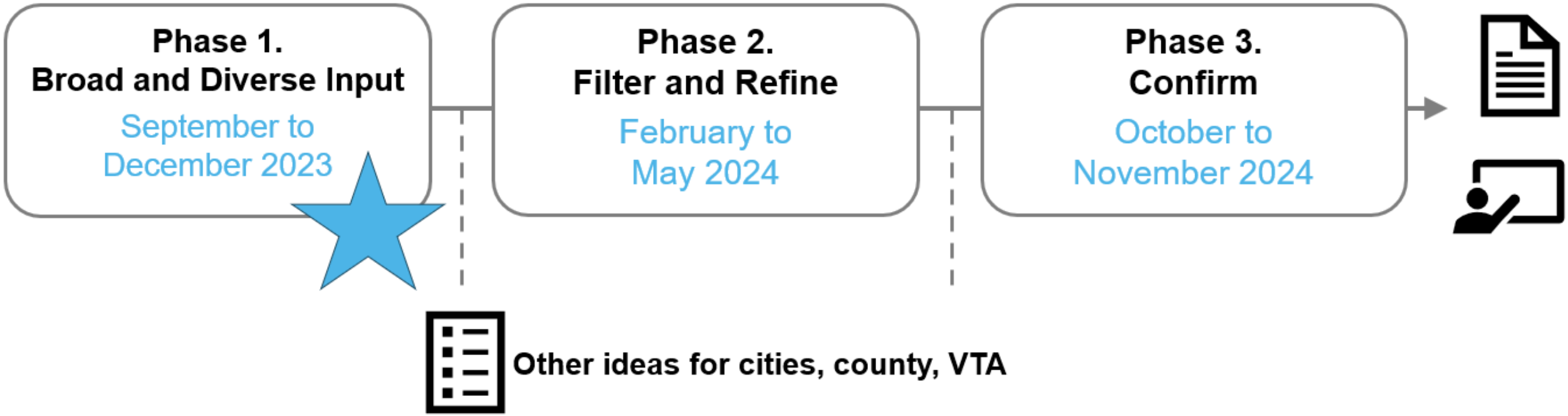
How will we use your input?



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What’s next?

- Phase II – Filter and Refine
- Presentation to Jurisdiction – contact us if interested

How can you help?

- Stay up to date
  - www.vta.org/EquitableVMT
- Share upcoming events – listed on website
- Share the community survey
  - www.vta.org/vmtsurvey

Scan for the project website

Scan for the survey

Note: Survey is no longer active.

Links included in this appendix for illustrative purposes only.

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Thank You

Contact: Robert Swierk, VTA at Robert.Swierk@vta.org

Scan for the project website

Santa Clara Valley Transportation Authority

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Appendix F: VMT Reductions Needed Memorandum

Valley Transportation Authority

FEHR PEERS

Memorandum

Date: February 27, 2024

To: VTA Project Team

From: Fehr & Peers

Subject: Equitable VMT Mitigation Program Framework for Santa Clara County: Santa Clara County Total VMT Rate Summary, Heat Maps, and Estimates of Potential VMT Reductions Needed (49)

SJ23-2220

When considering an Equitable VMT Mitigation Program for Santa Clara County, one important element is to understand the magnitude of the VMT impacts that could occur within Santa Clara County over a given time period (in the case of this study, the time period used is 25 years), and the magnitude of the VMT reductions that could be needed to mitigate those impacts. This is a complex question that relies upon assumptions regarding the number of new projects that may occur over that time period; how much VMT is likely to be generated by each of those projects; and how each lead agency will apply its CEQA thresholds to those projects to determine the level of significant VMT impacts and associated mitigation requirements.

It is not possible to know these details with certainty. Therefore, the analysis resulted in a range of possible outcomes that could inform considerations around how a VMT mitigation program framework could be designed and implemented to be most effective. This analysis was conducted for the model years 2015 and 2040 with a focus on new land development projects that will add to a jurisdiction's population and employment.

1. VMT Methods

The Santa Clara VTA's City/County Association of Governments of San Mateo County (C/CAG) Bi-County Model (VTA Travel Model, version g6d) developed in late 2019 has been used to prepare estimates of total VMT per service population for the years 2015 and 2040 for three geographic areas:

- Santa Clara County;
- the Equity Priority Community (EPC) areas in Santa Clara County (the definitions of which are further described below); and
- the non-EPC areas in Santa Clara County.

In all cases, and consistent with the recommendations in the Office of Planning and Research *Technical Advisory on Evaluating Transportation Impacts in CEQA*, adjustments have been applied to the model results to account for the distance of travel outside of the model area (refer to **Table A-1** in the Attachment A External Station Adjustments). The VMT forecasts were prepared at the transportation analysis zone (TAZ) level, which is the smallest unit of land use in the VTA travel model.[1]

Model Inputs

Based on the land use inputs from the VTA Countywide Model, in Santa Clara County over the planning horizon between 2015 and 2040 the model assumes that there will be:

- 697,400 new residents
- 262,180 new employees

During this time several important transportation improvements (e.g., transit projects, express lanes, interchange improvements, and street widenings and connections) are also assumed to be completed (VTP 2040 Project numbers in parentheses):

- Transit Projects
    - BART Silicon Valley: The Berryessa Extension (T2)
    - BART Silicon Valley: The Santa Clara Extension (T2)
    - Bus rapid transit on key corridors (T3 to T5)
    - New and enhanced bus and light rail service (T6 to T12)

[1] As defined by *NCHRP Report 716, Travel Demand Forecasting: Parameters and Techniques*, TRB, 2012, "TAZ boundaries are usually major roadways, jurisdictional borders, and geographic boundaries and are defined by homogeneous land uses to the extent possible."

    - Caltrain Electrification and Altamont Commuter Express (ACE) improvements (T13 to T17)
- Highway Improvements
    - Express lanes on most freeways (H1 to H18)
    - Interchange improvements at numerous locations (H19 to H51)
- Expressway and Local Street System Improvements (X1 to X19 and R1 to R41)
    - Street widenings and connections

Definition of the Total VMT Per Service Population Metric

Total VMT is the VMT from all vehicle trips for all trip purposes and types caused by the residential population and jobs in a specific area. It is calculated by summing the VMT within the specified geographic area (internal-internal trips), "VMT from" the geographic area (internal-external trips), and "VMT to" the geographic area (external-internal trips), as follows:

$$Total\ VMT = (II + IX) + (II + XI) = 2 * II + IX + XI$$

- **Internal-internal (II)**: The full length of all trips made entirely within the specified geographic study area limits.
- **Internal-external (IX)**: The full length of all trips with an origin within the specified geographic study area and destination outside of the area.
- **External-internal (XI)**: The full length of all trips with an origin outside of the specified geographic study area and destination within the area.

