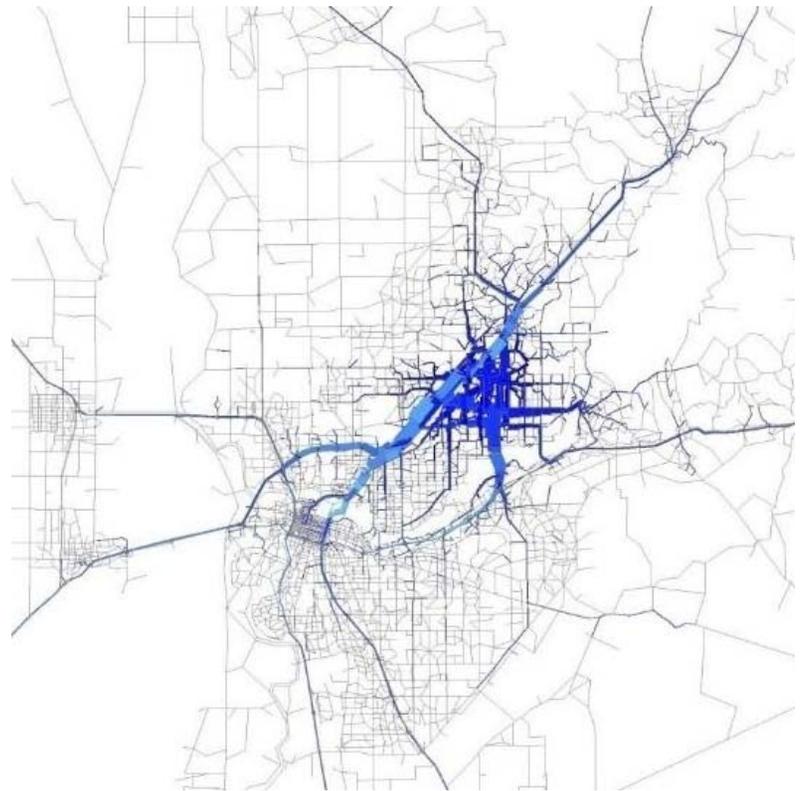


SB 743.

An Evolutionary Change to CEQA Transportation Impact Analysis

Ronald T. Milam, AICP, PTP

FEHR  PEERS



Change & Choice.

Transportation Impacts (SB 743)

CEQA Guidelines Update and Technical Advisory

After over four years of stakeholder-driven development through nearly 200 stakeholder meetings, public convenings, and other outreach events, OPR has transmitted its proposed CEQA Guideline implementing Senate Bill 743 to the California Natural Resources Agency. OPR has also prepared a Technical Advisory on Evaluating Transportation Impacts in CEQA, which contains OPR's technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. OPR may update or supplement this technical advisory in response to new information and advancements in modeling and methods. Both of these documents can be accessed through the following links:

- ▶ [Proposed CEQA Guideline Implementing SB 743 \(Section 15064.3\)](#) 
- ▶ [Technical Advisory on Evaluating Transportation Impacts in CEQA \(2017\)](#) 

Notice of future activity on the CEQA Guidelines will be posted on OPR's website and distributed through the CEQA Guidelines [List Serve](#). Please sign-up on the List Serve to stay connected. The Natural Resources Agency will also post updated information about the rulemaking process on its [website](#) 

SB 743

AB 417

AB 2245

SB 226

AB 1358

SB 375

SB 97

AB 32

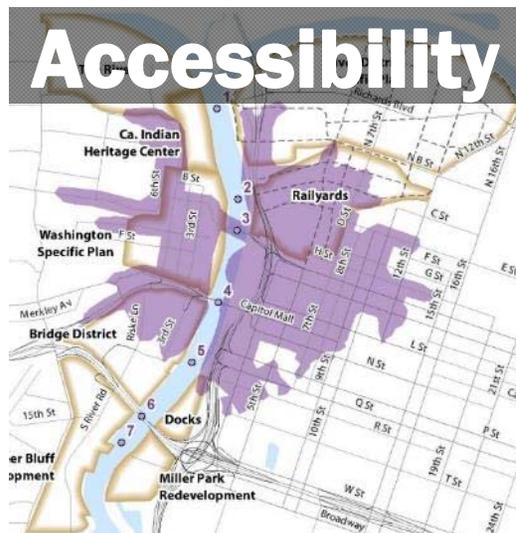
Change ■ SB 743 LEGISLATIVE INTENT

(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.

Change

IMPACT ANALYSIS & MITIGATION



What SB 743 Does Do

- Eliminates LOS/Delay
- Adds VMT
- Provides methods and thresholds guidance
- Changes impact locations and mitigation focus

Choices

LEAD AGENCY DECISIONS



Revised
Proposal on
Updates to
the CEQA
Guidelines on
Evaluating
Transportation
Impacts in
CEQA

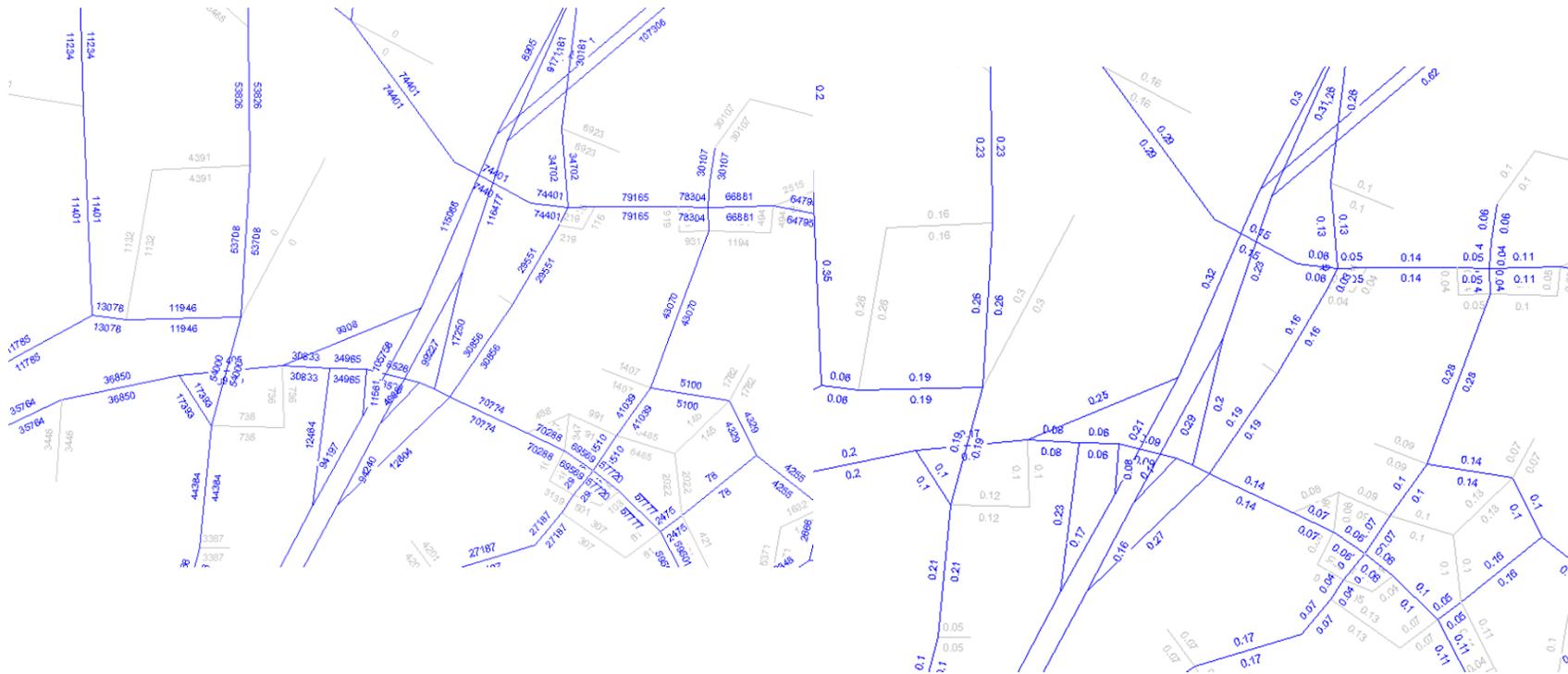
Implementing Senate Bill
743 (Steinberg, 2013)

Implementation Decisions:

