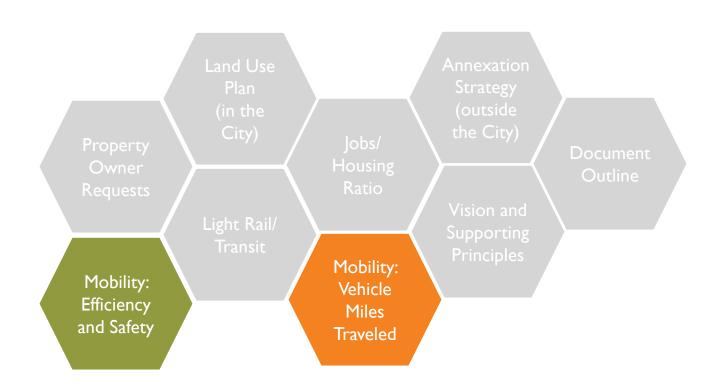
GENERAL PLAN UPDATE

Joint Study Session

June 21, 2017



Interrelated Issues and Topics

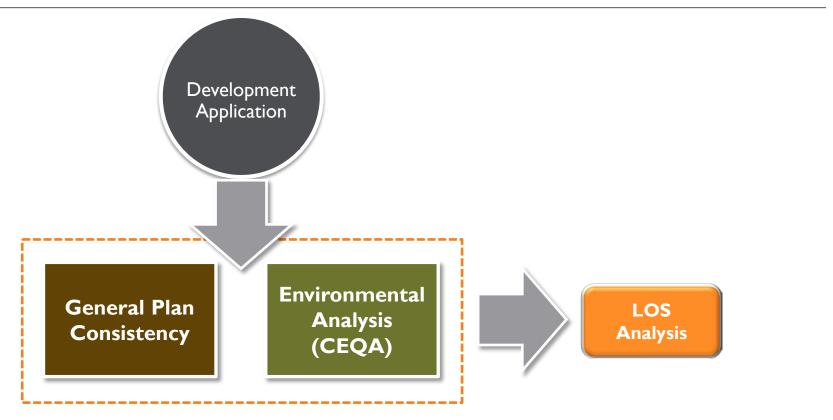


Tonight's Discussion

- City's current approach to mobility and efficiency
- SB 743
 - The Intent
 - Implementation
- What is VMT?
 - Calculations & thresholds
- Staff Recommendation
- Project-Specific Example Applications



The City's Current Approach



The City's Current Approach

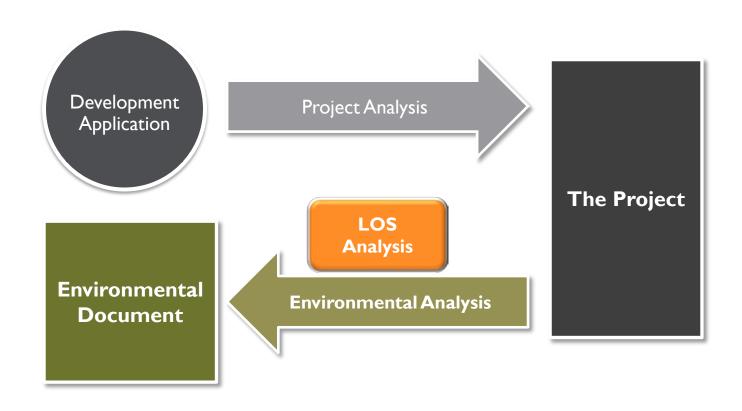
- City measures transportation impacts through Level of Service
 - Focus of analysis is on delay experience
- Calculation based on Highway Capacity Manual
- LOS analysis uses inputs from:
 - ITE Trip Generation Rates
 - Travel Forecasting Models
 - Field Observations (i.e., facility geometrics)