The intra-zonal (i.e., internal-internal (II)) VMT and VMT between traffic analysis zones, or TAZs, that are in the specified geographic study area cause some double counting, which is an expected result when summing the trip end based VMT. To ensure a VMT rate is expressed properly (i.e., that the numerator and denominator include the generators of both trip ends of the VMT), the total VMT is divided by the service population (residential population, and employment population)—the generator of both trip ends of the VMT. The VMT estimates are presented on a per service population basis to account for both the effects of population and/or employment growth and the effects of changes in personal travel behavior. For example, population growth may cause an increase in overall VMT, while travelers changing their behavior by using different travel modes or decreasing their vehicle trip lengths would cause decreases in the amount of VMT that each person generates.

1.1 Definition of an Equity Priority Community (EPC) Area for the Equity Framework

Because of this study's focus on developing an equitable framework for VMT mitigation, it is essential to set criteria for defining the geographic areas that will be prioritized due to the equity-related characteristics of those communities. Six different definitions were considered for the VMT mitigation program framework. After consideration, the project team identified Metropolitan Transportation Commission's (MTC's) "equity priority community" definition as the preferred option because it offers a mix of criteria related to social and economic characteristics, income, and ability, and in many cases its definition overlaps with or encompasses other definitions that were considered.

The MTC's Equity Priority Community (EPC) definition incorporates race, income, language proficiency, age, access to a vehicle, household size, ability status, and rent-burden criteria, as noted in **Table 1**. An EPC is defined as a census tract whose population:

- Exceeds both threshold values for Low-Income AND People of Color shares, OR
- Exceeds the threshold value for Low-Income AND also exceeds the threshold values for three or more variables (#3 to #8).

In addition to the Santa Clara County communities that meet MTC's EPC definition, VTA also requested that the Alviso neighborhood in San José be added. Alviso is not an MTC EPC, but it meets MTC's threshold for People of Color share, and it has been identified using other screening criteria such as the AB 1550 low-income communities definition. These equity priority community definitions may be refined in the final VMT mitigation program framework specifications based on input from local community-based organizations.

Table 1: MTC "Equity Priority Community" Demographic Factors & Definitions

Demographic Factor	Demographic Factor Definition	Concentration Threshold
1. Race (People of Color)	People of Color populations include persons who identify as any of the following groups as defined by the Census Bureau in accordance with guidelines provided by the U.S. Office of Management and Budget: American Indian or Alaska Native Alone (non-Hispanic/non-Latino); Asian Alone (non-Hispanic/non-Latino); Pacific Islander Alone (non-Hispanic/non-Latino); Black or African-American Alone (non-Hispanic/non-Latino); and Other (Some Other Race, Two or More Races, non-Hispanic/non-Latino); and all Hispanic/Latino persons.	70%
2. Low Income (<100% Federal Poverty Level)	Person living in a household with incomes less than 200% of the federal poverty level established by the Census Bureau.	28%
3. Limited English Proficiency	Person above the age of 5 years, who do not speak English at least "well" as their primary language or had a limited ability to read, speak, write, or understand English at least "well", as defined by the U.S. Census.	12%
4. Zero-Vehicle Household	Households that do not own a personal vehicle.[1]	15%
5. Seniors 75 Years and Over	Self-explanatory.	8%
6. People with Disability	The U.S. Census Bureau defines disability as: Hearing difficulty- deaf or having serious difficulty hearing (DEAR); Vision difficulty- blind or having serious difficulty remembering, concentrating, or making decisions (DREM); Ambulatory difficulty- having serious difficulty walking or climbing stars (DPHY; Self-care difficulty- having difficulty bathing or dressing (DDRS); Independent living difficulty- because of a physical, mental, or emotional problem, having difficulty doing errands alone such as visiting a doctor's office or shopping (DOUT).	12%
7. Single-Parent Family	Families with at least one child. To determine whether single-parent families exceed tract concentration thresholds, **the share of single parent families is calculated as a share of all families regardless of whether or not they have any children.**	18%
8. Severely Rent-Burdened Household	Renters paying > 50% of income in rent. To determine whether severely rent-burdened households exceed tract concentration thresholds, **the share of severely rent-burdened households is calculated as a share of all households regardless of occupancy status (renter or owner).**	14%

Notes.
1. Given that this criterion must be coupled with low-income and at least two other criteria, it is considered appropriate to include here despite the perception that its inclusion may otherwise seem antithetical to VMT reduction efforts.

Source: MTC Plan Bay Area 2050 Equity Priority Communities, available from: https://bayareametro.github.io/Spatial-Analysis-Mapping-Projects/Project-Documentation/Equity-Priority-Communities/.

2. VMT Summary

Estimated total VMT per service population rates for geographies within Santa Clara County under year 2015 Conditions and year 2040 Conditions are presented below. This content provides an increasingly detailed look at the VMT landscape for Santa Clara County and highlights the geographic areas that have the highest total VMT per service population in the County and thus might require more mitigation options.

VMT summaries are provided via a series of tables and figures. Estimates are presented first for Santa Clara County as a whole, then for EPC and non-EPC areas, and lastly for all of the individual member jurisdictions plus unincorporated areas and Federal Land.[2] Tabular estimates are followed by heat maps illustrating the areas of high and low[3] VMT rates (refer to attached **Figures 1** and **2**). As the VMT analysis was done at the TAZ level, the heat map data is summarized using the VTA travel model TAZ boundaries. EPC TAZs are those that are within the MTC's Equity Priority Community boundaries plus the TAZs that include Alviso.

2.1 Santa Clara Countywide Total VMT per Service Population Summary

The tables below present the changes in the Santa Clara County service population and total VMT per service population. For this analysis, service population is defined as the sum of all residents and employees. **Table 2** presents the total service population for Santa Clara County, which is anticipated to increase by about 33 percent between 2015 and 2040.

[2] For completeness and consistency with previous VTA VMT summaries, the federal lands VMT rates are included; however, because federal land is not typically subject to CEQA, this portion of the county is unlikely to participate in the VMT Mitigation Program Framework.

[3] "Low VMT" rate is defined as 85% of the countywide baseline (Year 2015) total VMT per service population rate.

Table 2: Santa Clara County Service Population

Year	Residents	Employees	Total Service Population
Year 2015 (A)	1,856,260	1,040,520	2,896,740
Year 2040 (B)	2,553,660	1,302,700	3,856,390
Absolute Change (B-A=C)	697,400	262,180	959,650
Percent Change (C/A*100%=D)	**37.6%**	**25.2%**	**33.1%**

Source: VTA travel model land use summarized by Fehr & Peers, 2023.

Table 3 presents the total VMT per service population for Santa Clara County, which is anticipated to decrease by almost 4 percent from 2015 to 2040. This indicates that the rate of total VMT generation per person is expected to decline over time, such that the total countywide VMT grows more slowly than the service population.

Table 3: Santa Clara Countywide Total VMT per Service Population

Year	Total VMT	Service Population	Total VMT per Service Population
Year 2015 (A)	88,209,870	2,896,740	30.45
Year 2040 (B)	113,057,030	3,856,390	29.32
Absolute Change (B-A=C)	24,847,160	959,650	-1.13
Percent Change (C/A*100%=D)	**+28.2%**	**+33.1%**	**-3.7%**

Source: Fehr & Peers, 2023.

