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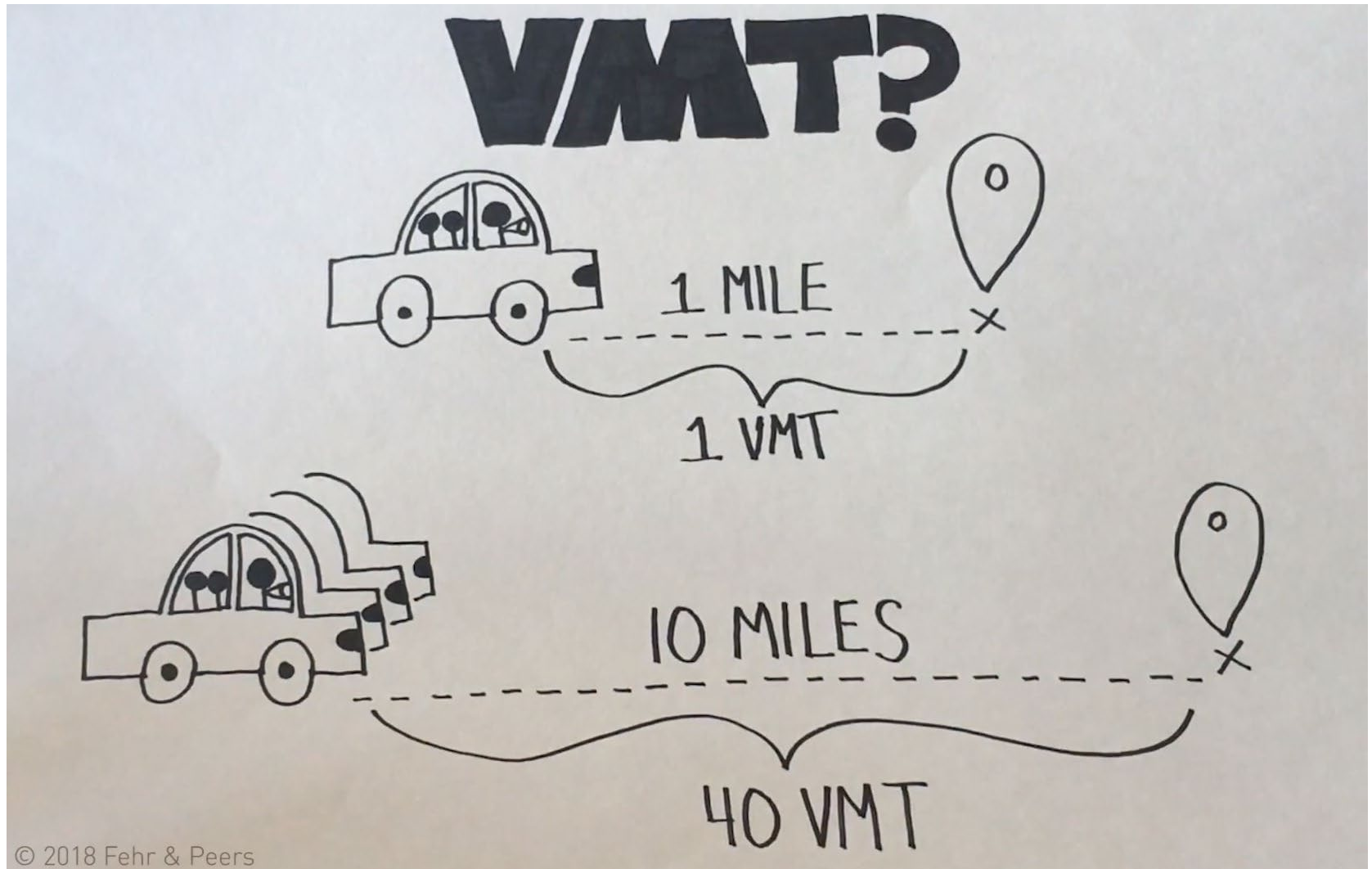
Daniel Rubins
September 22, 2020

Cupertino LOS to VMT Transition Project

Agenda

- What is VMT?
- Overview of SB 743
- Lead Agency Decisions
 - VMT Threshold
 - VMT Mitigation Actions
- Multimodal Transportation Analysis
- Next Steps

What is VMT?



Overview of Senate Bill 743

Signed into law by Governor Jerry Brown
on September 27, 2013

Legislative Intent

1. Ensure that the environmental impacts of traffic, such as noise, air pollution, and safety concerns, continue to be properly addressed and mitigated through the California Environmental Quality Act.
2. More appropriately balance the needs of congestion management with statewide goals related to **infill development**, promotion of public health through **active transportation**, and **reduction of greenhouse gas emissions**.

Overview of Senate Bill 743

DOES

Eliminates vehicle delay (i.e., LOS) as basis for determining significant CEQA impacts