- **Methodology**
- **Thresholds**
- **Mitigation**

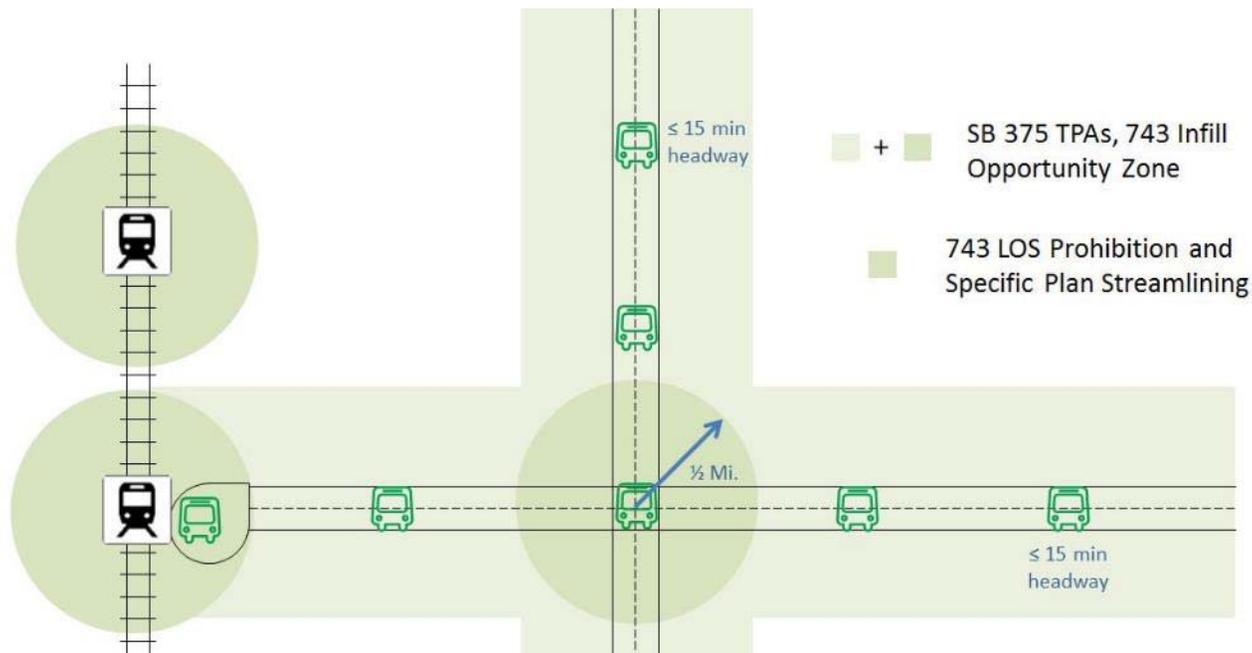
Methods ■ VMT FORECASTING

**VMT = Volume x Distance or
Trips x Trip Length**

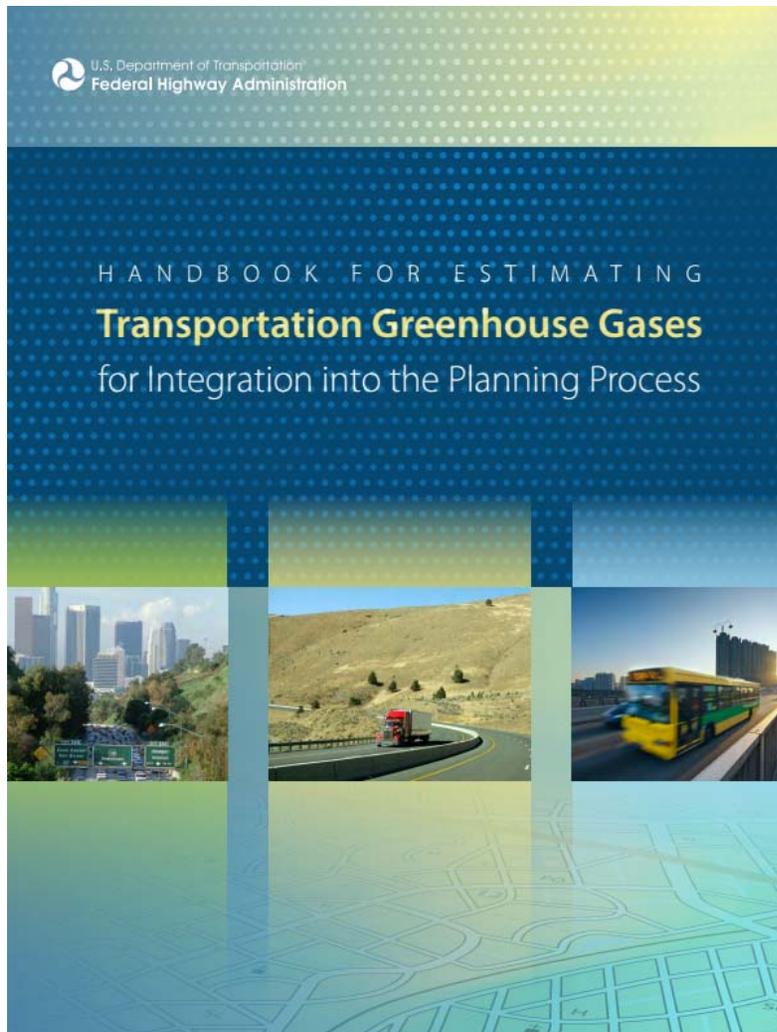


Methods ■ VMT SCREENING

- **Transit Priority Area**
- **Highway Quality Transit Corridor**



Methods ■ NO HCM EQUIVALENT?



Revised
Proposal on
Updates to
the CEQA
Guidelines on
Evaluating
Transportation
Impacts in
CEQA

Implementing Senate Bill
743 (Steinberg, 2013)

Methods

■ DATA, TOOLS, MODELS...

Data

- **VMT is not directly measured or observed**
- **VMT is estimated from traffic counts or traffic volume forecasts**
- **Highway Performance Monitoring System (HPMS)**
- **Big Data - StreetLight**

Tools and Models

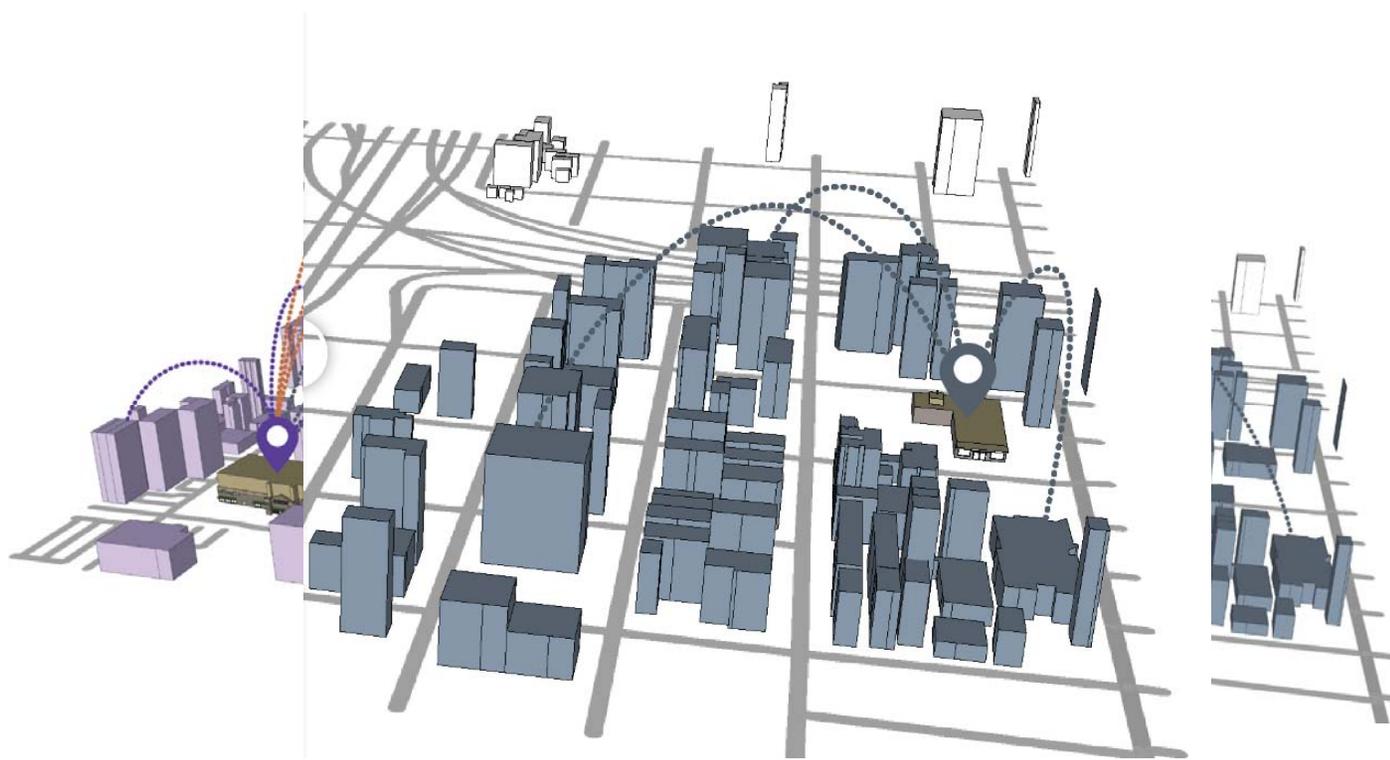
- **Travel Forecasting Models**
 - **MPOs**
 - **RTPA**
 - **Cities/Counties**
- **Sketch/Spreadsheet Tools**
 - **CalEEMod**
 - **MXD+**
 - **UrbanFootprint**

Methods TOOLS

Sketch Tool	Output	Technical & Legal Defensibility	Parameter Sensitivity	Administrative Utility
CalEEMod	VMT	++	+	++
Sketch 7	% Change in VMT	+	+	+
VMT Impact Tool/Salon	% Change in VMT	+	+	+
Green TRIP Connect	VMT; Change in VMT	+	+	++
UrbanFootprint	VMT	+++	++	+
Envision Tomorrow	VMT	+	++	+
CA Smart Growth Tool	Trips	++	+	+
URBEMIS 2007	VMT	+	++	+
TRIMMS	VMT	++	++	+
MXD+/MainStreet	Trips; VMT	+++	+++	++
VMT+	VMT	+	+	++
TDM+	% Change in VMT	+++	++	++

Methods ■ WHAT VMT COUNTS?