When we distinguish between and EPC and non-EPC areas (as shown in **Table 4**), we see that EPC areas have lower overall VMT rates than non-EPC areas. Over the time period of this study, both EPC and non-EPC areas are projected to experience a similar absolute decline in the VMT rate (about one total VMT per service population reduction). However, because the EPC areas start from a lower base value, the percentage decline in VMT rate is slightly greater in EPC areas than in non-EPC areas.

Table 4: Total VMT per Service Population for non-EPC and EPC Areas

Year	Total VMT	Service Population	Total VMT per Service Population
Non-EPC Areas			
Year 2015 (A)	74,708,340	2,398,230	31.15
Year 2040 (B)	95,441,930	3,176,210	30.05
Absolute Change (B-A=C)	20,733,590	777,980	-1.10
Percent Change (C/A*100%=D)	**+27.8%**	**+32.4%**	**-3.5%**
EPC Areas			
Year 2015 (E)	13,501,530	498,520	27.08
Year 2040 (F)	17,615,090	680,150	25.90
Change (F-E=G)	4,113,560	181,630	-1.18
Percent Change (G/E*100%=H)	**+30.5%**	**+36.4%**	**-4.4%**

Source: Fehr & Peers, 2023.

2.2 Total VMT per Service Population Summary by City

The tables below present the anticipated changes in total VMT per service population for all the local jurisdictions within Santa Clara County under year 2015 and year 2040 conditions.

Under year 2015 Conditions, the total VMT per service population ranges between about 27 and 36 for most of the incorporated jurisdictions, with a few jurisdictions at higher values (refer to **Table 5**). Notably, jurisdictions that contain several EPC areas, such as San Jose and Sunnyvale, tend to have lower VMT rates (27.89 and 27.02, respectively) compared to jurisdictions with no EPC areas such as Los Gatos (36.36) or Morgan Hill (41.68).

Table 5: Santa Clara County Total VMT per Service Population by Jurisdiction (Year 2015)

Jurisdiction	Total VMT	Service Population	Total VMT per Service Population
Campbell	2,212,250	67,040	33.00
Cupertino	3,334,960	92,370	36.10
Gilroy	2,629,120	76,520	34.36
Los Altos	1,659,970	48,330	34.35
Los Altos Hills[1]	839,450	10,110	83.03
Los Gatos	1,629,390	44,810	36.36
Milpitas	4,065,370	133,980	30.34
Monte Sereno	163,970	4,480	36.60
Morgan Hill	2,461,410	59,060	41.68
Mountain View	5,422,130	166,160	32.63
Palo Alto	5,566,030	166,440	33.44
San Jose	39,048,660	1,400,110	27.89
Santa Clara	7,561,840	270,450	27.96
Saratoga	1,280,710	34,600	37.01
Sunnyvale	6,411,160	237,250	27.02
Santa Clara County (unincorporated)	3,919,720	84,880	46.18
Federal Land	3,730	150	24.87

Note:
1. Los Altos Hills total VMT per service population is greater than other jurisdictions because the total VMT for Los Altos Hills includes the Foothill College VMT and has a relatively small service population (residents and employees) compared to other jurisdictions that have a college.

Source: Fehr & Peers, 2023.

As shown in **Table 6**, under year 2040 Conditions the total VMT per service population is projected to be lower than in 2015 in most of the jurisdictions, with similar observations about how jurisdictions that contain EPC areas tend to have lower VMT rates compared to jurisdictions that do not contain EPC areas. There are a few jurisdictions where the total VMT rate is projected to increase compared to year 2015 levels; this includes the cities of Campbell, Gilroy, Los Gatos, Milpitas, Morgan Hill, and Saratoga.

Table 6: Santa Clara County Total VMT per Service Population by Jurisdiction (Year 2040)

Jurisdiction	Total VMT	Service Population	Total VMT per Service Population
Campbell	2,557,610	75,910	33.69
Cupertino	3,949,740	114,770	34.41
Gilroy	3,761,890	101,540	37.05
Los Altos	1,827,310	53,740	34.00
Los Altos Hills[1]	805,190	10,020	80.36
Los Gatos	1,999,030	52,300	38.22
Milpitas	5,022,380	162,390	30.93
Monte Sereno	146,700	4,210	34.85
Morgan Hill	3,323,950	77,110	43.11
Mountain View	7,013,700	228,620	30.68
Palo Alto	6,306,810	193,630	32.57
San Jose	52,324,860	1,922,620	27.22
Santa Clara	10,155,590	409,460	24.80
Saratoga	1,348,960	35,600	37.89
Sunnyvale	8,168,600	317,350	25.74
Santa Clara County (unincorporated)	4,230,040	91,830	46.06
Federal Land	114,670	5,290	21.68

Note:
1. Los Altos Hills total VMT per service population is greater than other jurisdictions because the total VMT for Los Altos Hills includes the Foothill College VMT and has a relatively small service population (residents and employees) compared to other jurisdictions that have a college.

Source: Fehr & Peers, 2023.

Heat Maps

Error! Reference source not found. Attached to this memorandum are maps showing the total VMT per service population for 2015 and 2040 for each TAZ in Santa Clara County (refer to **Figures 1** and **2**). As noted previously, for the purpose of these heat maps, "Low VMT" is defined as 85 percent of the countywide Year 2015 total VMT per service population rate. In general, low VMT areas are concentrated in the middle of the county and tend to align with EPC areas. Put a different way, most EPC areas already have relatively lower VMT generation rates than non-EPC areas, so significant VMT impacts are more likely to occur in non-EPC areas.

Given housing and job targets for the Bay Area, roughly 85 percent of future development is expected to occur within the northern part of the county encompassing Palo Alto, Mountain View, Sunnyvale, Santa Clara, and San José, as indicated on **Figures 1** and **2.** This area overlaps with the concentration of EPC areas. Most of the future development in the County, both in EPC and non-EPC areas, is anticipated to occur in locations where future VMT rates will exceed the 85 percent below baseline target.

Potential VMT Reductions Needed

This section addresses issues around identifying where and of what magnitude future VMT reductions might be needed in Santa Clara County, which could help inform the design of a VMT mitigation program framework. This is a complex question and there are a variety of different scenarios that could be explored. For the purposes of this section, we have looked at the ramifications of setting VMT reduction targets at two different levels:

- Desired Rate is 85 percent of the Baseline Rate: One option would be setting a target of 85 percent of the baseline VMT rate; this is consistent with how most of the local jurisdictions have set their CEQA thresholds under SB 743, in which they have established a goal that new development should generate VMT at a rate that is at least 15 percent lower than the existing baseline.
- Desired Rate is 70 percent of the Baseline Rate: A second option would be setting a target of 70 percent of the baseline VMT rate; this is similar to the most recent publication from CARB in their 2022 Scoping Plan, in which they set a statewide goal that VMT per capita be reduced to 30 percent below 2019 levels by the year 2045.