Recommends VMT as the most appropriate measure of transportation impacts

Other considerations may include transit and non-motorized travel

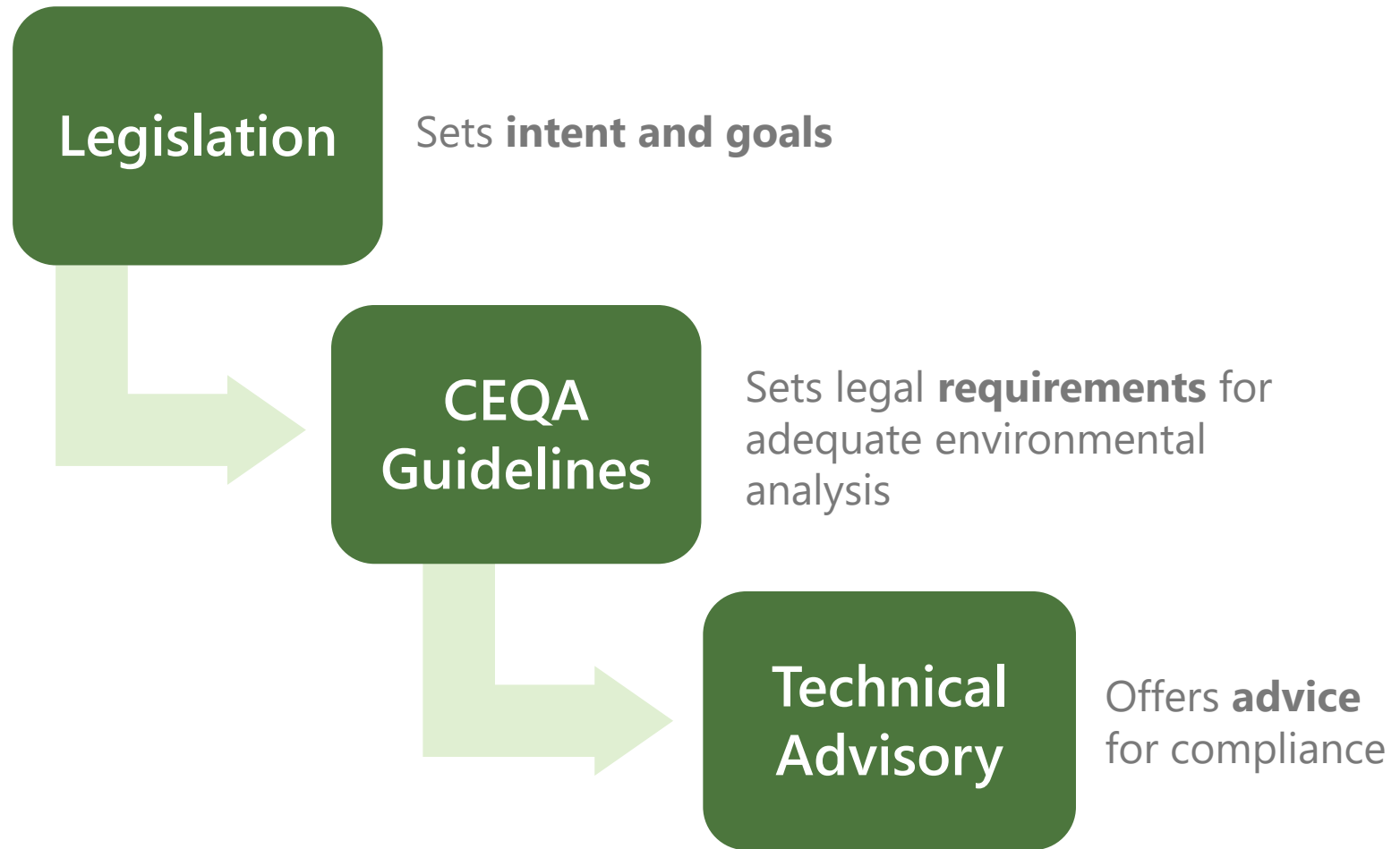
DOES NOT

Affect planning, design, or development review, except for the CEQA process

Change the General Plan or Congestion Management Plan process

Change CEQA disclosure standards

Overview of Senate Bill 743



Lead Agency Decisions

Metric

Method

Threshold

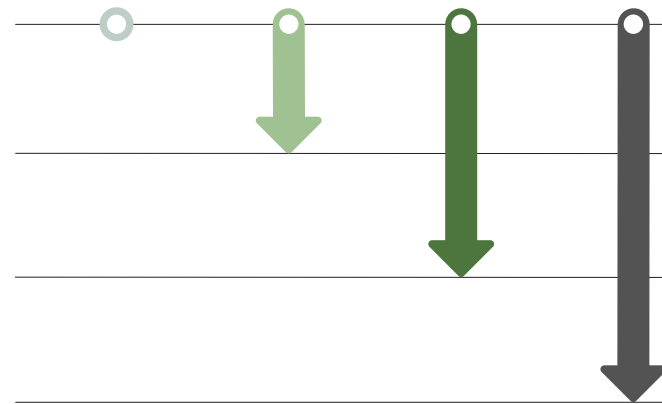
Mitigation

VMT Threshold

Project Generated VMT Rate Reduction

Change in VMT on City Streets

0%



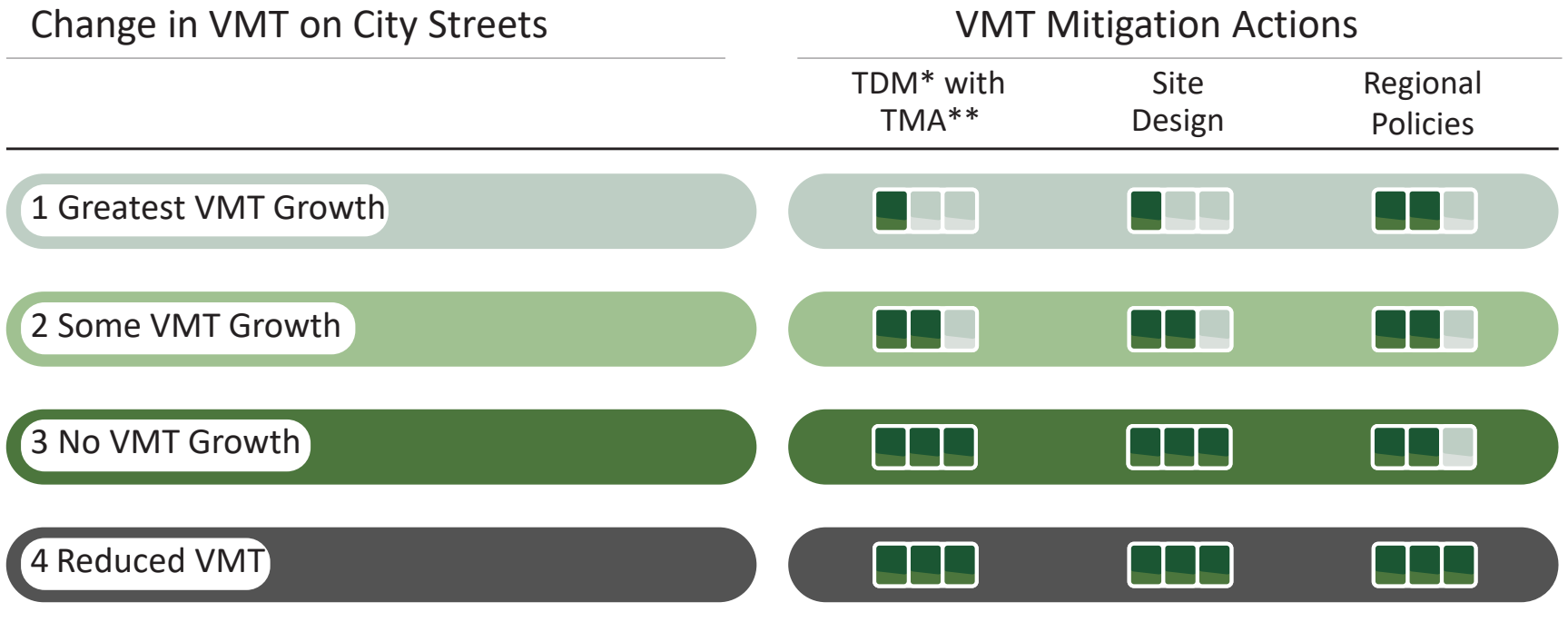
1 Greatest VMT Growth

2 Some VMT Growth

3 No VMT Growth

4 Reduced VMT

VMT Mitigation Actions



Multimodal Transportation Analysis












- *Policy M-1.2: Transportation Impact Analysis: **Participate in the development of new multi-modal analysis methods and impact thresholds as required by Senate Bill 743.** However, until such impact thresholds are developed, continue to optimize mobility for all modes of transportation while striving to maintain **the following intersection Levels of Service (LOS) at a.m. and p.m. peak traffic hours:***
 - *Major intersections: LOS D*
 - *Stevens Creek Boulevard and De Anza Boulevard: LOS E+*
 - *Stevens Creek Boulevard and Stelling Road: LOS E+*
 - *De Anza Boulevard and Bollinger Road: LOS E+*