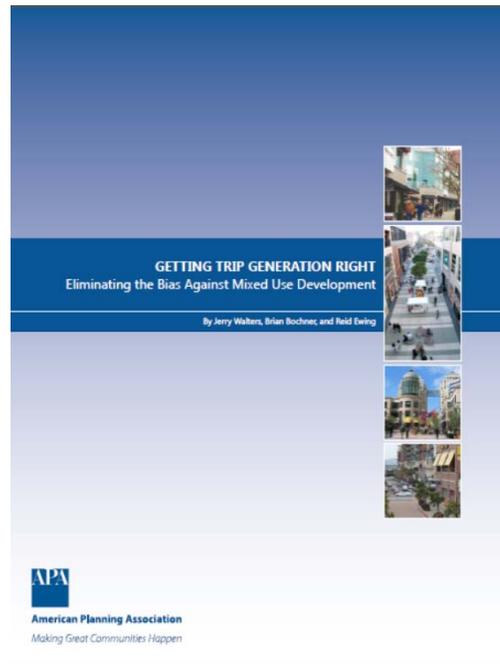
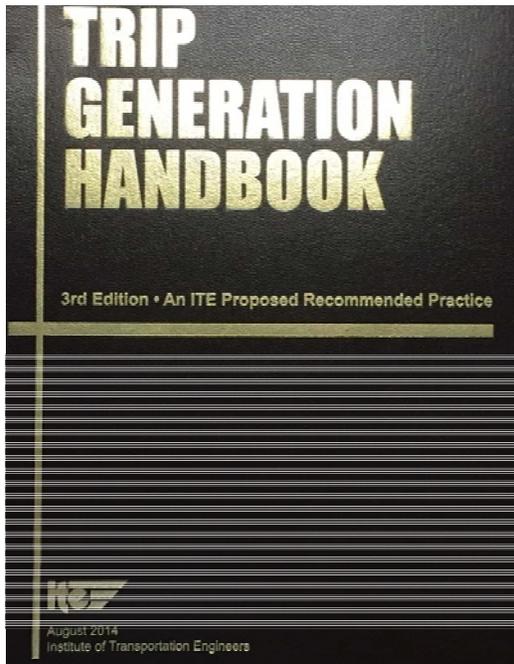
Project Generated VMT vs. Project's Effect on VMT



Methods ■ WHAT VMT COUNTS?

Vehicle Trip Type	VMT Required in Analysis			
	AQ	GHG	Energy	SB 743 Transportation
<i>Residential Project</i>				
Home-based work	✓	✓	✓	✓
Home-based other	✓	✓	✓	✓
Non-home-based	✓	✓	✓	
<i>Office Project</i>				
Home-based work	✓	✓	✓	✓
Visitor	✓	✓	✓	
Delivery	✓	✓	✓	
Maintenance/Security	✓	✓	✓	

Methods ■ TRIP GENERATION



Choice

ACCURACY OVER COMMONALITY

Single-Family Detached Housing (210)

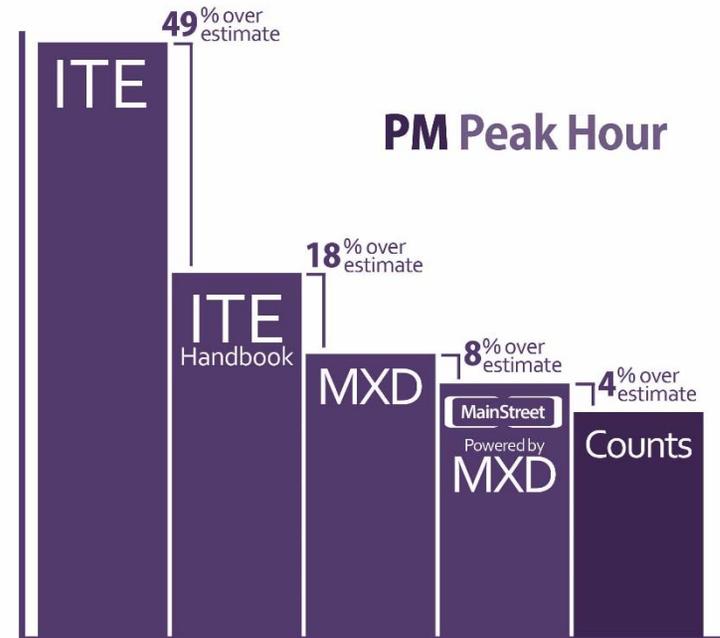
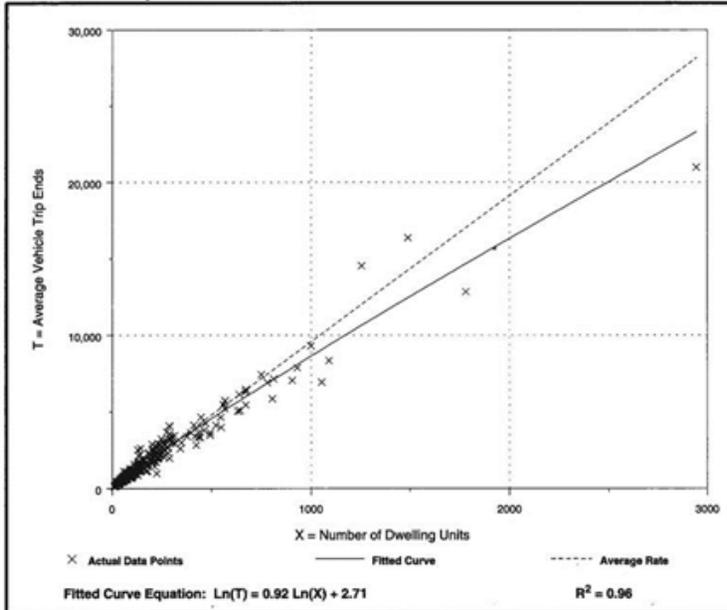
Average Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Number of Studies: 350
Avg. Number of Dwelling Units: 197
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Dwelling Unit

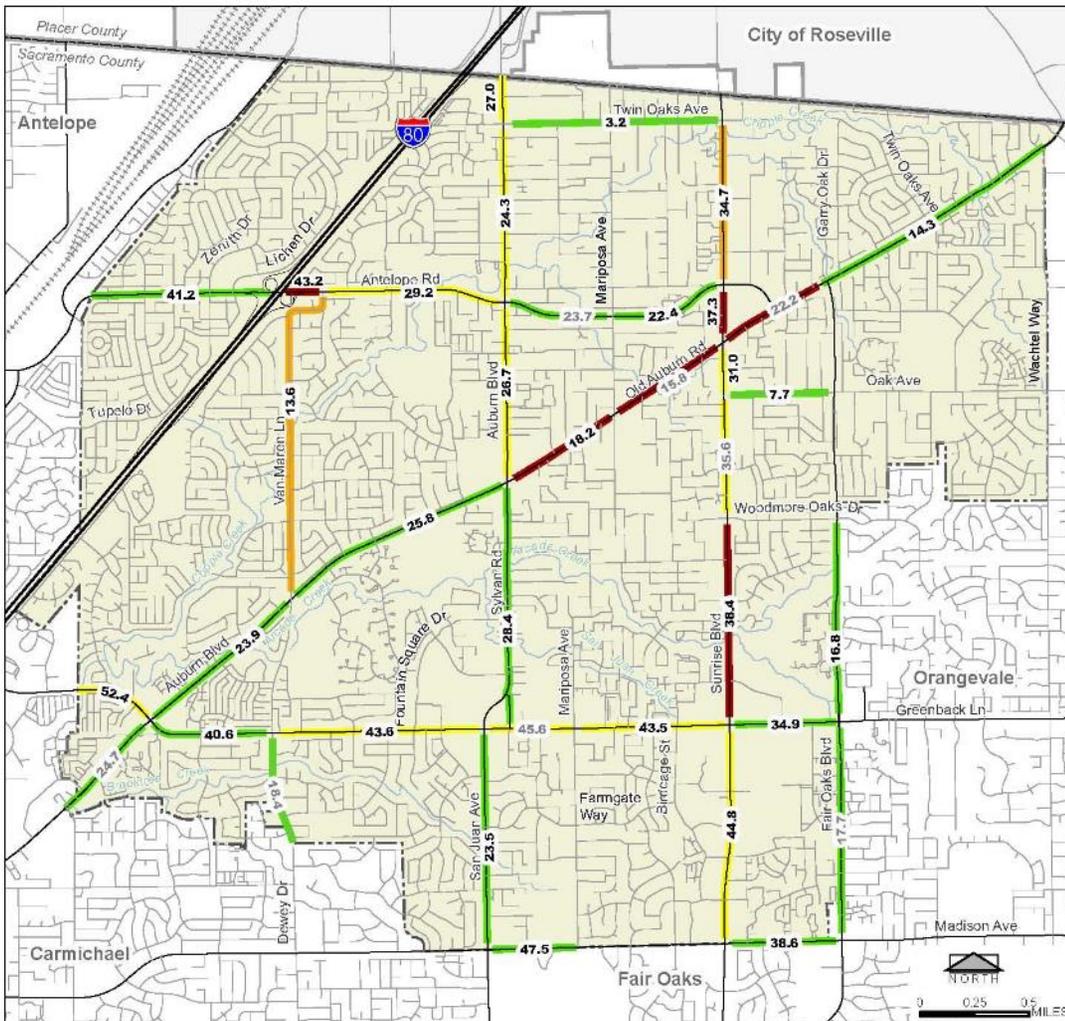
Average Rate	Range of Rates	Standard Deviation
9.57	4.31 - 21.85	3.69