The values presented in **Table 7** reflect the results of the calculations related to the two VMT reduction targets for future development per CEQA Statues and Guidelines (i.e., future development is allowed to grow at a desired VMT rate).

- Potential VMT Reductions Associated with Future Development per CEQA Statues and Guidelines (Concept: Future development is allowed to grow at a desired VMT rate): It is important to point out that CEQA thresholds under SB 743 apply to lead agency decisions that are subject to CEQA review; hence, these thresholds apply only to future development proposals and are not designed to affect the travel characteristics of existing land uses. Under such scenarios, the future development is 'allowed' to grow at the desired VMT rate. The projected amount of new total VMT exceeding the desired VMT growth budget is the difference between the projected net increase in Countywide VMT and the allowed net increase in future development total VMT.
- Potential Overall Countywide VMT Reductions to Achieve CARB Scoping Plan Goals (Concept: Existing and future development have a desired VMT budget): By contrast, the CARB goals apply uniformly across the entire state and express the state's recommendation that all sources of VMT (both existing and future) should be reduced to meet the state's climate targets. Under such scenarios (refer to scenarios 3 and 4), the existing and future development (refer to line 7) can generate VMT at the desired VMT rate (refer to line 2) to a total year 2040 countywide VMT budget (refer to line 8). The projected amount of total countywide VMT exceeding the desired VMT budget (refer to line 10) is the difference between the projected total year 2040 Countywide VMT (refer to line 9) and total year 2040 countywide VMT budget (refer to line 8).

Table 7: Estimates of Potential VMT Reductions Needed under Different Scenarios

	Desired Rate = 85% of Baseline Rate	Desired Rate = 70% of Baseline Rate
Potential VMT Reductions Associated with Future Development per CEQA Statutes and Guidelines		
	Scenario 1	Scenario 2
1. Baseline VMT Rate (Total VMT per Service Population) (A)	30.45	30.45
2. Desired VMT Rate[1] (B)	25.88	21.32
3. Net Increase in Service Population, 2015-2040 (C)	959,650	959,650
4. Net Increase in Total VMT Budget if Future Growth were to Achieve Desired VMT Rate (D=C*B)	24,835,740	20,459,740
5. Projected Net Increase in Countywide VMT, 2015-2040 (E)	24,847,160	24,847,160
6. Projected Amount of New VMT Exceeding the Desired VMT Growth Budget (F=E-D)	**11,420**	**4,387,420**
Potential Overall Countywide VMT Reductions to Achieve CARB Scoping Plan Goals		
	Scenario 3	Scenario 4
1. Baseline VMT Rate (Total VMT per Service Population) (A)	30.45	30.45
2. Desired VMT Rate[2] (B)	25.88	21.32
7. Year 2040 Countywide Service Population (G)	3,856,390	3,856,390
8. Total Year 2040 Countywide VMT Budget if the County were to Achieve the Desired VMT Rate (H=G*B)	99,803,370	82,218,230
9. Projected Total Year 2040 Countywide VMT (I)	113,057,030	113,057,030
10. Projected Amount of Total Countywide VMT Exceeding the Desired VMT Budget (J=I-H)	**13,253,660**	**30,838,800**

Note:
1. Note that most local jurisdictions have set a desired threshold at 85% of the baseline rate.
2. Note that the 2022 CARB Scoping Plan sets a statewide target of reducing the VMT rate to 70% of baseline levels by 2045.

Source: Fehr & Peers, 2023.

The overall countywide VMT rate is projected to decline between 2015 and 2040, based on the assumptions reflected in the VTA travel model. When looking solely at new development's effect on countywide VMT (as shown in the top portion of **Table 7**), the results indicate that the modeled growth in countywide VMT is expected to largely align with a target of 85 percent of the baseline rate (that is, the amount of new VMT that exceeds that desired VMT budget is relatively small). However, it is important to note that this result may be misleading in the sense that it blends a wide range of locally specific actions which will be evaluated separately. Future development proposals will be evaluated by the jurisdiction within which that development will occur.

There is a wide range of VMT rates across the local jurisdictions in Santa Clara County and several jurisdictions are projected to experience increased VMT rates over time, so future developments proposed in those jurisdictions will be more likely to trigger significant VMT impacts, a fact which can be obscured when looking at countywide average VMT values. **Figure 1** presents the existing total VMT alongside the new VMT exceeding the desired VMT growth budget for the 85 percent of baseline VMT rate and 70 percent of baseline VMT rate, respectively.

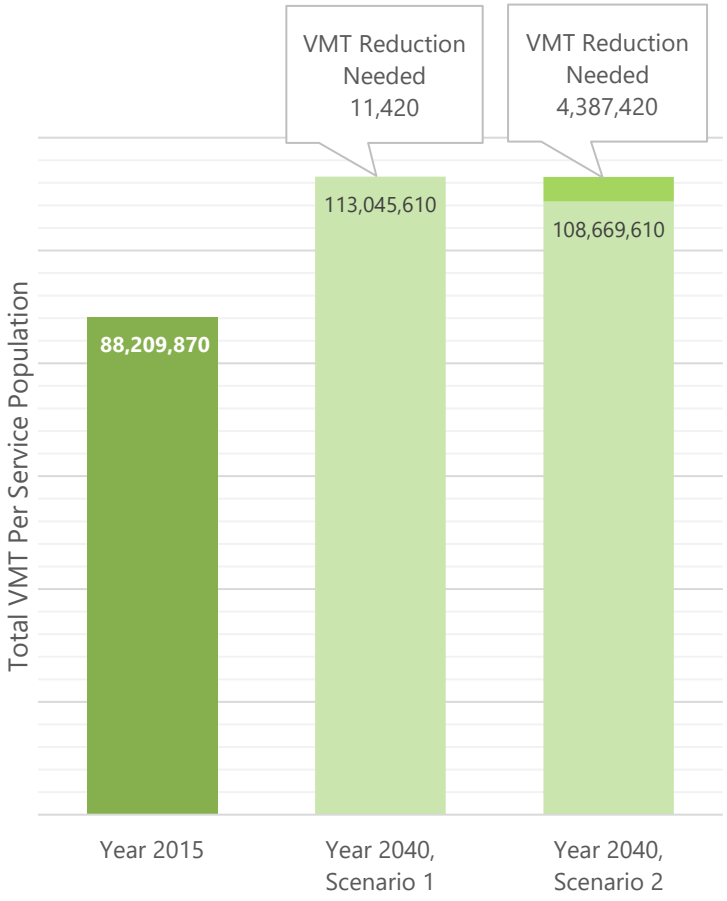

Figure 1. Potential VMT Reductions Associated with Future Development per CEQA Statutes and Guidelines, 2015-2040.