Develop Multimodal Analysis Methods

- *Policy M-7.1: Multi-Modal Transportation Impact Analysis: Follow guidelines set by the VTA related to transportation impact analyses, while conforming to **State goals for multimodal performance targets**.*
- *Policy M-7.2: Protected Intersections: **Consider adopting a Protected Intersection policy**, which would identify intersections where improvements would not be considered, which would degrade levels of service for non-vehicular modes of transportation. Potential locations include intersections in Priority Development Areas (PDAs) and other areas where non-vehicular transportation is a key consideration, such as **near shopping districts, schools, parks and senior citizen developments**.*

Multimodal Performance Measure Options

Multimodal Performance Measure Options

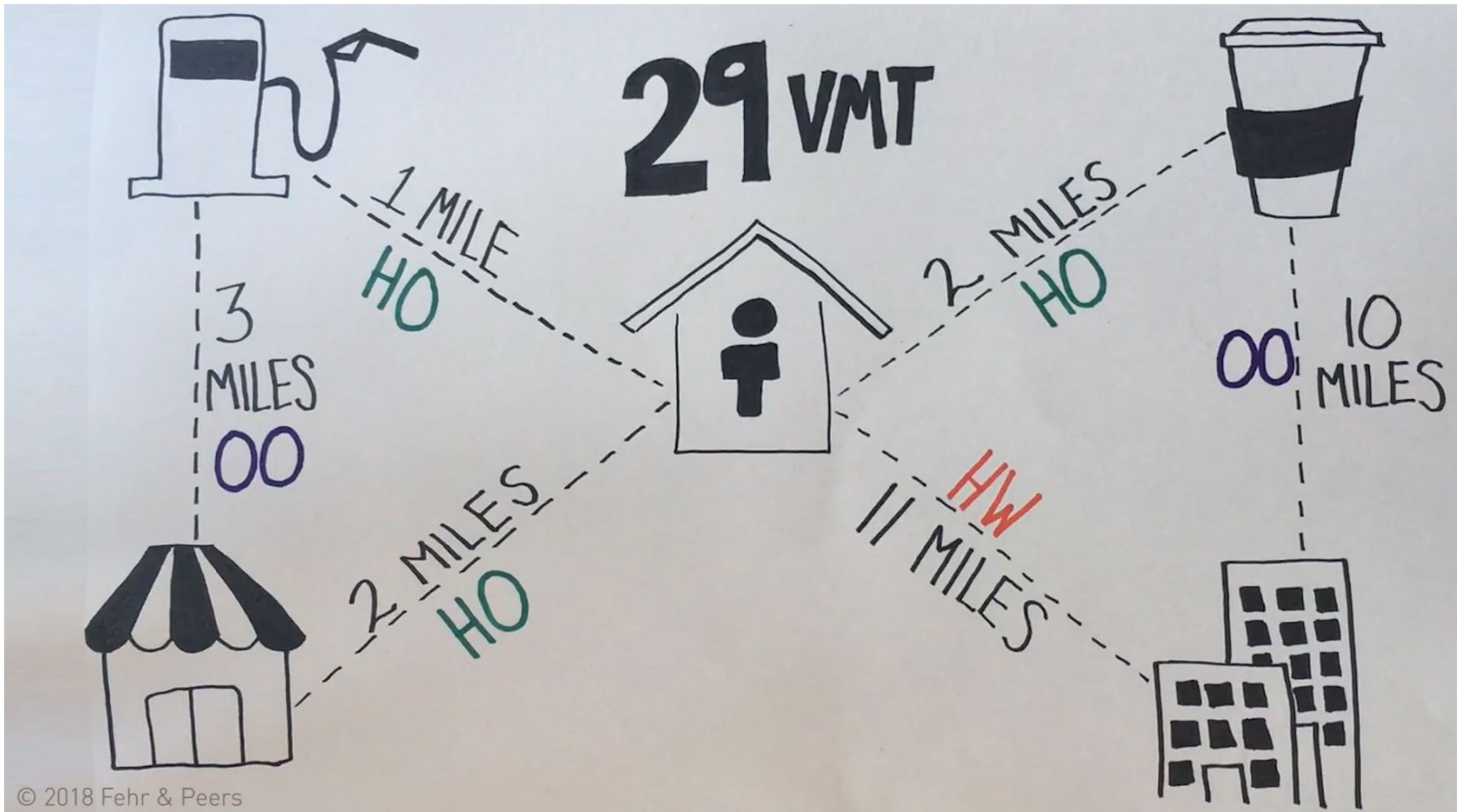
Tiered Vehicle Level of Service*	Person Delay	Layered Networks	Level of Traffic Stress
Peak 15 Minutes	Peak Hour	24 Hours	24 Hours
			
			
			
			

*Vehicle delay for automobile and transit modes are combined.

Next Steps

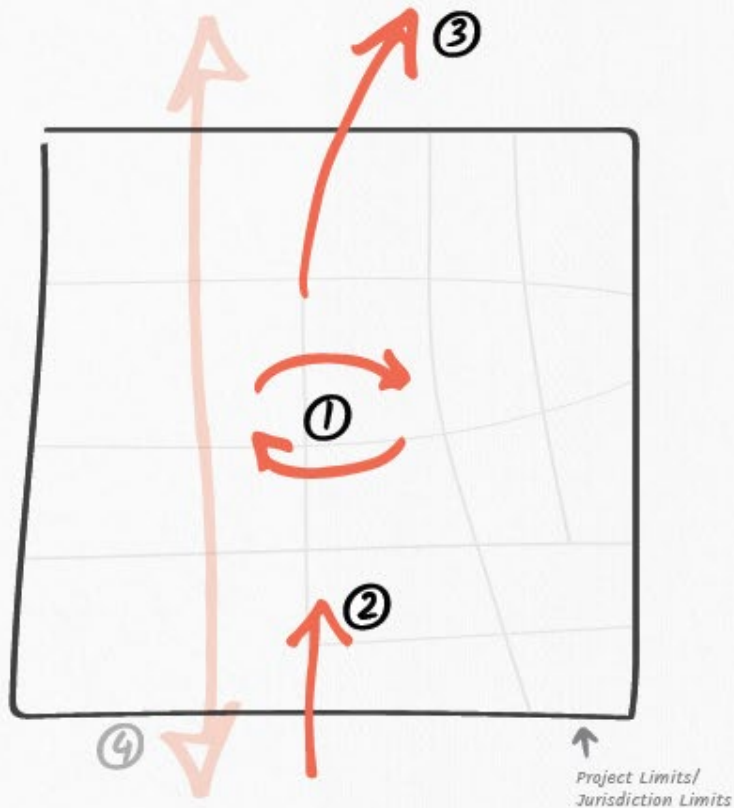
- Publish *SB 743 Implementation Decisions for the City of Cupertino: Draft*
- City Council Study Session
- Draft Local Transportation Analysis Guidelines
- Adoption of Thresholds and Local Transportation Analysis Guidelines