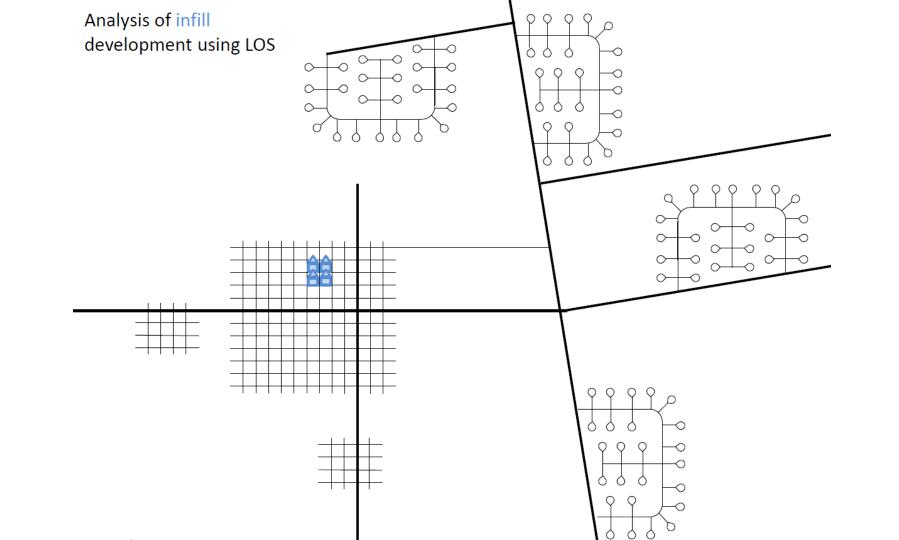
What is LOS?

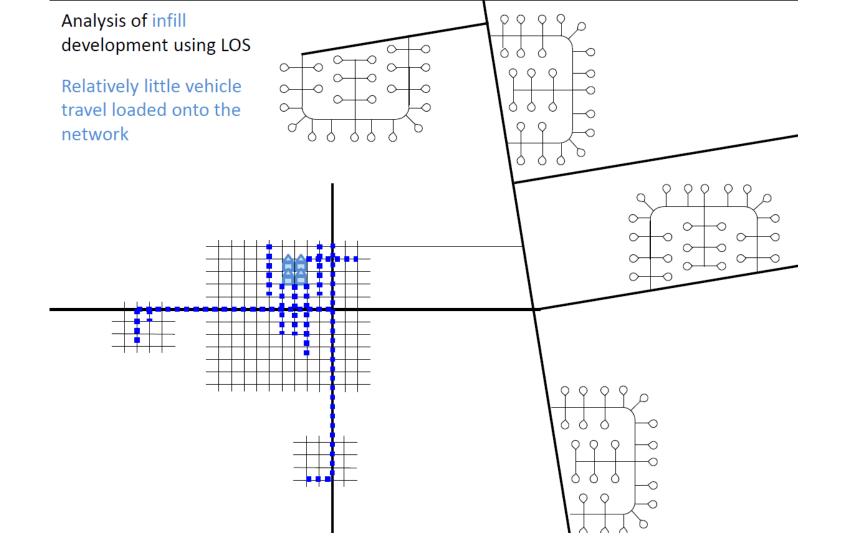
A qualitative measure used to relate the quality of traffic service.
Categorizes traffic flow and assigns quality levels
(A to F)*