The lower portion of **Table 7** shows the results of applying a desired VMT reduction target across the board to all existing and future land uses countywide, per the latest CARB goals. Not surprisingly, these calculations indicate that VMT rates in the county would need to drop substantially beyond what is already projected to achieve the desired targets (that is, the amount of projected VMT exceeding the desired target is large). **Figure 2** presents the existing Total VMT alongside the desired county budget for the 85% of baseline VMT rate and 70% of baseline VMT rate, respectively.

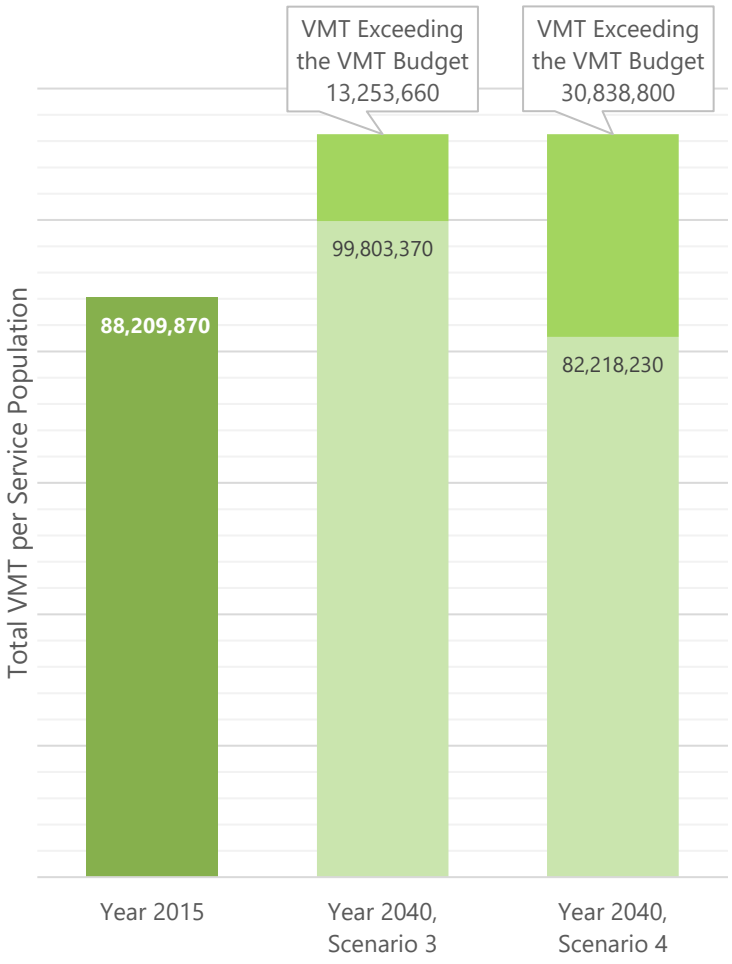

Figure 2. Potential Overall Countywide VMT Reductions to Achieve CARB Scoping Plan Goals, 2015-2040.

To get more refined geographic information about the potential need for future VMT reductions, **Table 8** looks at the proportion of all the TAZs in Santa Clara County where the future VMT rate is projected to exceed a desired target rate; as above, two options for a desired target rate are presented, one being 85 percent of the baseline and the other being 70 percent of the baseline.

EPC areas generally have lower VMT rates than non-EPC areas. Even so, in a scenario where the desired target rate is set at 85 percent of the baseline rate, almost half (47 percent) of the EPC-area TAZs have future VMT rates that would exceed that desired target, and almost 60 percent of the non-EPC area TAZs would exceed that target. For obvious reasons, if the desired target were set at a more aggressive level of 70 percent of the baseline rate, then even more of the TAZs would exceed that target; this is particularly notable in the non-EPC areas, where close to three-quarters of TAZs would exceed such a target.

While each TAZ represents a distinct geographic area, some areas will experience more future development activity than others. In a scenario where the desired target rate is set at 85 percent of the baseline, the proportion of future growth occurring in the EPC and non-EPC TAZs with a total VMT per service population rate that exceeds the target is 42 percent and 56 percent, respectively; this growth represents the future development that would be most likely to trigger a significant VMT impact during a CEQA review process. Again, for obvious reasons, if the desired target were set at a more aggressive level of 70 percent of baseline, even more future development would occur in TAZs that exceed such a target.

Table 8: Total VMT per Service Population Characteristics by TAZ

		Desired Rate = 85% of Baseline Rate		Desired Rate = 70% of Baseline Rate	
	Average VMT Rate Year 2040	% of TAZs with a High VMT Rate	% of Future Growth in High VMT Rate TAZs	% of TAZs with a High VMT Rate	% of Future Growth in High VMT Rate TAZs
EPC Areas	25.90	47%	42%	58%	64%
Non-EPC Areas	30.05	58%	56%	74%	76%
Countywide	29.32	56%	54%	71%	74%

Source: Fehr & Peers, 2023.

Next Steps

The information presented here uses a range of methods and scenarios to investigate the amount of and locations where future VMT reductions may be needed, to help inform the design of a VMT mitigation program framework. Some of the conclusions drawn from these results include the following:

- As an overall countywide average, VMT rates are anticipated to decline over time, such that the total amount of countywide VMT will increase more slowly than the countywide population.
- In general, EPC areas currently have lower VMT rates than non-EPC areas and those rates are expected to decline somewhat faster than the rates in non-EPC areas. This raises interesting questions about how a VMT mitigation program framework could focus its VMT-reducing activities; for example, should the program's focus be on strategies that would further reduce the already low VMT from EPC residents and employees, or should the focus be to accelerate reductions in those non-EPC areas that are currently generating relatively high levels of VMT?

- When looking solely at a new development's effect on countywide VMT, the results indicate that the modeled growth in countywide VMT is expected to largely align with a target of 85 percent of the baseline rate (that is, the amount of new VMT that exceeds that desired VMT budget is relatively small). However, it is important to note that this result may be misleading in the sense that it blends a wide range of locally specific actions which will be evaluated separately and will likely result in project-by-project VMT analysis identifying a greater VMT reduction needed.
- There is a wide range of VMT rates across the local jurisdictions in Santa Clara County and several jurisdictions are projected to experience increased VMT rates over time, so future developments proposed in those jurisdictions will be more likely to trigger significant VMT impacts, a fact which can be obscured when looking at countywide average VMT values.
- To achieve the State's climate goals, both existing and future development would need to make substantial reductions in VMT rates. Reductions in the VMT rates associated with existing development are beyond the scope of a VMT mitigation program like this project, which is designed to provide mitigation options for future development.
- In both EPC and non-EPC areas, a sizeable proportion of future development is anticipated to occur in locations where future VMT rates would not meet a target of 85 percent below baseline levels. Future developments in such areas would be more likely to trigger a significant VMT impact and to need mitigation options that could be provided by a mitigation program.