Additional Slides



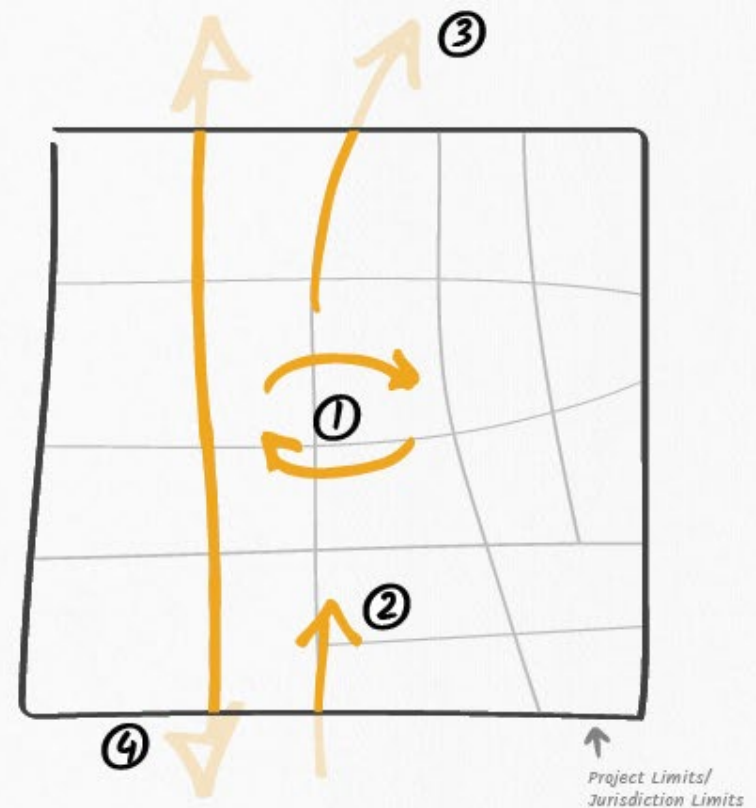
Measuring VMT

Project Generated VMT



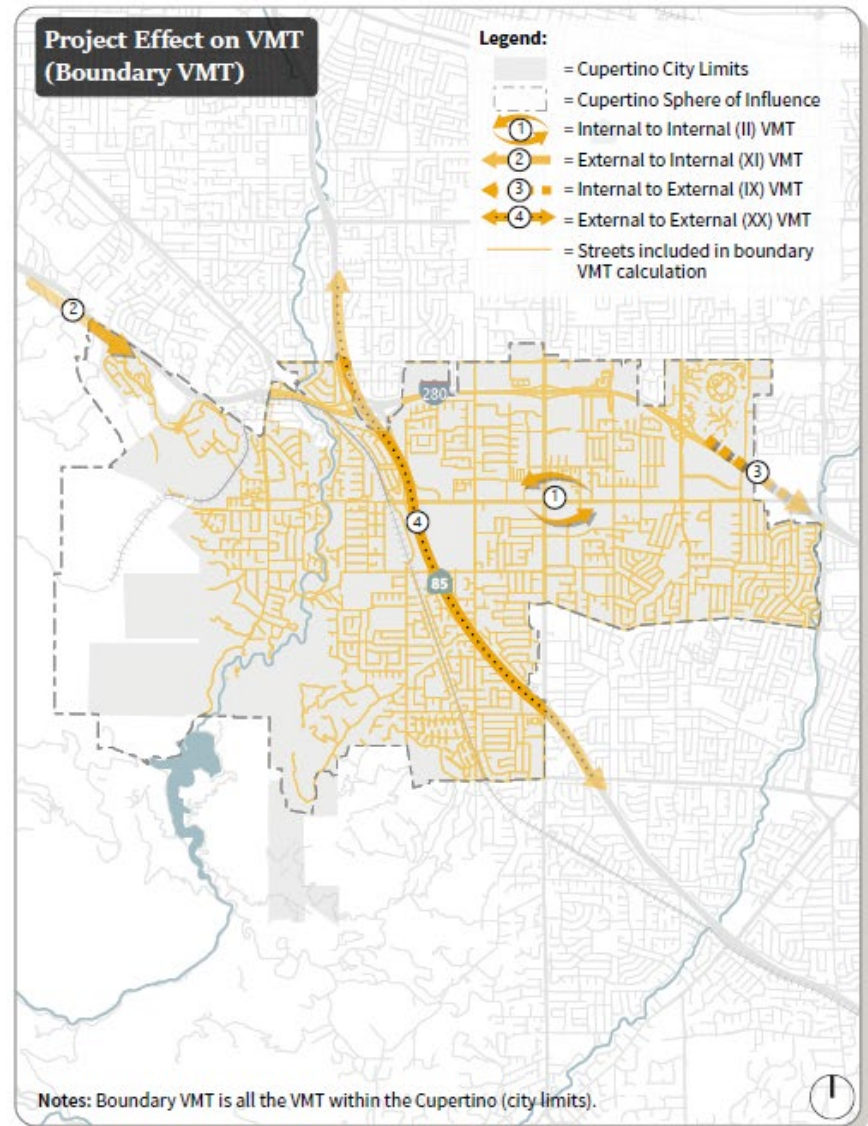
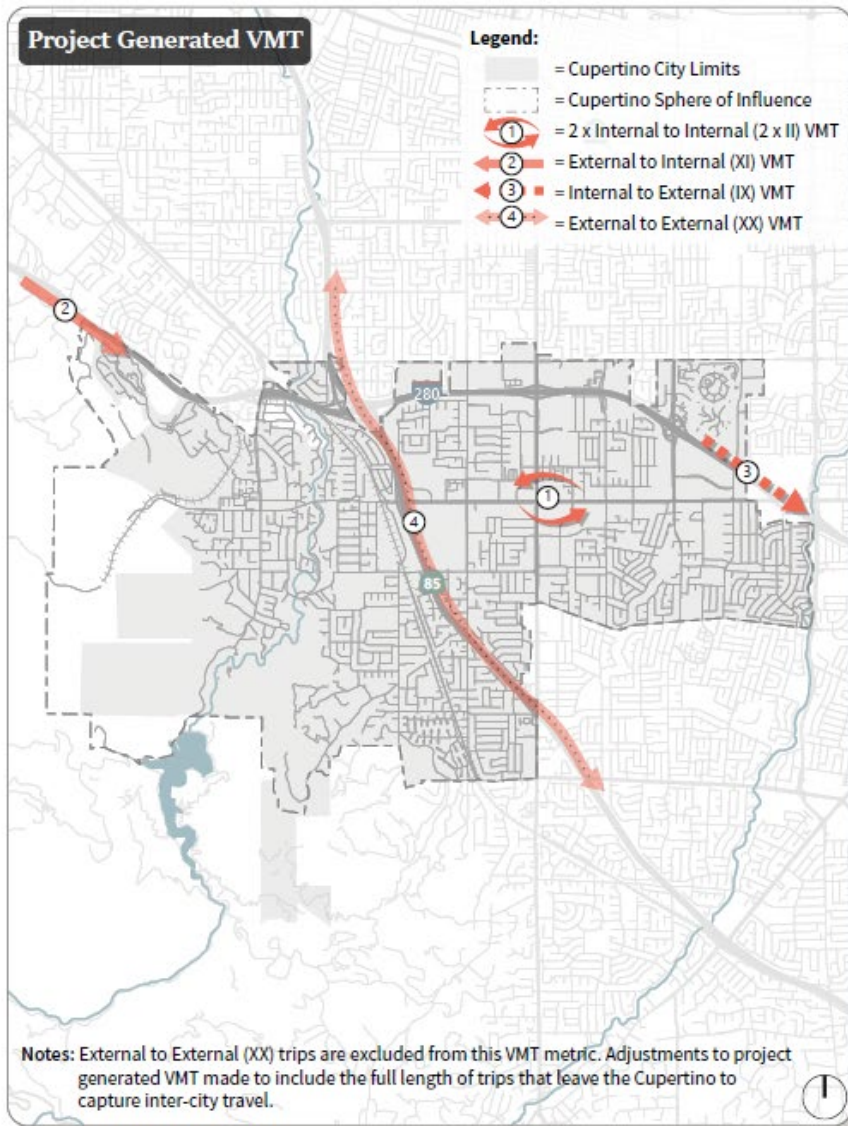
- ① 2x Internal to Internal (2xII) VMT
- ② External to Internal (XI) VMT
- ③ Internal to External (IX) VMT
- ④ External to External (XX) VMT