Data Plot and Equation



Methods

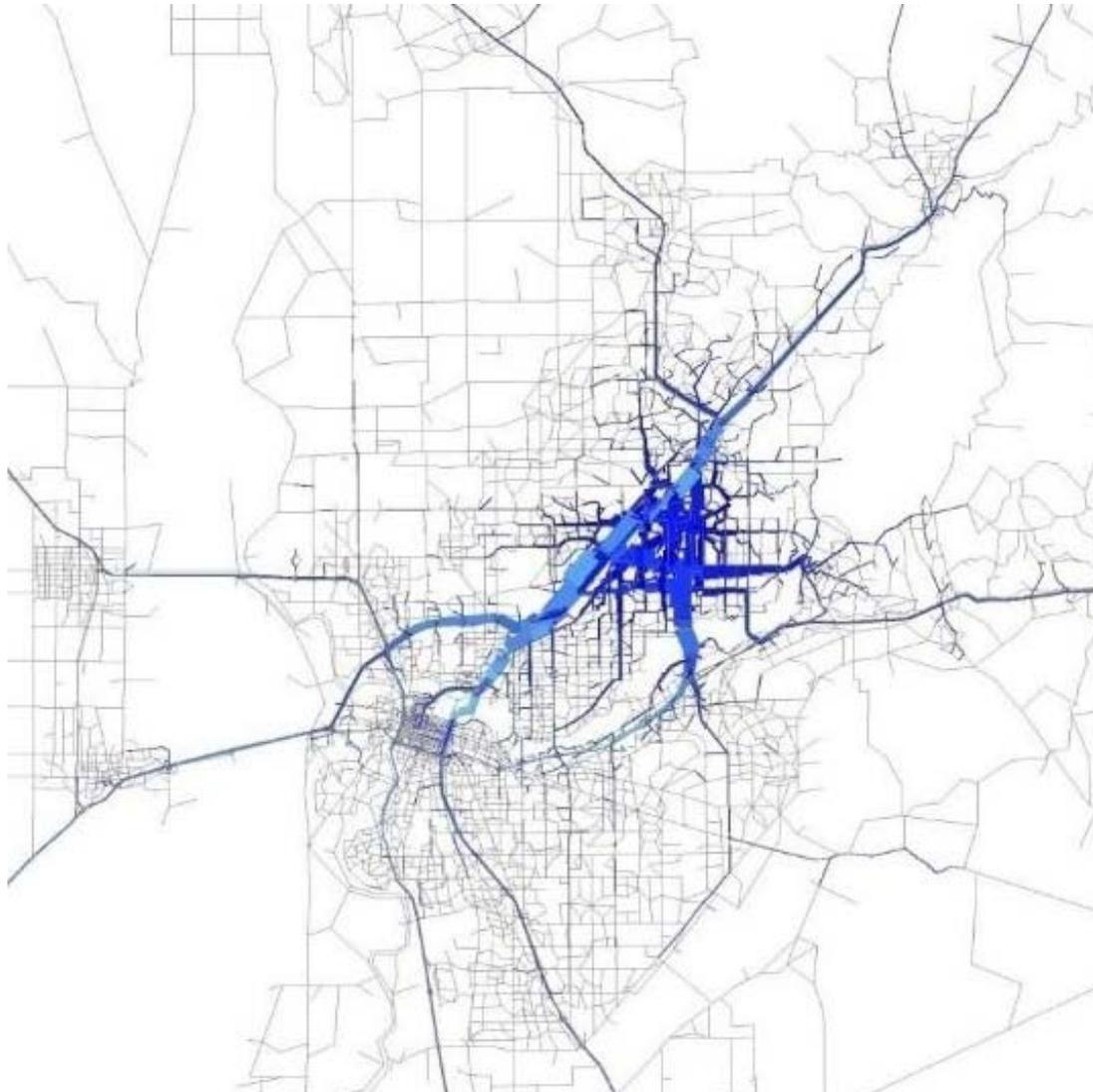
AIR POLLUTION ≠ GHG



Boundary VMT Method

- **Citrus Heights = 1,000,110 daily VMT (weekday)**

Methods FULL ACCOUNTING



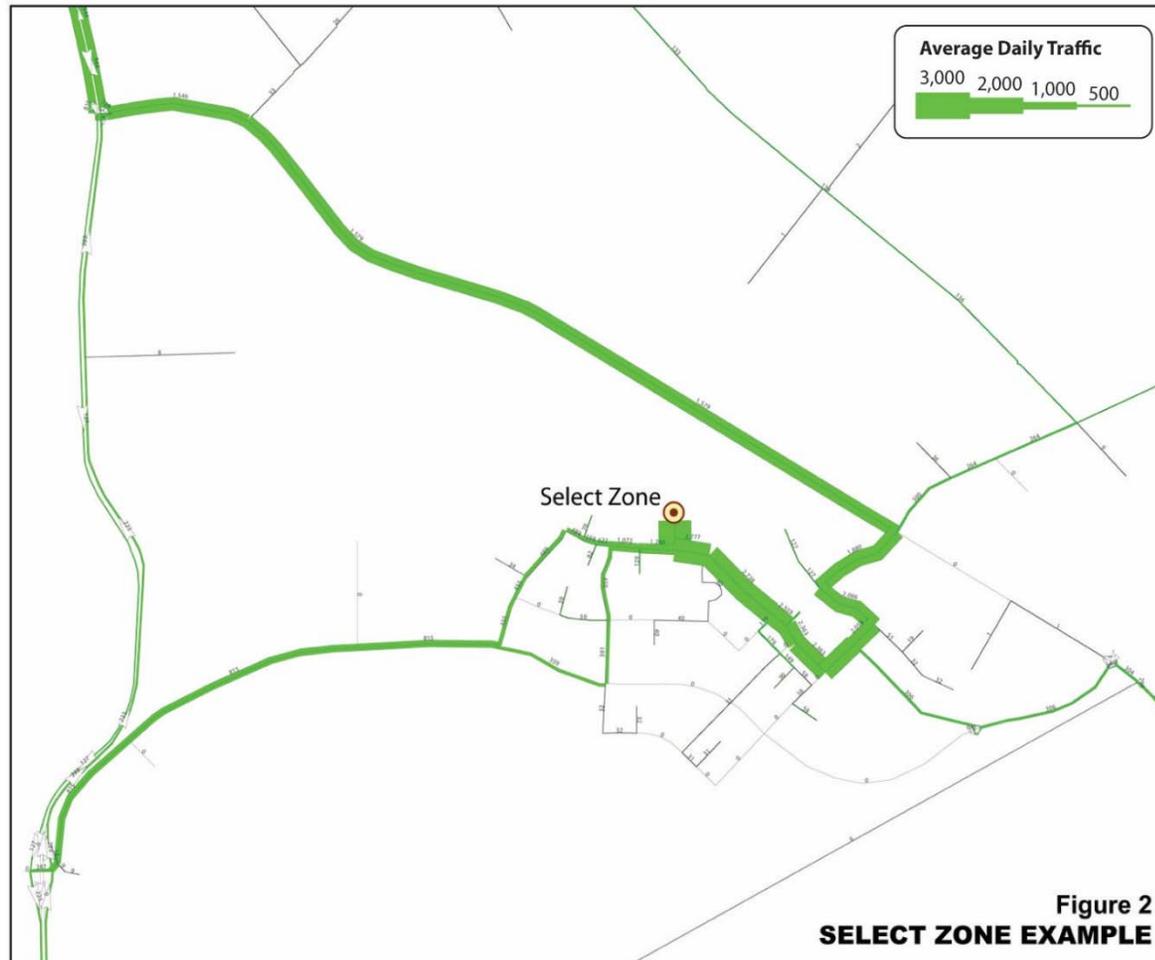
Origin-Destination (OD) VMT Method

- **Citrus Heights = 1,397,340 daily VMT (weekday)**

Methods ■ TRIP LENGTHS

Region Name	California Household Travel Survey (CHTS) HBW, all trip ends, miles			
	Region Sample Size	Average	50th	90th
AMBAG	2,927	12.5	5.3	28.3
MTC	17,340	11.8	7.4	26.8
SACOG	3,102	11.6	8	23
SCAG	24,243	12.6	8.4	27.3
TMPO	333	6.0	4.4	10.5
SJV	8,429	11.4	5.7	27.1
SANDAG	2,585	12.6	9.2	24.4

Methods ■ TRIP LENGTHS

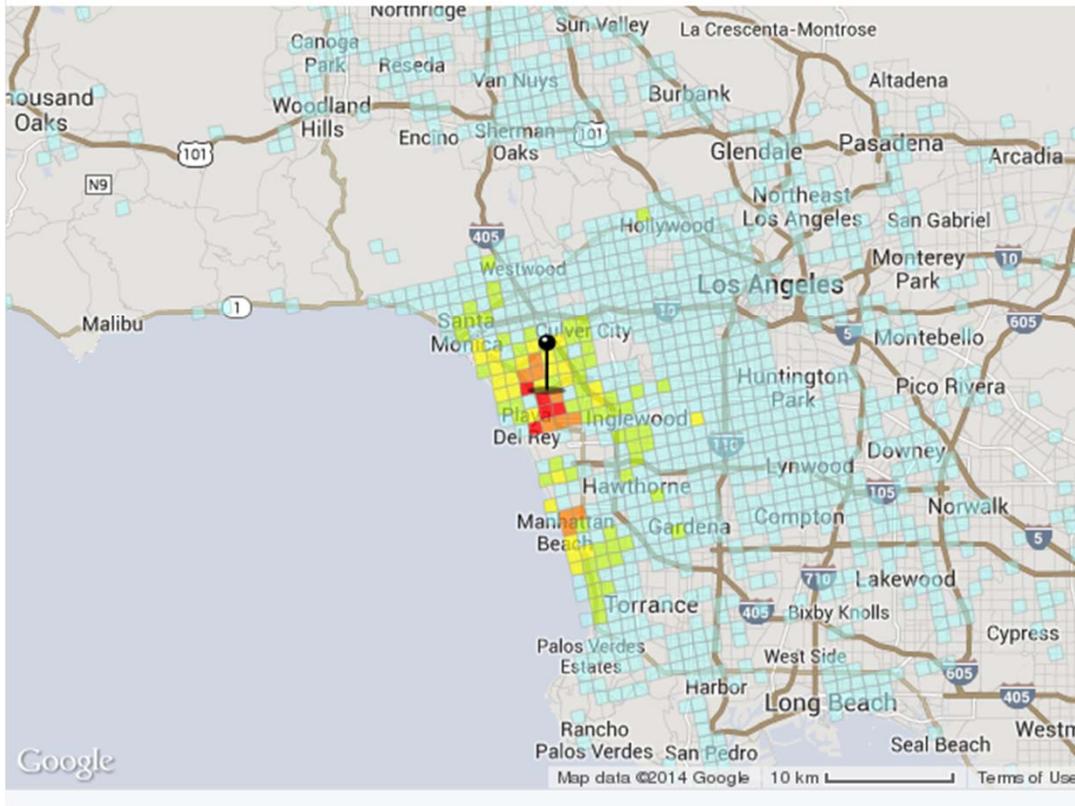


Methods ■ TRIP LENGTHS

LA12-2416_playa | Home Places | Average Weekday | All-Day

Colors indicate the percent of total visitors to the site who live or work in that 1 km² grid cell.