Attachments

Attachment A: External Station Adjustments
Figure 1. High and Low Total VMT (2015) with Equity Priority Community Areas in Santa Clara County
Figure 2. High and Low Total VMT (2040) with Equity Priority Community Areas in Santa Clara County

Attachment A: External Station Adjustments

Table A-1: External Station Adjustments at Bay Area Regional Boundary

External Station (Connecting County)	Distance (Miles)
SR 1 – Mendocino County	9.4
US 101 – Mendocino County	48.4
SR 29 – Lake County	21.4
I-505 – Yolo County	101.2
SR 113 – Yolo County	12.9
I-80 – Yolo County	39.2
SR 12 – San Joaquin County	No adjustment made to these external station distances because the VTA travel model area includes San Joaquin County.
SR 4 – San Joaquin County	*Same as above*
I-205 – San Joaquin County	*Same as above*
SR 152 – Merced County	162.9
SR 25 – San Benito County	No adjustment made to these external station distances because the VTA travel model area includes San Benito County.
US 101 – San Benito County	*Same as above*
SR 152 – Santa Cruz County	No adjustment made to these external station distances because the VTA travel model area includes Santa Cruz County.
SR 17 – Santa Cruz County	*Same as above*
SR 9 – Santa Cruz County	*Same as above*
SR 1 – Santa Cruz County	*Same as above*

Notes: External station adjustments rounded to nearest tenth of a mile.
Source: California statewide travel demand mode (CSTDM) was used to develop the VTA Travel Model land use summary prepared by Fehr & Peers, 2021.

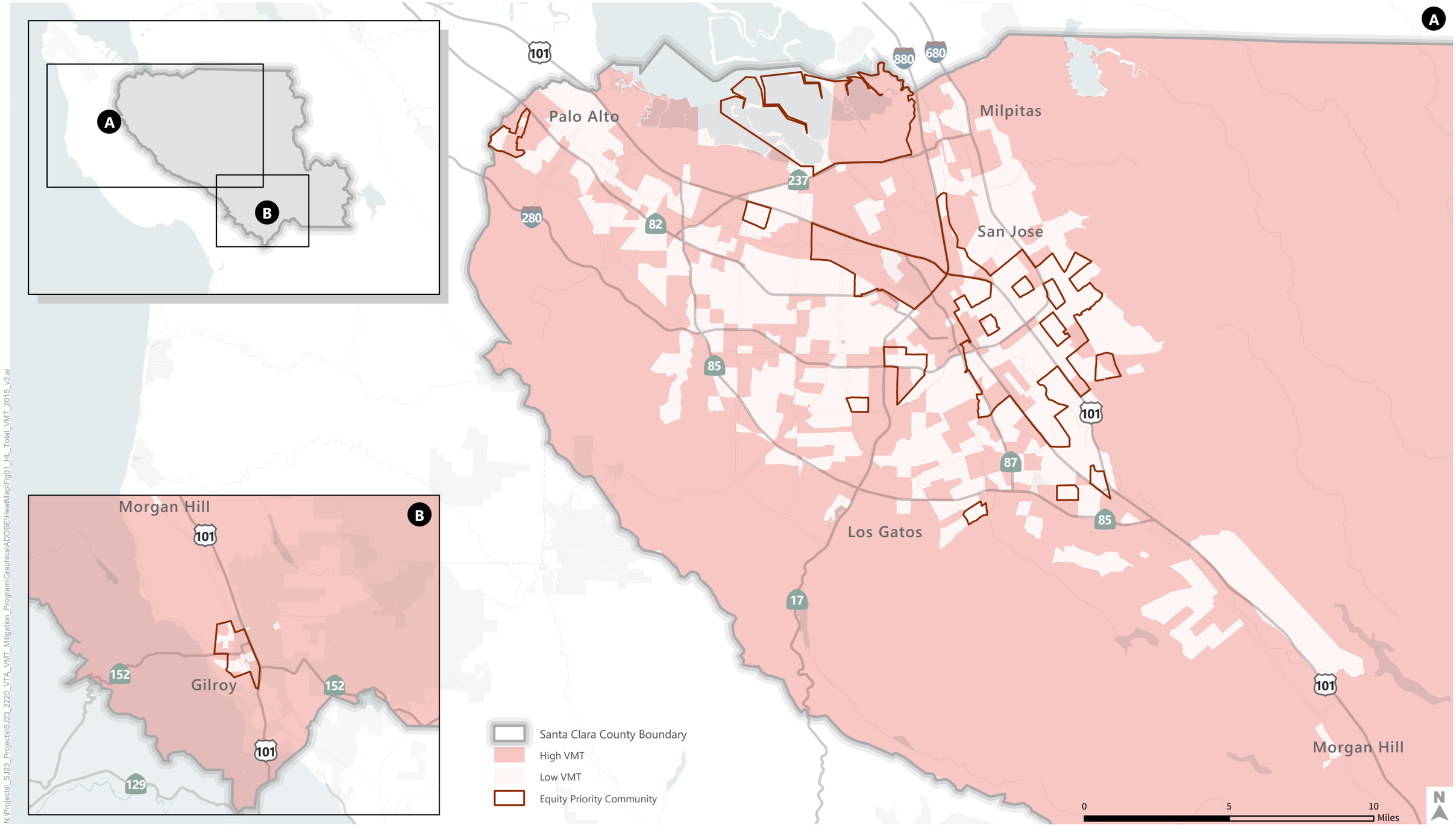

Figure 1

High and Low Total VMT (2015) with Equity Priority Community Boundaries in Santa Clara County