Project Effect on VMT (Boundary VMT)



- ① Internal to Internal VMT
- ② External to Internal (XI) VMT
- ③ Internal to External (IX) VMT
- ④ External to External (XX) VMT

Measuring VMT



TDM with TMA VMT Mitigation Actions

- Employ marketing and encourage strategies to promote non-drive-alone travel
- Encourage telecommuting and alternative work schedules
- Provide ride-sharing programs
- Require employer-based shuttle or transit service

Site Design VMT Mitigation Actions

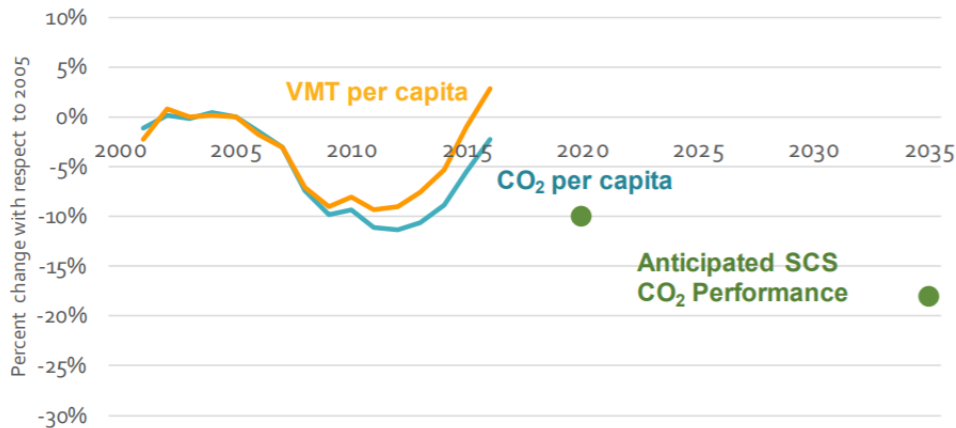
- Provide pedestrian network improvements
- Provide traffic calming measures and low-stress bicycle network improvements
- Implement car-sharing program
- Limit parking supply
- Unbundle parking costs
- Implement on-street market pricing for parking

Regional Policy VMT Mitigation Actions

- Increase density of land uses
- Increase diversity of land uses
- Increase transit accessibility
- Integrate affordable and below market rate (BMR) housing
- Increase transit service frequency and speed

VMT Trends (Before COVID19)

Statewide CO₂ and Vehicle Miles Traveled (VMT) Per Capita Trend with Respect to Anticipated Performance of Current SB 375 SCSs²