0.01 - 0.19% 0.2 - 0.43% 0.44 - 0.71% 0.72 - 1.27% 1.28% or more.

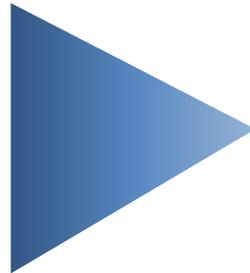


Thresholds ■ DISCRETION?

OPR Technical Advisory

- **Land Use Projects**

- Residential
- Office
- Retail



- **Land Use Plans**

- **RTP/SCSs**

- **Transportation Projects**

- AB 32**
- Governor's EOs**
- SB 375 Targets**
- SB 743 Objectives**
- Caltrans SMP Target**

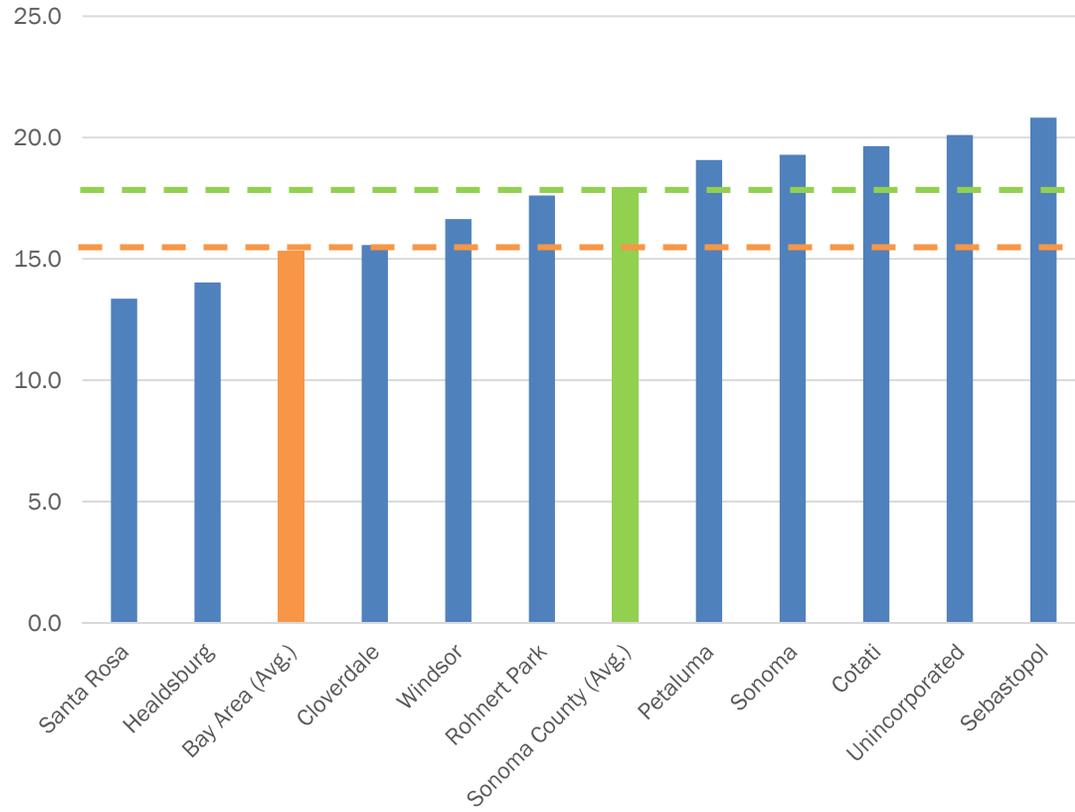
Thresholds OPR

**Project's
'Automobile'
VMT**



Methods ■ FULL ACCOUNTING

MTC Model: VMT Per Capita - Residents



More flexibility in rural areas

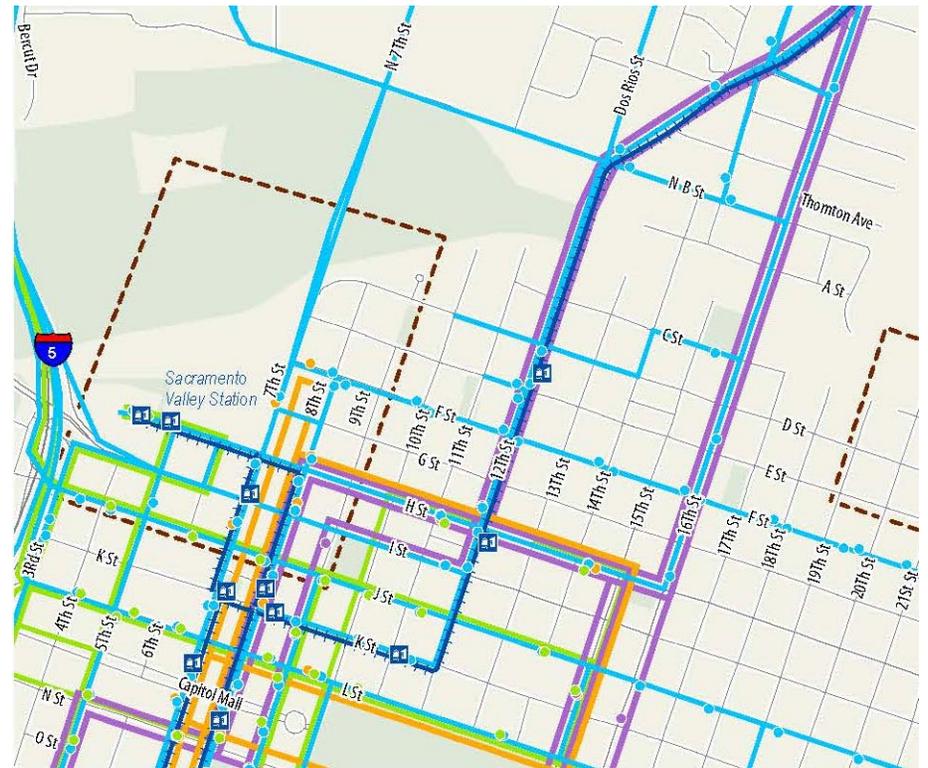
Rural Projects Outside of MPOs

In rural areas of non-MPO counties (i.e., areas not near established or incorporated cities or towns), fewer options may be available for reducing VMT, and significance thresholds may be best determined on a case-by-case basis. Note, however, that clustered small towns and small town main streets may have substantial VMT benefits compared to isolated rural development, similar to... transit oriented development....

(p. 15 – Technical Advisory on Evaluating Transportation Impacts in CEQA, November 2017)

Thresholds ■ OTHER MODES AND SAFETY

- Transit Service**
- Bicycle Facilities**
- Pedestrian Facilities**
- Safety**
 - **Direct**
 - **Indirect**



Thresholds ■ AGENCY DISCRETION

- **How much discretion does a lead agency have to set their own VMT thresholds?**

- **CEQA Guidelines §15064.7(c)**

(c) When adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.

- **CEQA Statute (SB 743) §21099(e)**

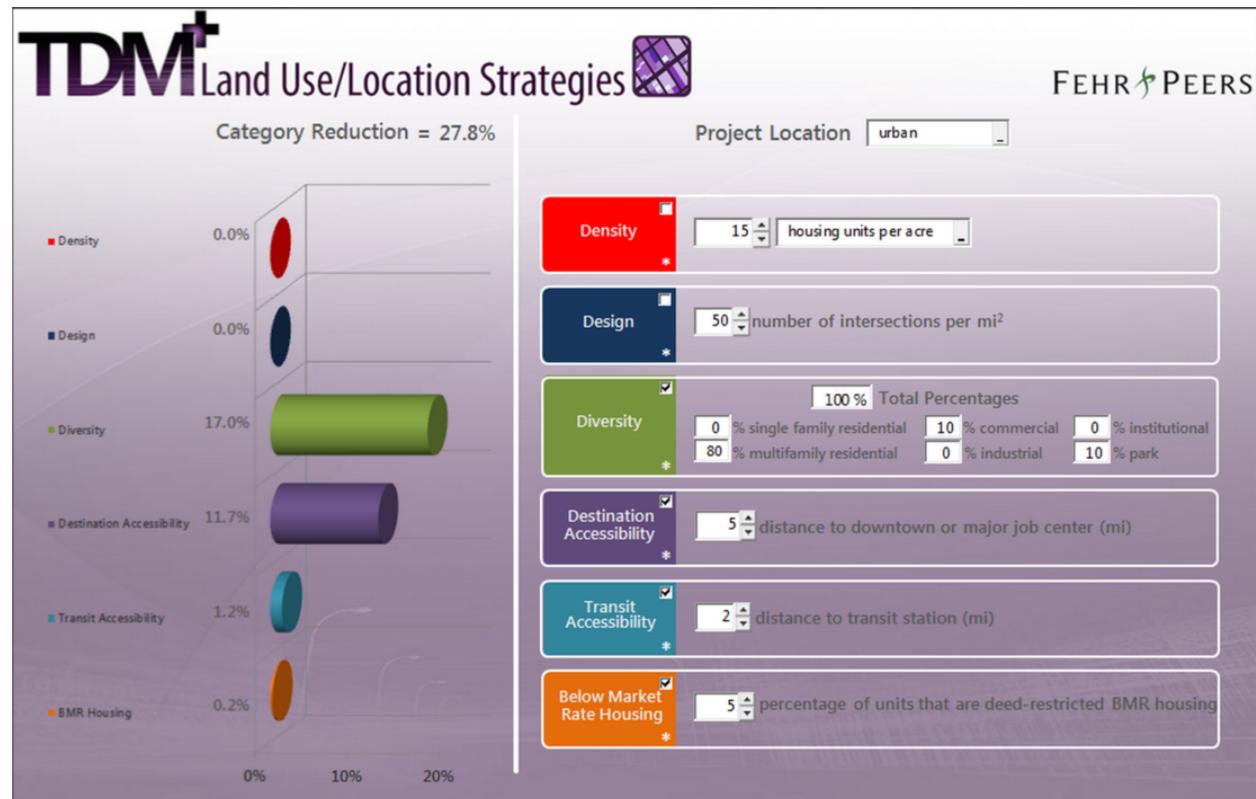
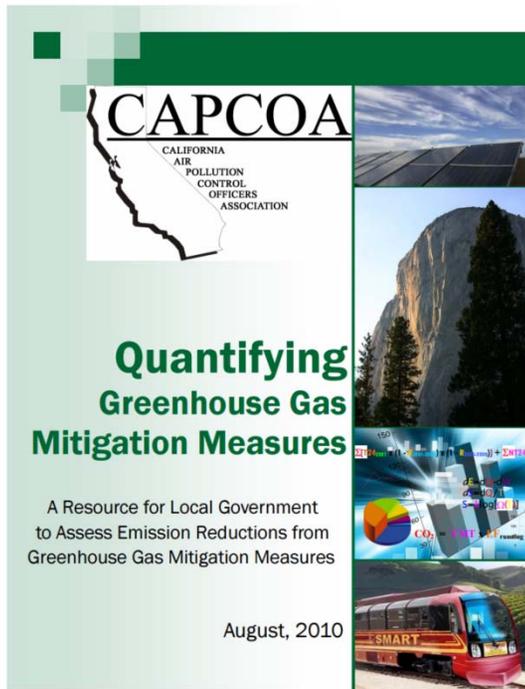
(e) This section does not affect the authority of a public agency to establish or adopt thresholds of significance that are more protective of the environment.