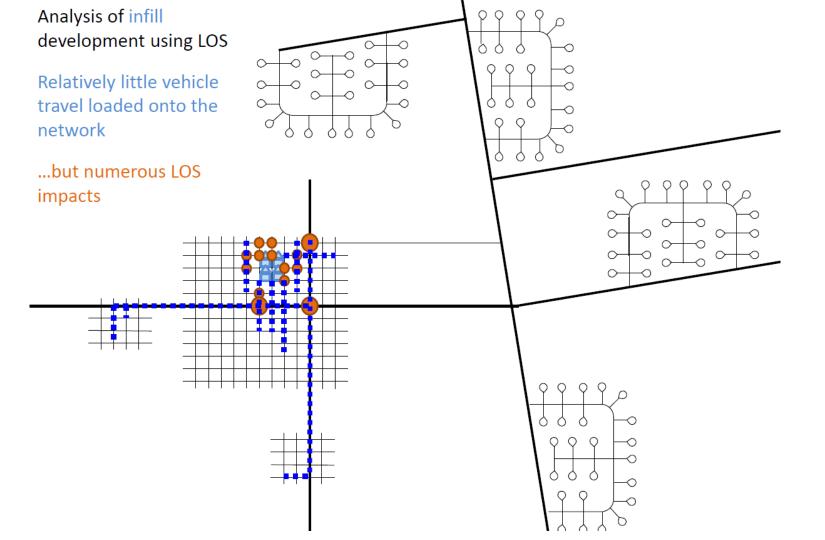
*Calculated for AM/PM peak hour conditions

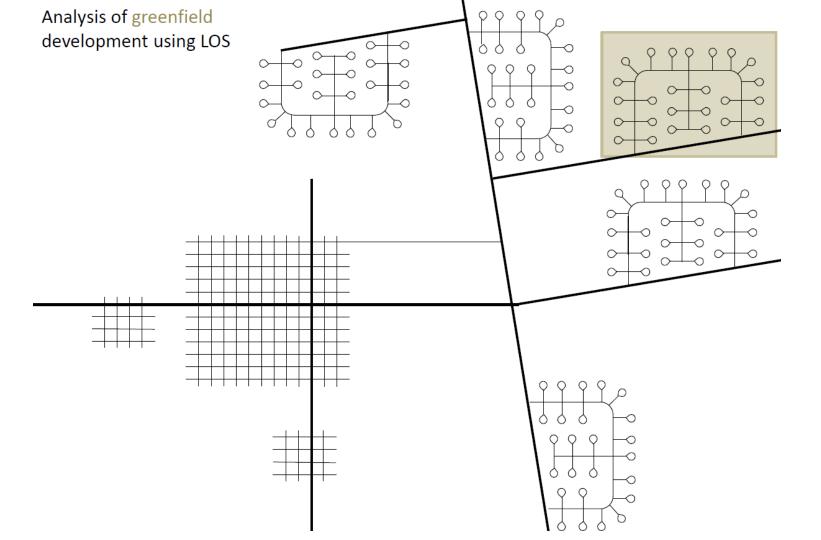
City's Current Approach





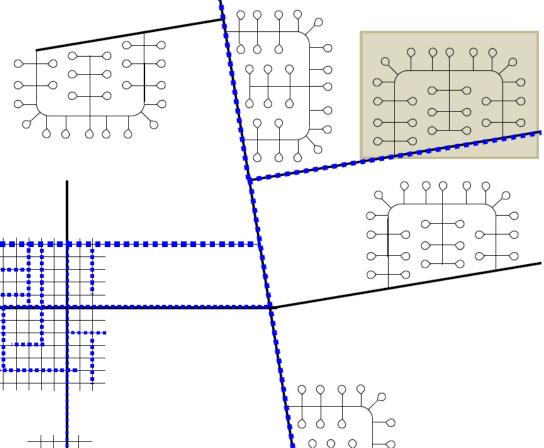






Analysis of greenfield development using LOS Typically three to four loaded onto the

times the vehicle travel network relative to infill development

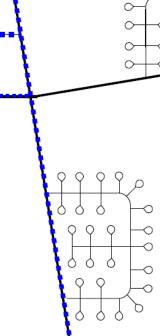




Analysis of greenfield development using LOS Typically three to four times the vehicle travel \bigcirc loaded onto the network relative to infill development ...but relatively few LOS impacts

Traffic generated by the project is disperse enough by the time it reaches congested areas that it doesn't trigger LOS thresholds, even though it contributes broadly to regional

congestion.