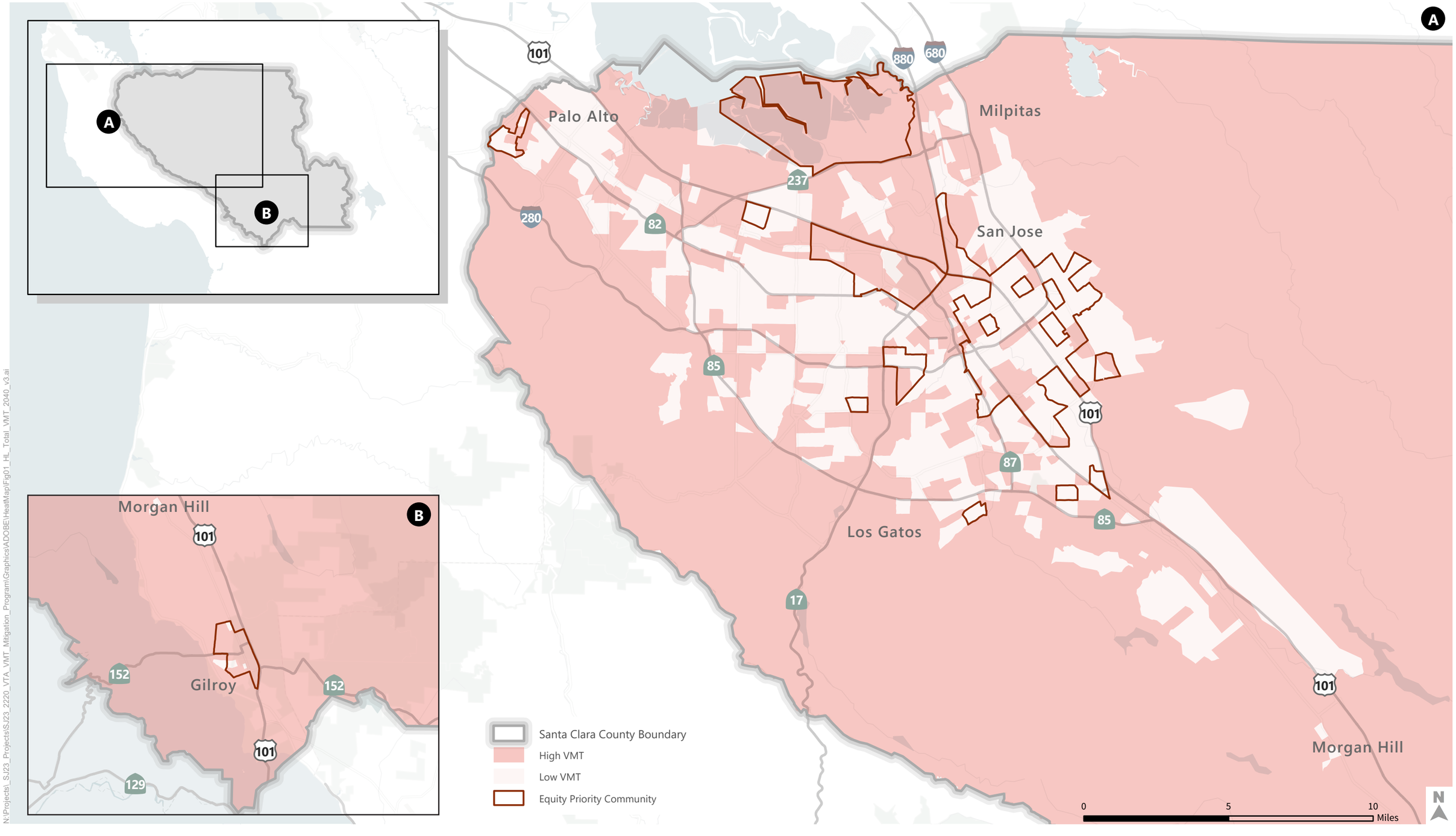

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Figure 2

High and Low Total VMT (2040) with Equity Priority Community Boundaries in Santa Clara County

Appendix G: Community Web Survey Results

Valley Transportation Authority

Web Survey of Community Travel Needs, Challenges, and Preferences

Introduction

The project team disseminated a Web Survey of Community Travel Needs, Challenges, and Preferences to members of Santa Clara County via the Social Point website. The survey ran from October 3, 2023 through December 10, 2023 and garnered 392 unique responses.

The survey was comprised of 27 multiple choice questions including 14 multiple choice, 4 open ended, and 9 demographic and/or administrative questions. Results are summarized below.

Results

Question 1: Do you have a regular trip that you make at least 2 days per week? Please select the options that you do most often.

Response Options	Number of Responses	Percent of Responses
Yes, I travel to work at least 2 days per week	267	57%
Yes, I travel to school for myself or for school drop off at least 2 days per week	69	15%
Yes, I travel to a senior center/community center at least 2 days per week	15	3%
No, I have no regular location that I travel to at least 2 days per week	51	11%
Yes, I travel to another location at least 2 days per week (List):	65	14%

Question 2: How do you normally travel for your regular trip? (Select up to 2 options)

Response Options	Number of Responses	Percent of Responses
Driving Alone	151	27%
Carpooling/Vanpooling	32	6%
Walking	43	8%
Bicycling	103	18%
Riding a Scooter/Electric Scooter	4	1%
Riding VTA Bus or Light Rail	142	25%
Riding Caltrain/BART	62	11%
Using Rideshare (e.g., Uber/Lyft)	9	2%
Other	11	2%

Question 3: What is most important to you when choosing how to get around for your regular trip?

Response Options	Number of Responses	Percent of Responses
Cost/Affordability	50	15%
Travel Time/Speed	136	40%
Availability/Convenience of Location	52	15%
Safety	25	7%
Physical Abilities or Disabilities	3	1%
Health Benefits/Desire for Exercise	20	6%
COVID-19/Social Interaction	1	0%
Reliability/Certainty/Stress Reduction	31	9%
Helping the Environment	21	6%
Other	4	1%

Question 4: What are the primary ways you travel for occasional travel (such as getting groceries or visiting friends and relatives)? (Select up to 2 options)

Response Options	Number of Responses	Percent of Responses
Driving Alone	221	33%
Carpooling/Vanpooling	77	12%
Walking	102	15%
Bicycling	115	17%
Riding a Scooter/Electric Scooter	3	0%
Riding VTA Bus or Light Rail	93	14%
Riding Caltrain/BART	34	5%
Using Rideshare (e.g., Uber/Lyft)	20	3%
Other	6	1%

Question 5: What reason is the most important to you when choosing how you travel for occasional trips (such as getting groceries or visiting friends and relatives)?

Response Options	Number of Responses	Percent of Responses
Cost/Affordability	46	12%
Travel Time/Speed	146	37%
Availability/Convenience of Location	108	28%
Safety	17	4%
Physical Abilities or Disabilities	5	1%
Health Benefits/Desire for Exercise	16	4%
COVID-19/Social Interaction	2	0%
Reliability/Certainty/Stress Reduction	18	5%
Helping the Environment	26	7%
Other	8	2%

Question 6: Please provide the zip code you live in

391 respondents provided zip codes including 55 specific to Santa Clara County and 25 specific to jurisdictions outside the county.

Question 7: Please provide the zip code you work in

205 respondents provided zip codes including 41 specific to Santa Clara County and 14 specific to jurisdictions outside the county.

Question 8: Carshare (e.g., Zipcar or Turo)

Response Options	Number of Responses	Percent of Responses
1 (Not at all interested)	190	48%
2 (Slightly interested)	98	25%
3 (Interested)	61	16%
4 (Very interested)	33	8%
I already use this regularly	10	3%

Question 9: Public Transportation

Response Options	Number of Responses	Percent of Responses
1 (Not at all interested)	15	4%
2 (Slightly interested)	40	10%
3 (Interested)	64	16%
4 (Very interested)	109	28%
I already use this regularly	164	42%

Question 10: Walking

Response Options	Number of Responses	Percent of Responses
1 (Not at all interested)	33	8%
2 (Slightly interested)	41	11%
3 (Interested)	74	19%
4 (Very interested)	51	13%
I already use this regularly	193	49%

Question 11: Bicycling

Response Options	Number of Responses	Percent of Responses
1 (Not at all interested)	66	17%
2 (Slightly interested)	51	13%
3 (Interested)	48	12%
4 (Very interested)	77	20%
I already use this regularly	150	38%