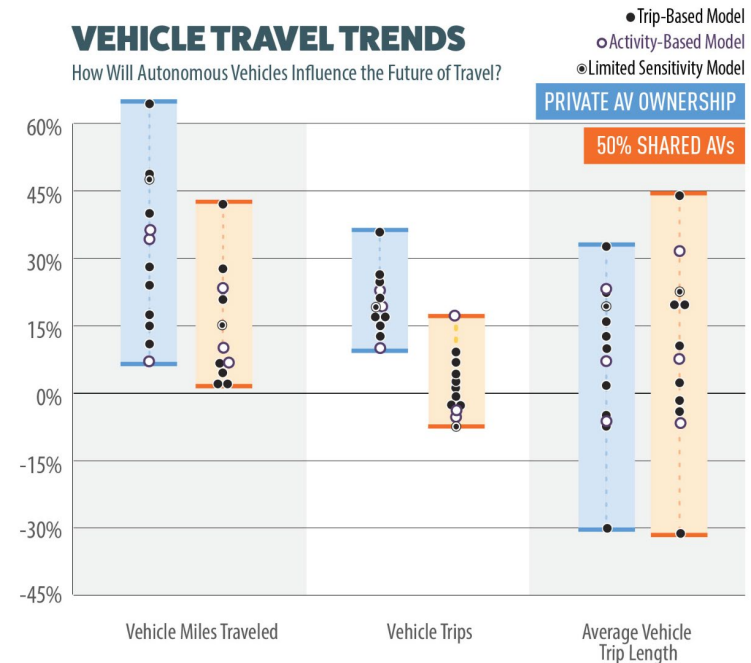


Source: CDTFA, U.S.EIA, U.S.EPA, CARB

Source: https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_02_Report.pdf

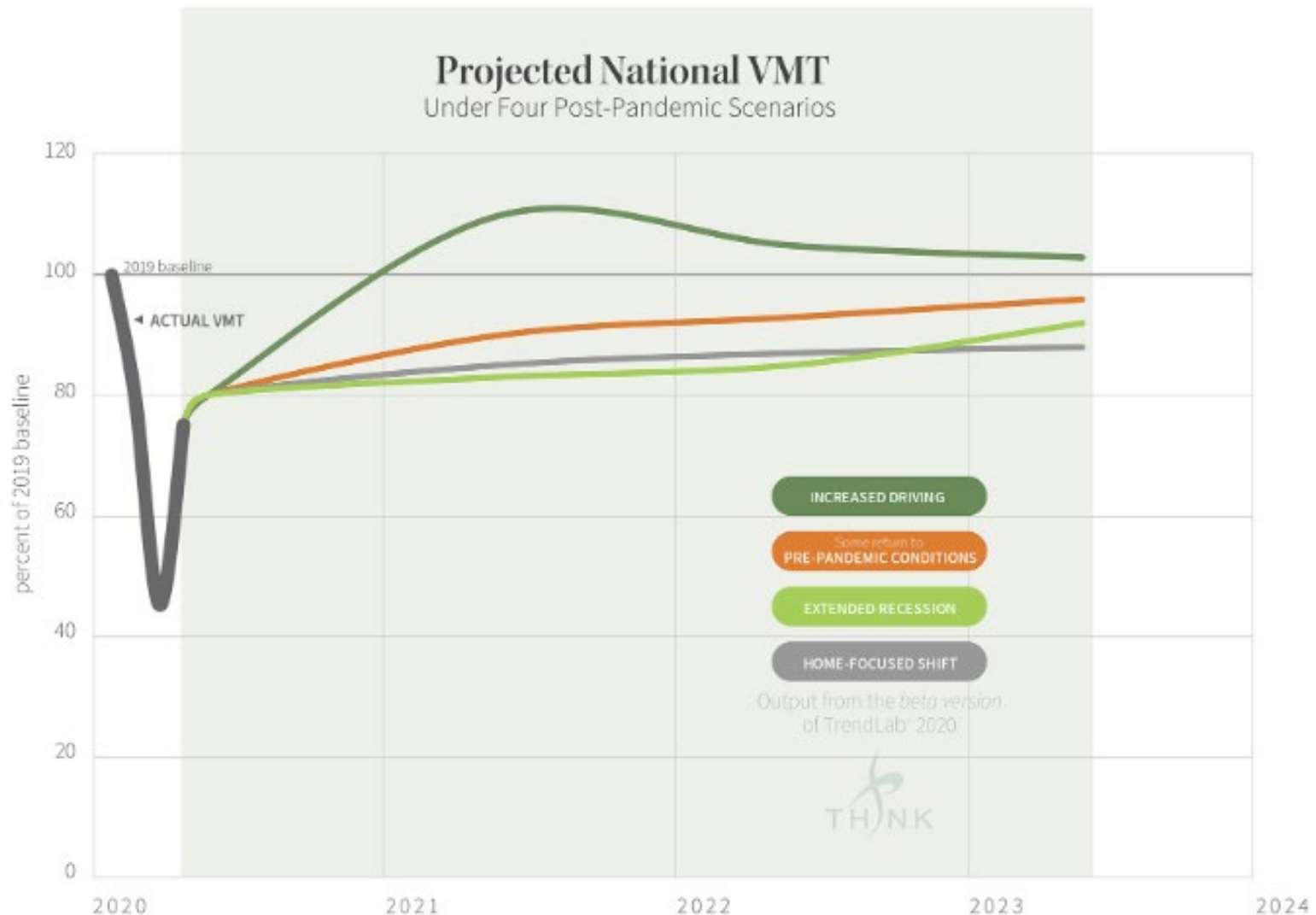
VEHICLE TRAVEL TRENDS

How Will Autonomous Vehicles Influence the Future of Travel?