Problems with LOS

- Punishes "last-in" infill development
- Focuses on relatively small area, ignores regional impacts
- Leads to problematic mitigation approaches
- Precision issues: trip distribution difficult to predict
- Biased against transit, ped, and bike improvements that may decrease LOS but improve person-throughput



Senate Bill 743

- Creates a process to change analysis of transportation impacts under CEQA
- Shifting the analysis from driver delay and towards alternative criteria
- Requires amendments to CEQA Guidelines to provide an alternative to LOS

Alternative criteria must "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses."

State Implementation of SB 743

 Authority delegated to Office of Planning and Research (OPR)

- OPR released discussion draft guidelines
- Solicited comments

2013/2014

2016

- 2nd round guidelines
- §5064.3
- Appendix G
- Technical Advisory

- Final revisions pending
- Subsequent rulemaking process (~6mos)

Late 2017

2018

- Completion of the rulemaking
- SB 743 enforced ([an 2019)



OPR's Analysis (2013)

OPR's Goals and Objectives

- Environmental effect
- Fiscal and economic effect
- Equity
- Health
- Simplicity
- Consistency with other State policies
- Access to destinations

Criteria Considered

- Vehicle Miles Traveled
- Automobile Trips
 Generated
- Multi-Modal Level of Service
- Fuel Use
- Motor Vehicle Hours Traveled

OPR's Identified "Impacts of High VMT Development"

Environment

- Emission
 - GHG
 - Regional Pollutants
- Energy Use
 - Transportation energy
 - Building energy
- Water
 - Water Use
 - Runoff- flooding
 - Runoff-pollution
- Consumption of open space
 - Sensitive habitat
 - Agricultural land

Health

- Collisions
- Physical activity
- Emissions
 - GHGs
 - Regional Pollutants
- Mental health

Cost

- Increased costs to state and local government
 - Roads
 - Other infrastructure
 - Schools
 - Services
- Increased private transportation cost
- Increased building cost (due to parking costs)
- Reduced productivity per acre due to parking
- Housing supply/demand mismatch → future blight

Understanding VMT

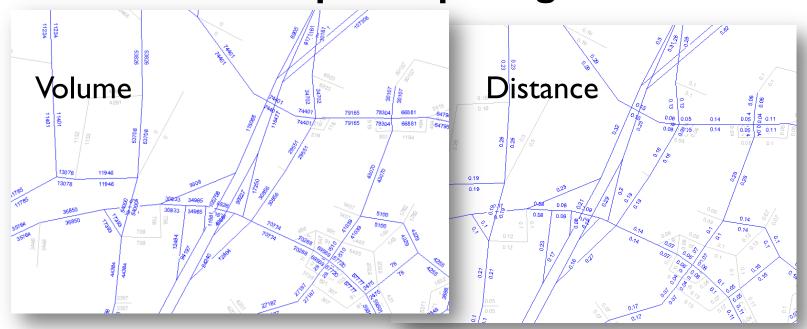
- VMT is recommended as an alternative for transportation impact analysis
- Loads full extent of VMT onto roadway network
- Transit & active transportation presumed to reduce VMT unless demonstrated otherwise
- Generally requires a transportation model based on land use

What is VMT?

The total number of vehicle miles traveled resulting from development due to uses and its physical relationship to other land uses.

VMT Estimation

VMT = Volume x Distance or Trips x Trip Length



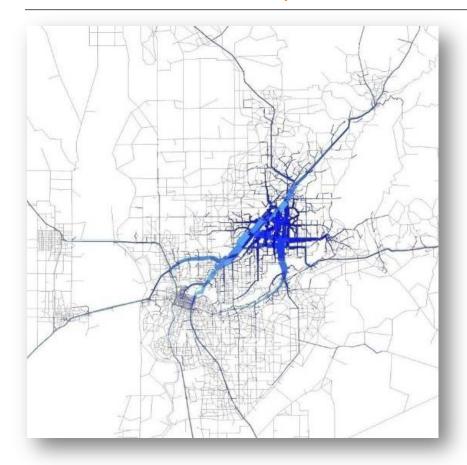
Tour-Based VMT



Tour-Based VMT



VMT Estimation (Full Accounting)