Thresholds ■ GOOD VS BAD VMT

- **Impact requires that a project cause a problem or exacerbate a problem.**
- **So what is a VMT problem?**
 - **Depends on how VMT relates to the human and natural environment**
- **Problem should be clear based on the **threshold****
- **Are there differences between **thresholds** for ‘project’ level impacts and ‘cumulative’ impacts?**

Mitigation ■ TRIPS OR TRIP LENGTH

The project needs to change in some way.



SB 743 Resources.

SB 743

Curious about how to navigate your Land Use or Transportation Project, or General Plan through SB 743? We've developed flow charts to help - click the buttons below for more.

[LAND USE PROJECT](#)

[TRANSPORTATION PROJECT](#)

[GENERAL PLAN](#)

On September 27, 2013, California Governor Jerry Brown signed SB 743 into law and started a process that could fundamentally change transportation impact analysis as part of CEQA compliance. These changes will include **elimination of auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion** as a basis for determining significant impacts in many parts of California (if not statewide). Further, parking impacts will not be considered significant impacts on the environment for select development projects within infill areas with nearby frequent transit service. According to the legislative intent contained in SB 743, these changes to current practice were necessary to 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.

SB 743 ■ Questions

The Challenges of VMT Analysis

Ronald T. Milam, AICP, PTP
r.milam@fehrandpeers.com

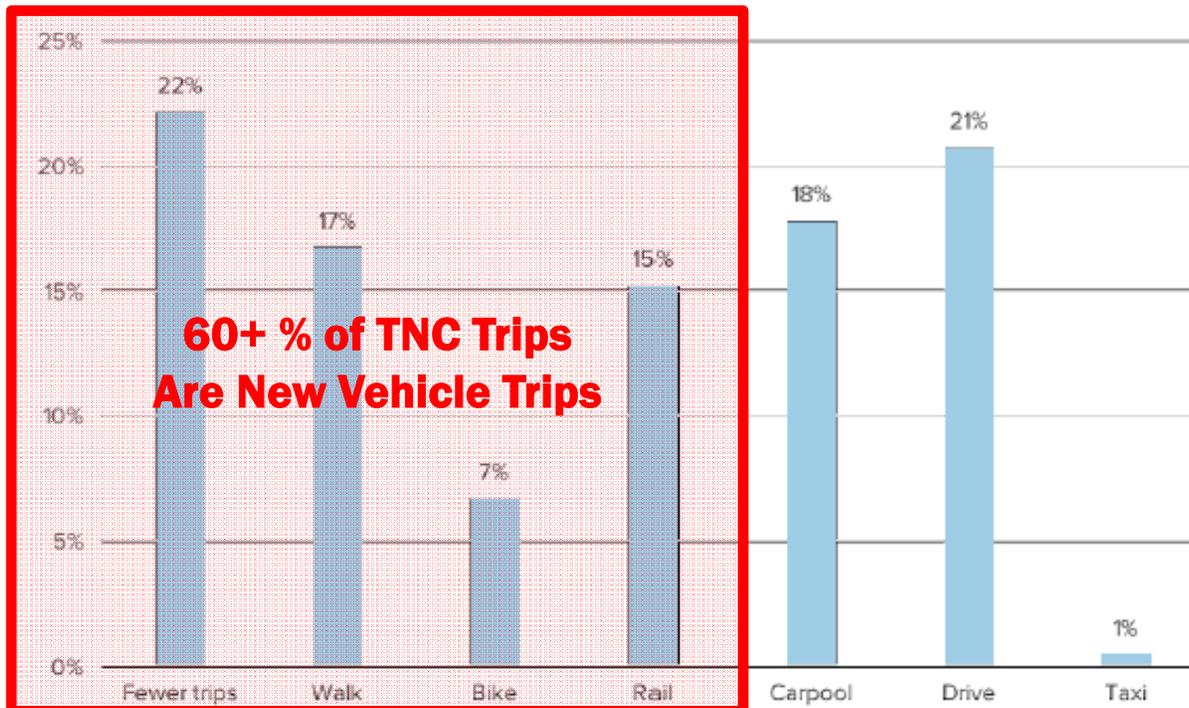
FEHR  PEERS

Uncertainty ■ DISRUPTIVE TRENDS



TNCs ■ MORE VMT

Figure 14. Mode substitution, weighted by frequency of ride-hailing use

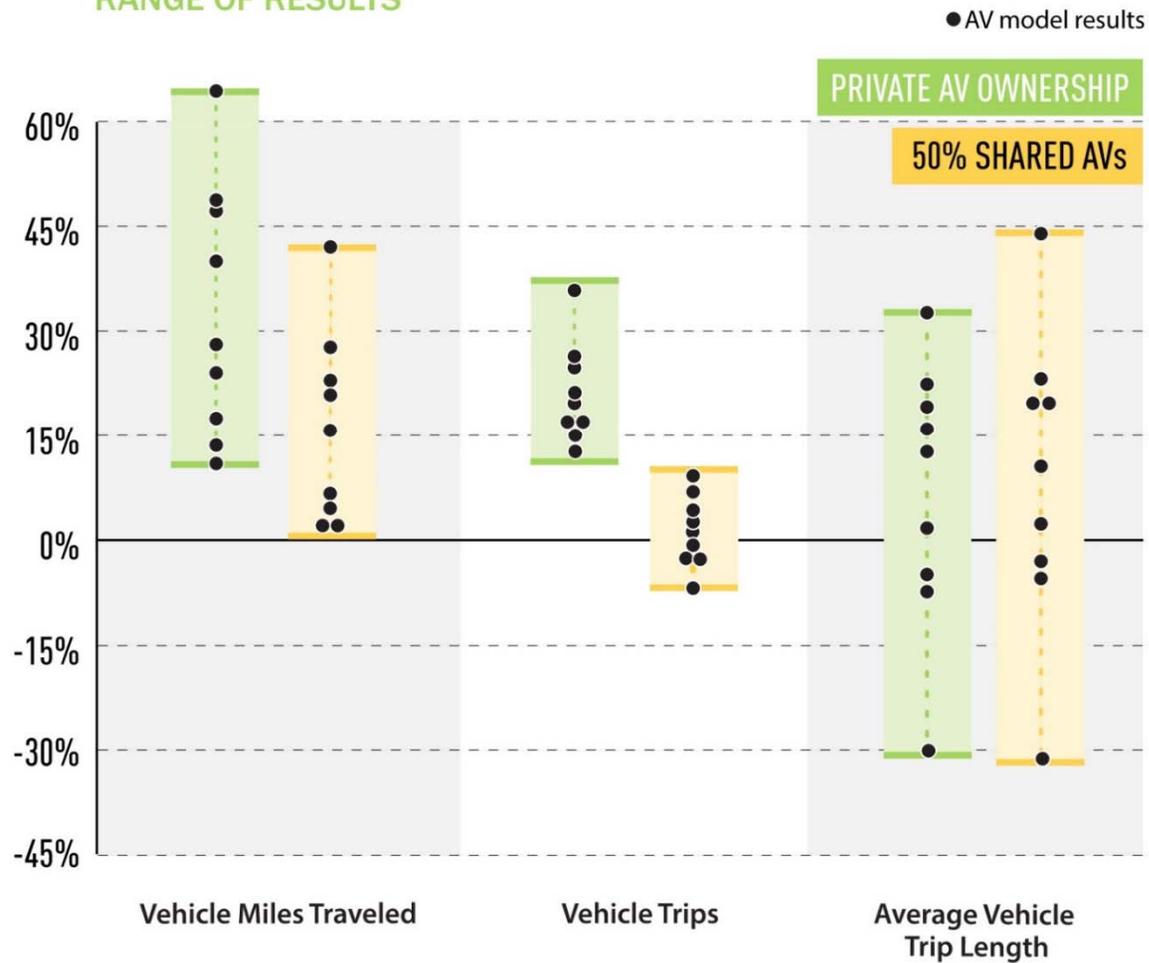


Survey question: If Uber or Lyft were unavailable, which transportation alternatives would you use for the trips that you make using Uber or Lyft?