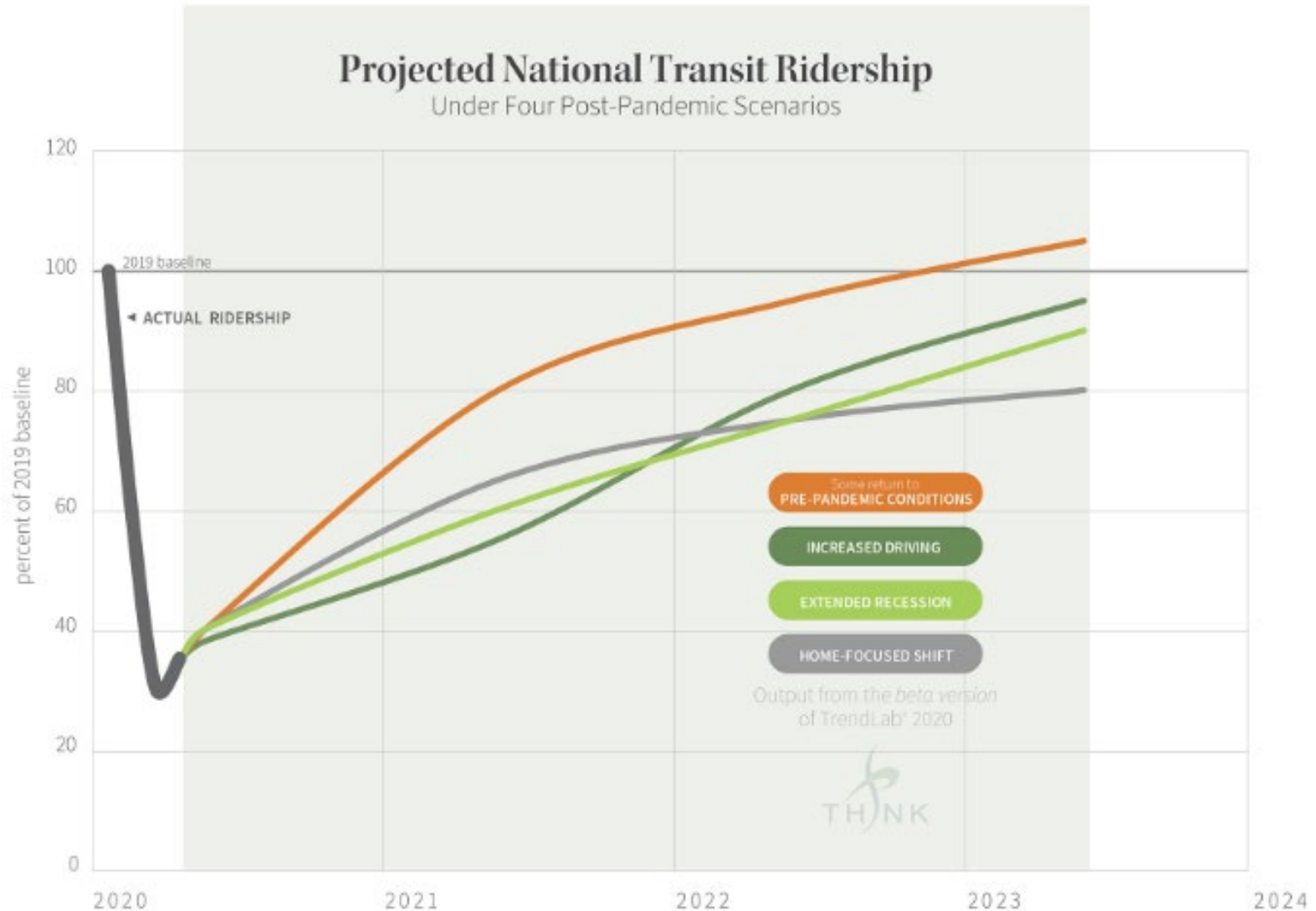


Source: <http://www.fehrandpeers.com/autonomous-vehicle-research/>

National VMT Recovery Paths

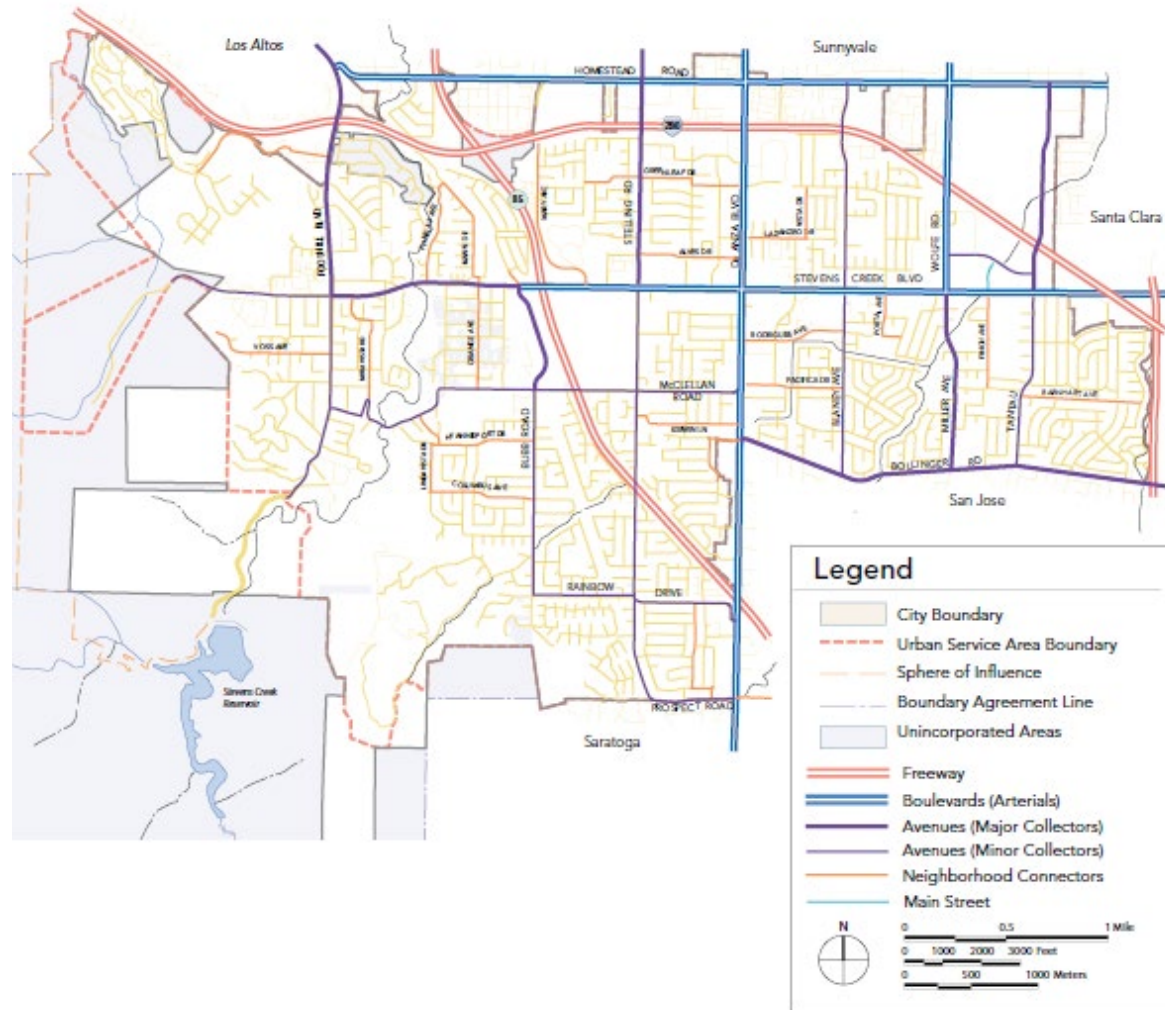


National Transit Ridership Recovery Paths




























Cupertino Circulation Element

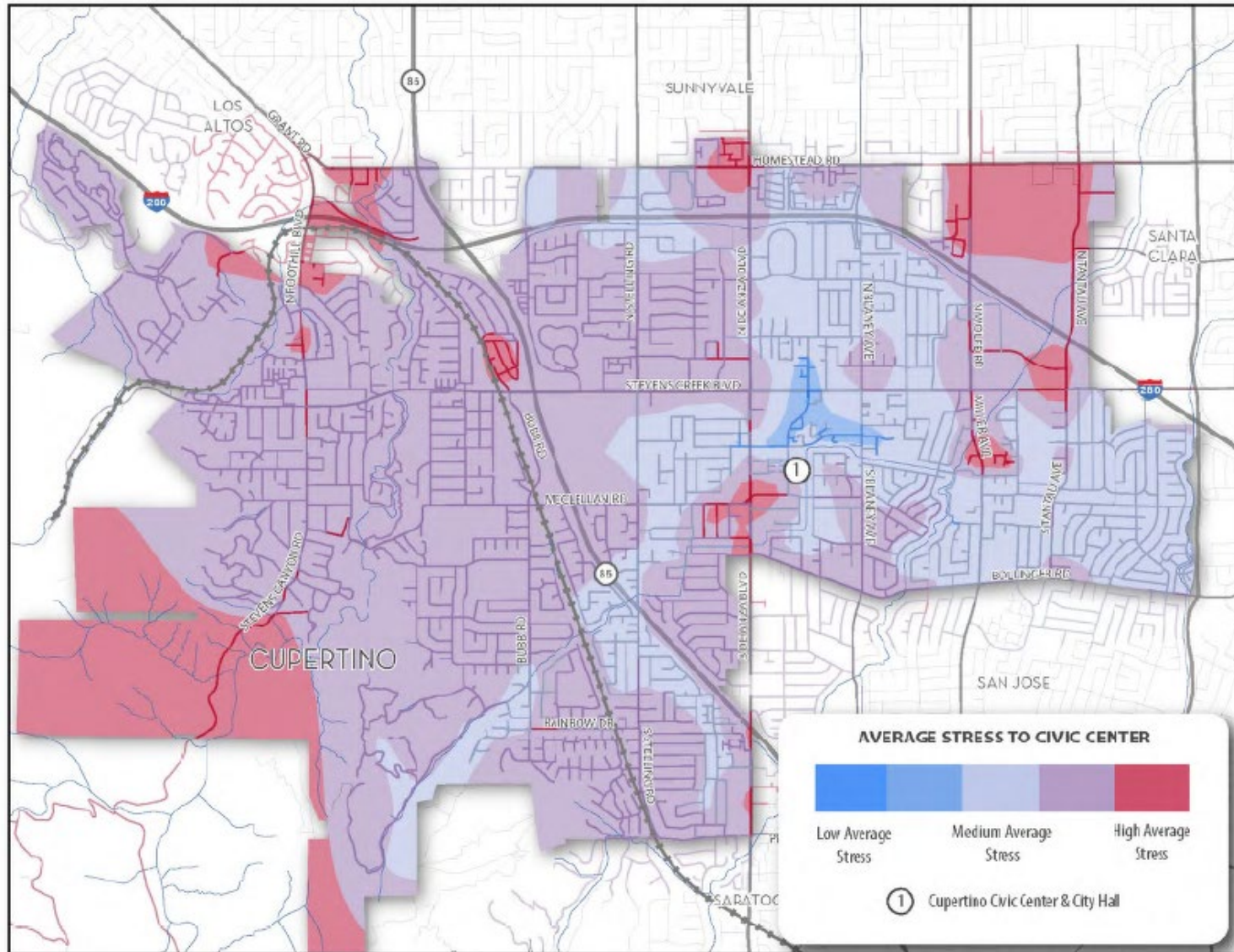
Figure M-2
Circulation Network



Cupertino Circulation Element

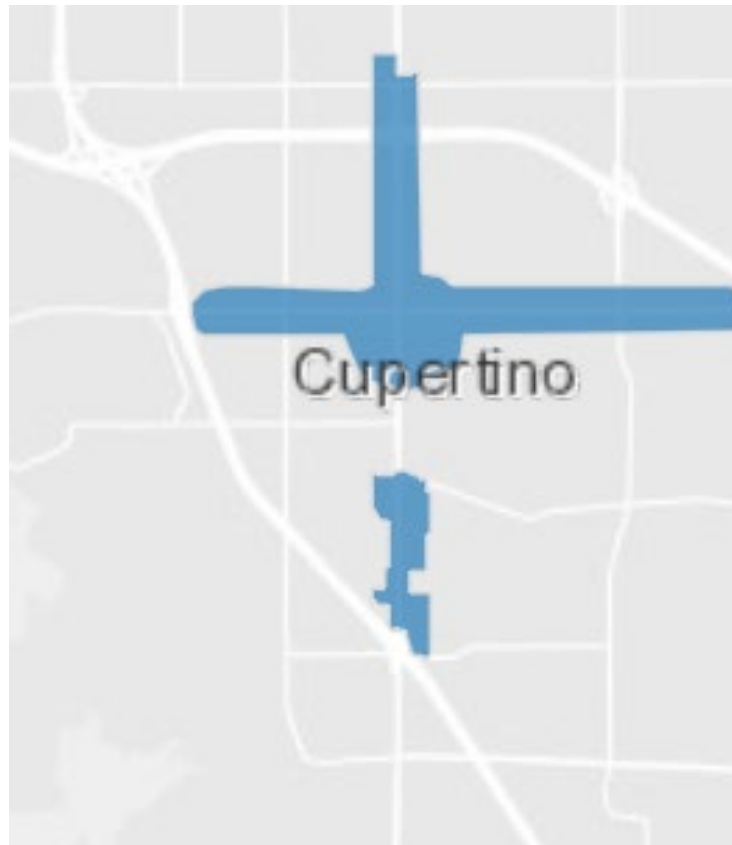
TABLE M-1 STREET TYPOLOGY		
Type	Mode(s) of Transportation	Guidelines
Freeway		Limited access, part of a regional and/or State network subject to State design standards.
Expressway	 	Limited access, regional and part of a county network subject to County design standards.
Boulevard (Arterial)	   	Access and safe crossing for all modes of travel along a regional transportation corridor. May include medians to separate directional travel. City or multi-jurisdictional design standards apply.
Main Street	   	Balances all modes of transportation, includes on-street parking and connects to highly pedestrian-oriented uses. Vehicular performance measures may be lowered to prioritize walking and biking.
Avenue (Major and Minor Collector)	   	Connector that distributes trips to commercial and residential areas from boulevards, and provides balanced levels of service for auto, bikes and pedestrians.