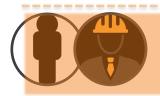


Origin-Destination (OD) VMT Method

Multiple Ways to Calculate VMT



Per Capita



Per Service Population



Per Household



Total Daily

VMT Methodology Recommendation

- VMT per service population
- Uses an allocation system to consider daily residential and worker VMT

Allocation Method									
			Home-Ba	ased					
Input	Quantity	VMT	Portion of	f VMT	VMT/Input		Description		
Population	100	1,000		500		5.0	< Daily Home-Based Residential VMT per Capita		
Employment	1,000	20,000	10	0,0001	, A	10.0	< Daily Home-Based Work VMT per Worker		
Population and Employment	1,01	21,000	10	0,500	1	10.4	< Daily Home-Based Residential and Work VMT per Worker		
500/100 = 5.0									

Draft Amendments to CEQA Guidelines

New Section 15064.3

- (a) Purpose
- (b) Criteria for Analyzing Transportation Impacts:
 - (I) Vehicle Miles Traveled and Land Use Projects
 - (2) Induced Travel and Transportation Projects
 - (3) Local Safety
 - (4) Methodology
- (c) Mitigation and Alternatives
- (d) Applicability

Amendments to Appendix F: Energy Impacts

Amendments to Appendix G:Transportation

Technical Advisory

Criteria for Analyzing Transportation Impacts

Multiple Project Types with different VMT assumptions



Land Use Projects



Transportation Projects

Criteria for Analyzing Transportation Impacts

Methodology



Evaluation of a project VMT is subject to a *rule* of reason

Should **not confine** its evaluation to its own **political boundary**.

May revise model estimates to reflect professional judgment based on **substantial** evidence

Document assumptions

Proposed Transportation Analysis Questions

- A. Conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths (except for automobile level of service)?
- B. Cause substantial additional vehicle miles traveled (per capita, per service population, or other appropriate efficiency measure)?

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	No Impac
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			
XVI_TRANSPORTATION/TRAFFIC_Would the project:			
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and one uncortased travel and relevant components of the circulation system, including but not limited, but not limited system, including but not limited in the prefestions, streets, highways and freeways, predestina and bicycle paths, and mass transit?			
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?			
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			
e) Result in inadequate emergency access? f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the			

Proposed Transportation Analysis Questions

- C. Substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed flow-lanes) or by adding new roadways to the network?
- D. Result in inadequate emergency access?

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	No Impa
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			
XVI_TRANSPORTATION/TRAFFIC_Would the project:			
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performance or safety of such facilities

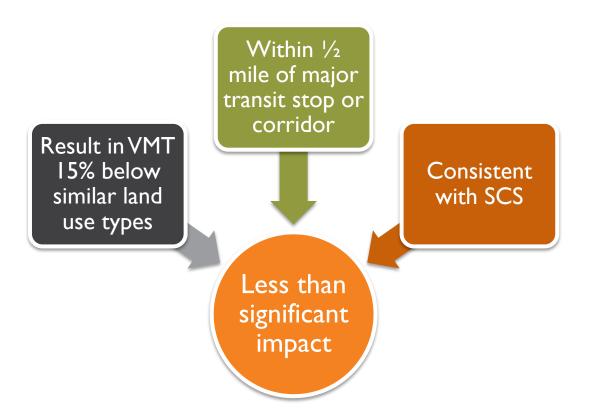
Mitigating VMT Impacts

- Left to local discretion
- Previously adopted measures for congestion impacts may continue to be enforced, or modified
- List of recommended measures provided in Guidelines Appendix F



State Guidance on Thresholds (Technical Advisory)

Sets forth *recommended* VMT thresholds for projects:



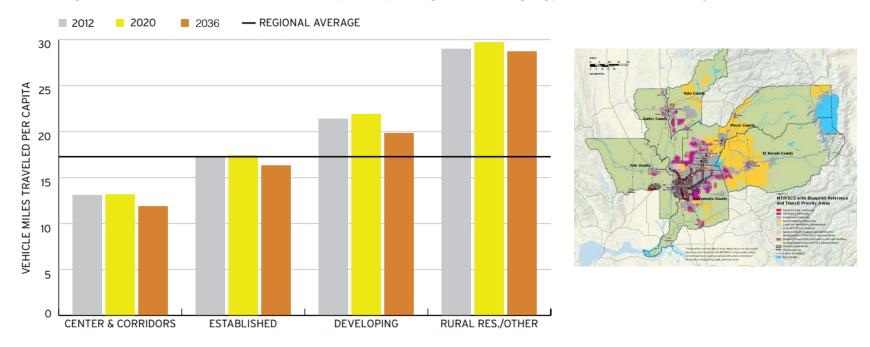
Will the 'threshold guidance' be construed by the courts as required thresholds?

We don't know yet.

State Guidance on Thresholds (Technical Advisory)

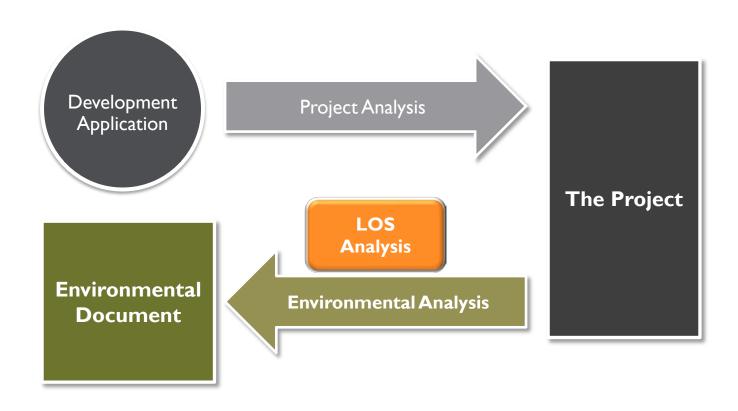
The Benchmark

Weekday Household Vehicle Miles Traveled per Capita by Community Type in the SACOG Region¹

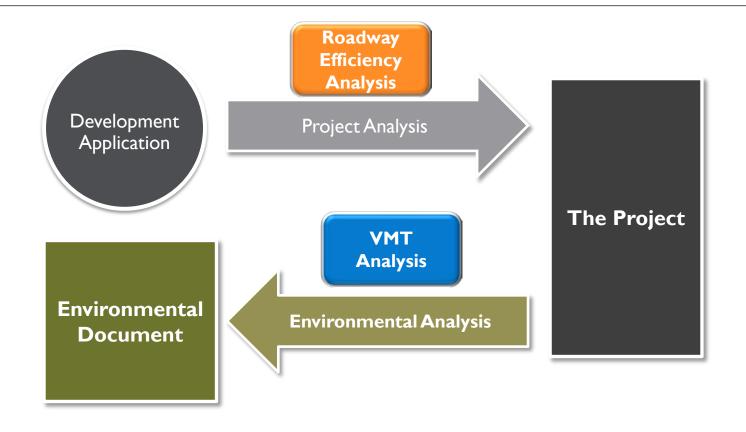


Household-generated VMT as defined in this report is rolled up to place of residence, and then totaled to the Community Type of the place

The Old Process



The New Process



Implementation and Compliance

Ramification of City action on SB-743

By addressing VMT in City could exclude VMT from the policy, the City Addressing SBprovides a local general plan, 743 in the Leaving VMT out leaving it for process for both General Plan project applicants compliance with of the General State VMT targets to address through Plan AND a path to "overenvironmental riding considerations" review

Implementation and Compliance

Use Ad-hoc, LOS-triggered mitigation (highly problematic)

Use LOS to help plan roadway capacity; use number of units or square footage to estimate project impact (not ideal)

Use LOS to help plan roadway capacity; use VMT to estimate project impact (okay)

Use <u>accessibility</u> metric to plan network; use VMT to estimate project impact (ideal)

e.g., costs, neighborhood vibrancy, air quality, GHGs, human health.