Source: Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States, October 2017, UC Davis Institute of Transportation Studies.

AV tests ■ MORE VMT

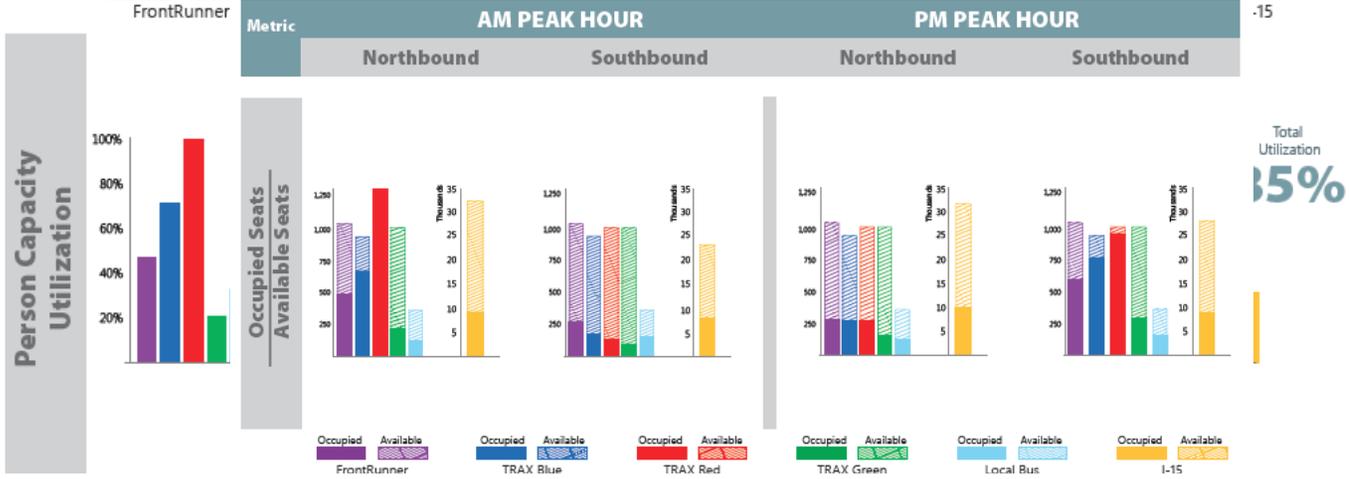
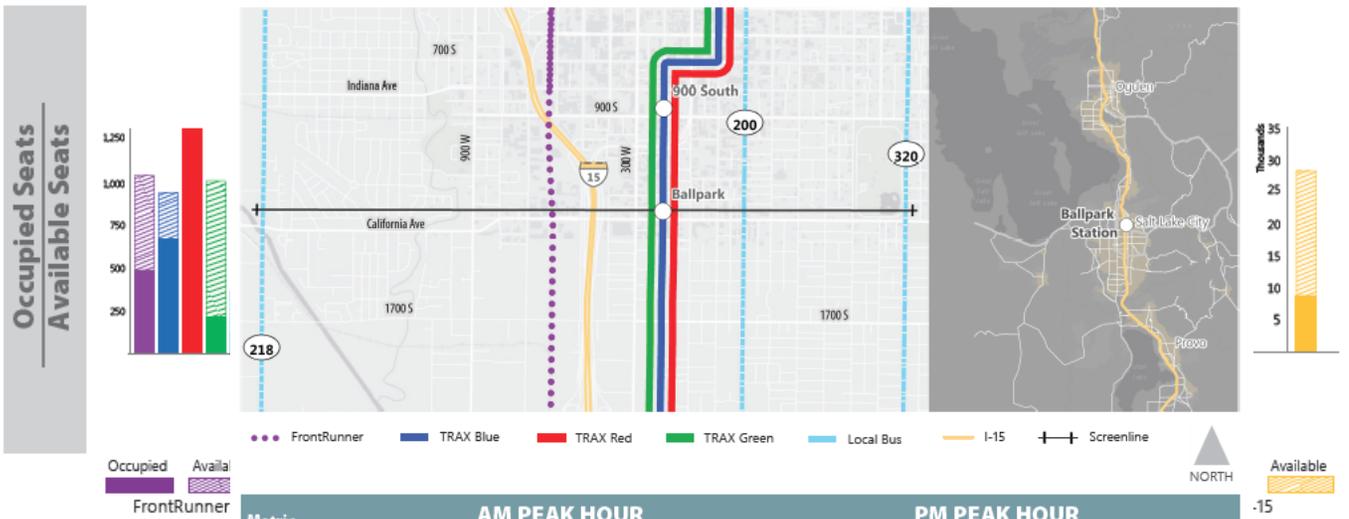
VEHICLES RANGE OF RESULTS

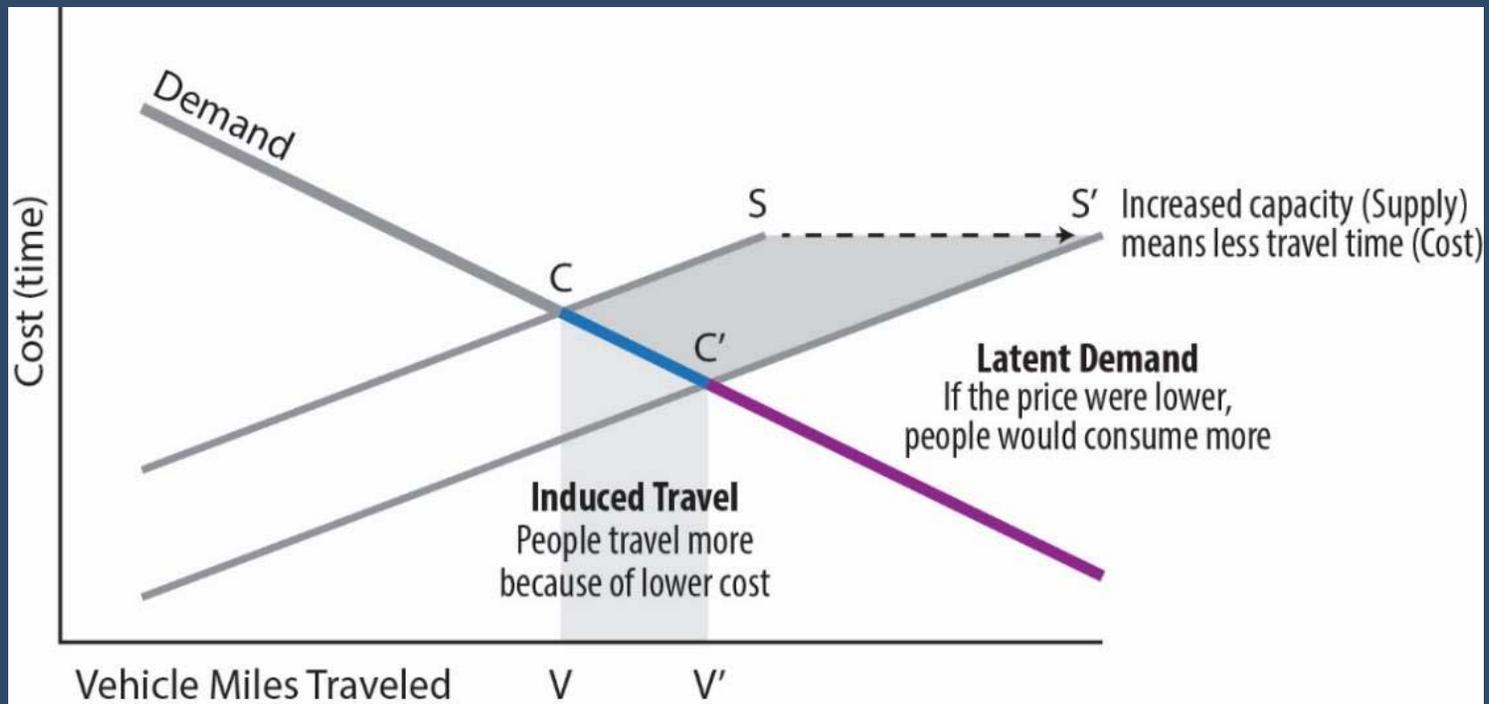


Change ■ WHY?

Metric nd


 Transportation Utilization
WASATCH FRONT CENTRAL CORRIDOR STUDY
 2050
BALLPARK STATION