Neighborhood Connector	  	Primarily serves and connects neighborhoods and neighborhood services, and facilitates safe walking and biking. May contain elements of Avenues including landscaped median or bus service.
Residential Street	  	Provides access to low-intensity residential uses, prioritizes walking and biking, and are typically good candidates for traffic calming.
Regional Pedestrian/Bike Pathway	 	Part of regional network providing high quality pedestrian and bike paths to connect to other regional destinations.
Local Pedestrian/Bike Pathway	 	Connects to regional network but part of local infrastructure, provides quality pedestrian and bike paths connecting local destinations.

Cupertino Bicycle Traffic Stress



Cupertino Priority Development Areas

- Santa Clara VTA City Cores, Corridors & Station Areas
- South DeAnza



Multimodal Performance Measure Options

Method	Pedestrian	Bicycle	Transit	Auto	Trucks
Tiered Level of Service Policy	√	√	√	√	
HCM 2010 MMLOS	√	√	√	√	
Person Delay	√	√	√	√	√
Built Environment Factors	√	√			
Layered Networks/Street Types	√	√	√	√	√
PEQI/BEQI	√	√			
Automobile Trip Generation	√	√	√	√	
Level of Traffic Stress		√			
Charlotte, North Carolina	√	√			
Fort Collins, Colorado	√	√	√	√	
Florida Department of Transportation	√	√	√	√	