Question 12: Carpooling/Vanpooling

Response Options	Number of Responses	Percent of Responses
1 (Not at all interested)	169	43%
2 (Slightly interested)	111	28%
3 (Interested)	57	15%
4 (Very interested)	26	7%
I already use this regularly	29	7%

Question 13: If you prefer not to use carshare (e.g., Zipcar/Turo) what are your top three reasons? Or if you do use carshare, what are three of your top issues? (Select up to 3 options)

Response Options	Number of Responses	Percent of Responses
Cost/Affordability	203	22%
Travel Time/Speed	109	12%
Need for Flexibility	166	18%
Lack of Availability/Inconvenience in Location	187	20%
Inability to Drive	32	4%
Physical Abilities or Disabilities	12	1%
Health Benefits/Desire for Exercise	36	4%
COVID-19/Social Interaction	22	2%
Safety Concerns	74	8%
Lack of Car Seats, Bike Racks, or Other Specialized Travel Gear	33	4%
Other	43	5%

Question 14: If you prefer not to ride public transportation what are your top three reasons? Or if you do ride public transportation, what are three of your top issues? (Select up to 3 options)

Response Options	Number of Responses	Percent of Responses
Cost/Affordability	47	5%
Travel Time/Speed	263	25%
Dependability	109	10%
Need for Flexibility	68	6%
Lack of Availability/Inconvenience in Location	168	16%
Inconvenience in Riding with Small Children	9	1%
Infrequent Buses or Trains	175	16%
Limited Hours of Service	106	10%
Physical Abilities or Disabilities	8	1%
Desire for Exercise	14	1%
COVID-19/Social Interaction	18	2%
Safety Concerns	66	6%
Lack of Car Seats, Bike Racks, or Other Specialized Travel Gear	3	0%
Other	15	1%

Question 15: If you prefer not to walk what are your top three reasons? Or if you do walk, what are three of your top issues? (Select up to 3 options)

Response Options	Number of Responses	Percent of Responses
Distance	268	28%
Lack of Adequate Sidewalks and/or Crosswalks	142	15%
Lack of Shelter from Weather (e.g., trees, awning)	97	10%
Travel Time/Speed	182	19%
Need for Flexibility	18	2%
Lack of Destinations to Walk to (e.g., work, shops, services)	122	13%
Physical Abilities or Disabilities	25	3%
COVID-19/Social Interaction	3	0%
Safety Concerns	81	8%
Other	19	2%

Question 16: If you prefer not to bicycle what are your top three reasons? Or if you do bicycle, what are three of your top issues? (Select up to 3 options)

Response Options	Number of Responses	Percent of Responses
Cost/Affordability	31	3%
Distance	122	13%
Lack of Adequate Bike Lanes	215	23%
Lack of Adequate and Secure Bike Parking	198	21%
Travel Time/Speed	90	9%
Need for Flexibility	20	2%
Lack of Destinations to Bike to (e.g., work, shops, services)	39	4%
Physical Abilities or Disabilities	24	3%
COVID-19/Social Interaction	2	0%
Safety Concerns	170	18%
Other	39	4%

Question 17: If you prefer not to carpool/vanpool what are your top three reasons? Or if you do carpool/vanpool, what are three of your top issues? (Select up to 3 options)

Response Options	Number of Responses	Percent of Responses
Cost/Affordability	77	9%
Travel Time/Speed	99	11%
Need for Flexibility	229	26%
Inconvenient Location of Carpool/Vanpool Partners	162	19%
Inability to Drive	38	4%
Lack of Available Vehicle	85	10%
Physical Abilities or Disabilities	9	1%
Health Benefits/Desire for Exercise	15	2%
COVID-19/Social Interaction	55	6%
Safety Concerns	72	8%
Other	36	4%

Question 18: Which of the following would make you drive less frequently? (Select up to 2 options)

Response Options	Number of Responses	Percent of Responses
On-Demand Mobility	42	6%
Biking and Walking Paths	166	23%
Many Things To Do Close By	156	21%
Frequent and Fast Transit Service	256	35%
Transit, Bike, Carpool Incentives	31	4%
Change Travel Costs	59	8%
Other	18	3%

Question 19: Which of the following would you like to see more of in Santa Clara County? (Select up to 2 options)

Response Options	Number of Responses	Percent of Responses
On-Demand Mobility	34	5%
Biking and Walking Paths	178	24%
Many Things To Do Close By	152	21%
Frequent and Fast Transit Service	248	34%
Transit, Bike, Carpool Incentives	35	5%
Change Travel Costs	64	9%
Other	13	2%

Question 20: What are your biggest transportation challenges? Could the options you selected above help solve these challenges?

279 unique responses were received. Sample responses are reported in the Phase 1 Engagement Debrief documentation and the full body of responses will inform development of program specifications.

Question 21: Do you need access to a vehicle to meet your day-to-day needs?

Response Options	Number of Responses	Percent of Responses
Yes	205	52%
No	187	48%

Question 22: How often you feel you have adequate access to a vehicle to meet your day-to-day needs?

Response Options	Number of Responses	Percent of Responses
Always	269	69%
Sometimes	82	21%
Rarely	22	5%
Never	19	5%

Question 23: How many vehicles does your household own or lease?

Response Options	Number of Responses	Percent of Responses
0	58	15%
1	142	36%
2	119	30%
3+	73	19%

Question 24: What age range best describes you?

Response Options	Number of Responses	Percent of Responses
less than or equal to 25 years old	50	13%
26-35 years old	110	28%
36-45 years old	76	20%
46-55 years old	58	15%
56-65 years old	48	13%
66-75 years old	32	8%
76-85 years old	12	3%
greater than 86 years old	1	0%

Question 25: What race/ethnicity best describes you? (Select all that apply)

Response Options	Number of Responses	Percent of Responses
White	214	51%
Black or African American	5	1%
American Indian and Alaska Native	4	1%
Asian	120	29%
Native Hawaiian and Other Pacific Islander	8	2%
Hispanic/Latino	58	14%
Some other race	11	2%

Question 26: What gender do you identify with?

Response Options	Number of Responses	Percent of Responses
Male	223	58%
Non-Binary	15	4%
Female	149	38%
Self-describe: List	0	0%

Question 27: What income range does your household fall into?

Response Options	Number of Responses	Percent of Responses
Less than $24,999	39	11%
$25,000 to $49,999	23	6%
$50,000 to $74,999	32	9%
$75,000 to $99,999	34	9%
$100,000 to $149,999	72	19%
$150,000 or more	169	46%

Question 28: Do you have a story or comment to share? Please share any other information about your travel needs, challenges, and priorities that you would like the team to be aware of.

199 unique responses were received. Sample responses are reported in the Phase 1 Engagement Debrief documentation and the full body of responses will inform development of program specifications.

Question 29: VTA is giving out five Clipper cards pre-loaded with $50 in Clipper cash that can be used on VTA, Caltrain, BART or other transit services. Enter your email address for a chance to win.

295 respondents provided addresses.

Question 30: If you would like your results to the survey emailed to you, please enter you email address below.

15 respondents provided addresses.