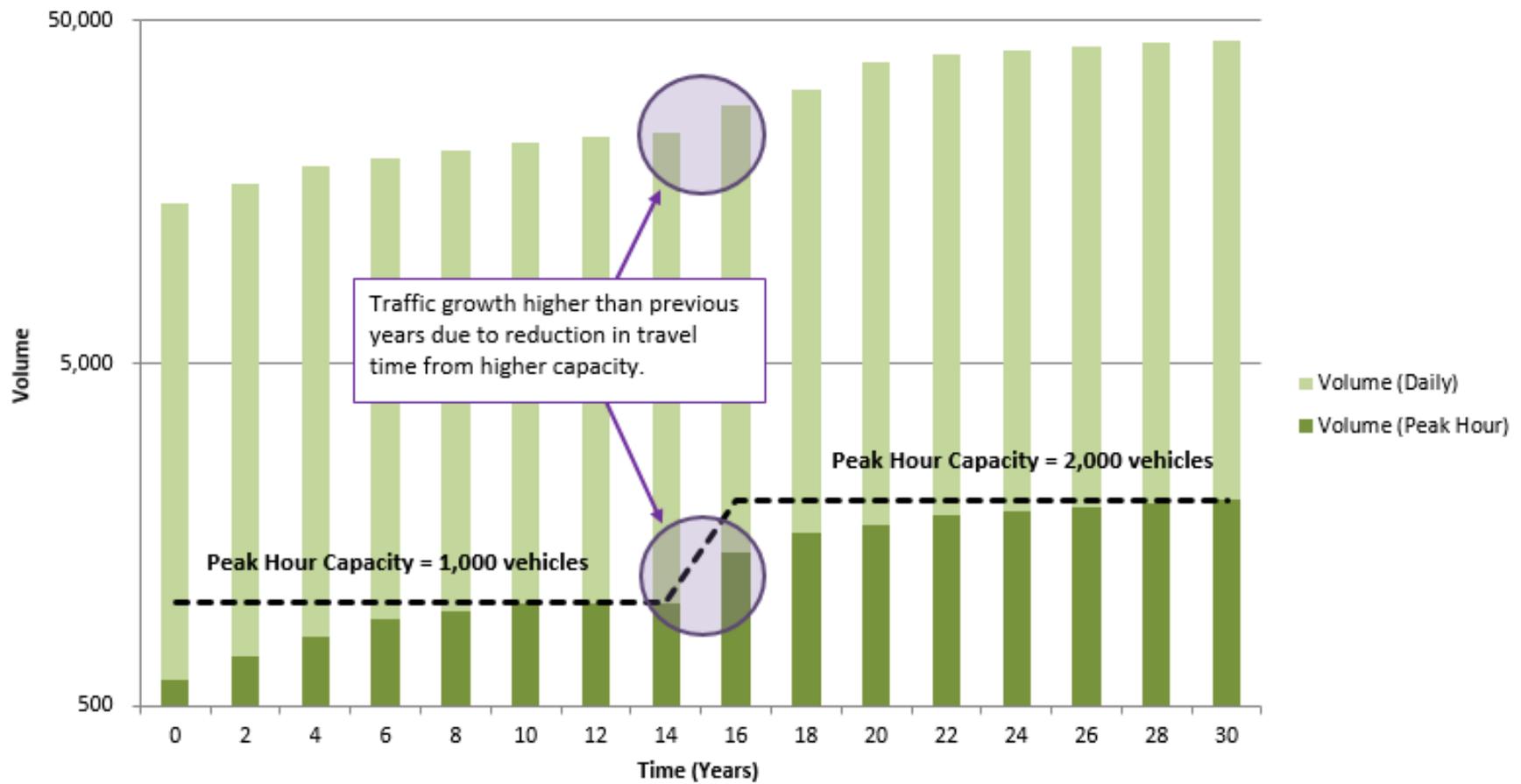
NOTES:

- C = Initial Cost
- C' = New Cost
- S = Initial Supply/Capacity
- S' = New Supply/Capacity
- V = Initial VMT
- V' = New VMT

Source: Susan Handy

Induced Travel Example

Influence of Capacity Expansion on Vehicle Traffic Growth



Methods ■ FULL ACCOUNTING

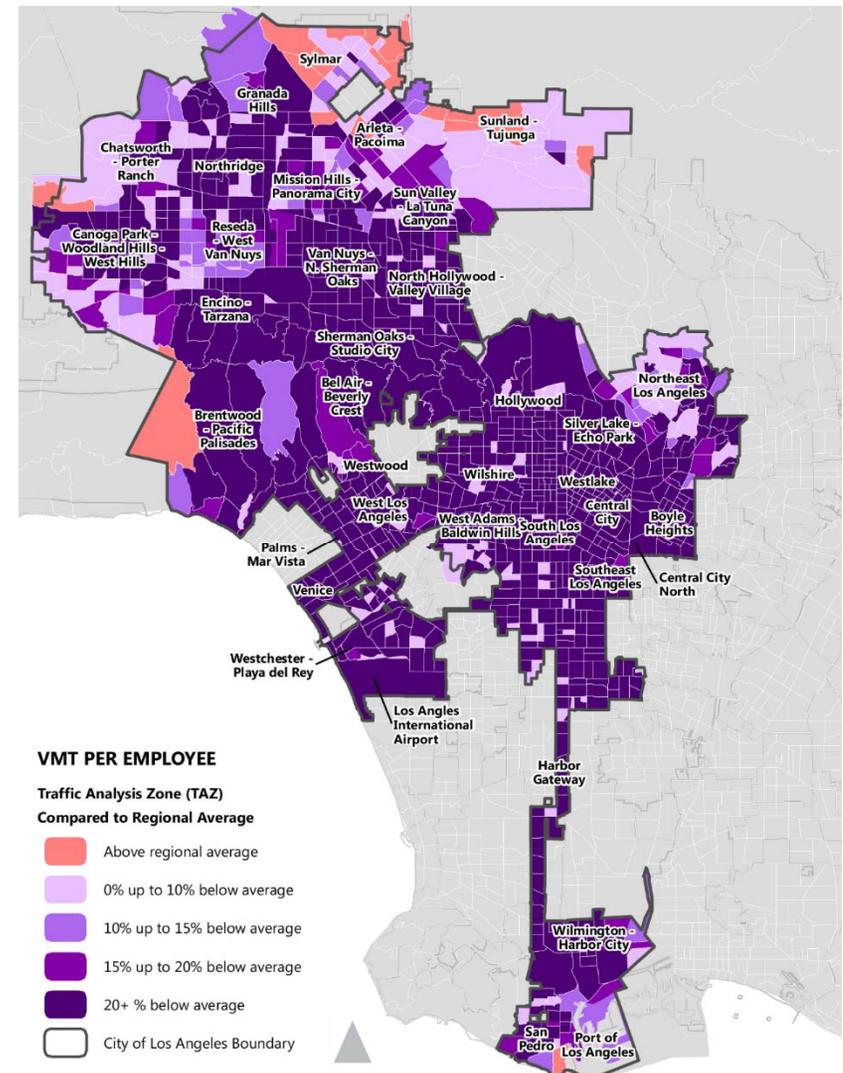
Trip Length Estimates	Average Trip Length by Trip Purpose		
	HBO	HBS	HBW
CalEEMod	7.50	7.30	10.80
VMT Spreadsheet Model	7.22	7.22	12.54
MPO Travel Forecasting Model	7.26	7.26	5.87
Notes: HBO = Home-Based Other HBS = Home-Based Shopping HBW = Home-Based Work			

Methods ■ TRIP LENGTHS

Trip Length Estimates	Average Trip Length by Trip Purpose		
	HBO	HBS	HBW
CalEEMod	7.50	7.30	10.80
VMT Spreadsheet Model	7.22	7.22	12.54
MPO Travel Forecasting Model	7.26	7.26	5.87
Notes: HBO = Home-Based Other HBS = Home-Based Shopping HBW = Home-Based Work			

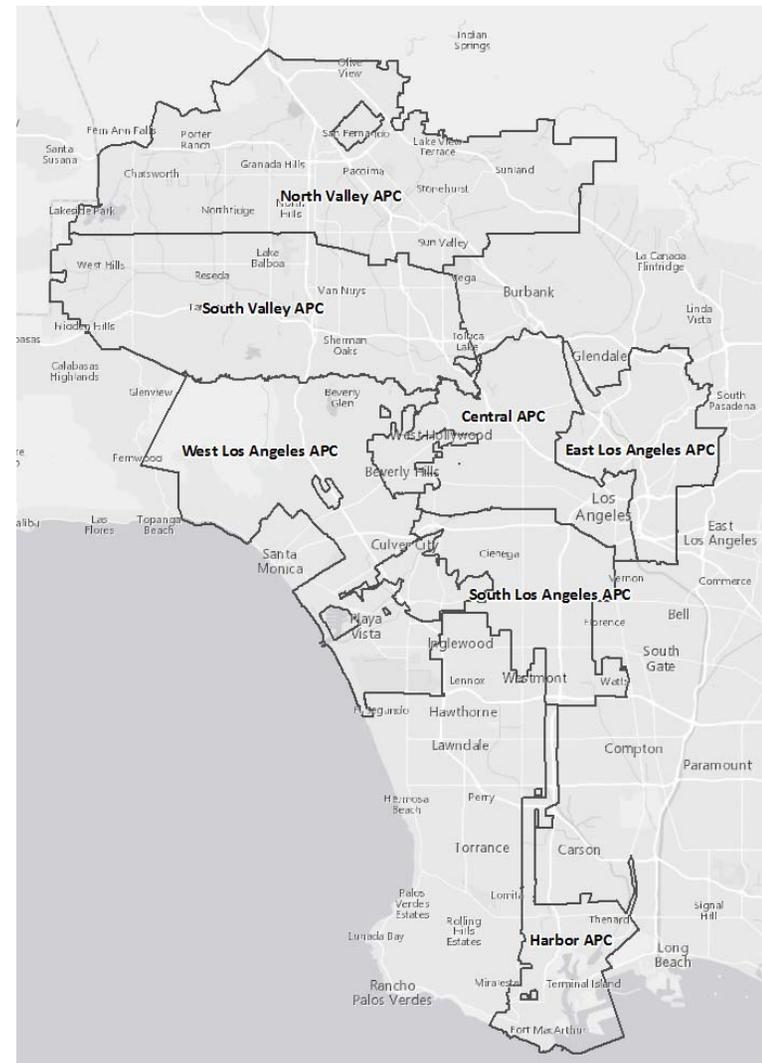
Choice ■ THRESHOLDS

	Daily Household VMT per Capita	Daily Work VMT per Employee
Los Angeles	9.3	12.9
SCAG Region	17.2	21.3



Choice ■ THRESHOLDS

Area Planning Commission	Daily Household VMT per Capita	Daily Work VMT per Employee
Central	6.2	7.8
East LA	7.5	12.9
Harbor	9.4	12.5
North Valley	9.4	14.9
South LA	6.2	11.8
South Valley	9.6	11.6
West LA	7.7	11.1



Change & Choice.

(4) Methodology. The lead agency's evaluation of the vehicle miles traveled associated with a project is subject to a rule of reason. A lead agency should not confine its evaluation to its own political boundary. A lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project.