Recommendation:

Balance auto mobility

with other interests,

State

Recommendations for Elk Grove



Mobility Policies: Two Pronged Approach

Mobility: Efficiency and Safety

Mobility: Vehicle Miles Traveled

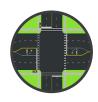
- I. Roadway Efficiency (replaces LOS)
 - i. Proposed General Plan policy
 - ii. Roadway performance targets
 - iii. Roadway sizing diagram
- 2. Vehicle Miles Traveled (VMT)
 - i. Proposed General Plan policies
 - ii. Development review process and CEQA
 - iii. Screening map and criteria

Roadway Efficiency and Safety Policy

New Policy: The City desires a robust and efficient roadway network that provides access to properties in a safe and convenient manner. The City will strive to implement the Roadway Performance Targets (RPT) for operations of roadway segments and intersections. The RPT requires the City to balance the design requirements to achieve identified design targets for intersections and for roadway segments with the role and function of the subject roadway(s), character of the surrounding area, and cost to complete the improvement and ongoing maintenance obligations. The Roadway System and Sizing Diagram reflects the implementation of the RPT Policy at a macro level.

Roadway Efficiency Policies

3 Types of Performance Targets



I. Intersection Performance Targets



2. Segment Performance Targets



3. Pedestrian and Bicycle Performance Stress Scores

Roadway Efficiency Performance Targets





Intersection Control	Peak Hour Delay Design Target*	
Stop (Side-Street & All-Way)	< 35. I	
Signal	< 55. I	
Roundabout	< 35. I	

^{*}Design targets measured in seconds per vehicle

Roadway Efficiency Performance Targets





Segment Performance Targets

Facility Type	# of Lanes	Median	Speed Limit	ADT Target*
Arterial	2-8	Y/N	25-55	13,600-72,000
Expressway	4-6	Y/N	55	64,000-97,200
Freeway	4-8	Y/N	55	74,400-148,800

^{*}There are specific ADT targets for each combination of lanes, median, and allowable speed. Ranges are shown here to provide a summary.

Roadway Efficiency Performance Targets



Pedestrian and Bicycle
Performance Stress Scores

Seek the lowest stress scores possible for pedestrian and bicycle performance after considering factors including design limitations and financial implications.

Stress Score?

Stress scores for bikes and pedestrians can be calculated a number of ways., such as output (e.g. miles of bike lane) or infrastructure rating (e.g. Sidewalk coverage). **StreetScore+**, is a propriety tool that is often used.

Roadway Efficiency Roadway Sizing

- Ultimate planned lane widths for arterials and collectors
 - Maintains 2-lane roads in Sheldon Rural Area, with 4-lanes on Bradshaw Road
 - Maintains 2-lane Elk Grove Blvd. in Old Town
- Road diets along select corridors to accommodate on-street bicycle and off-street trail improvements
- Analyzed multiple scenarios Staff recommends
 Scenario 6
 - Lane configurations in the Rural Area are all at two lanes consistent with Rural Roads Policy

Roadway Efficiency Roadway Sizing



2-lane Arterial\Collector

4-lane Arterial

6-lane Arterial

8-lane Arterial

4-lane Expressway

6-lane Expressway

--- Future Study Area Road

Freeway Interchange

Future Interchange

Mobility Policies: Two Pronged Approach

Mobility: Efficiency and Safety

Mobility: Vehicle Miles Traveled

- I. Roadway Efficiency (replaces LOS)
 - i. Proposed General Plan policy
 - ii. Roadway performance targets
 - iii. Roadway sizing diagram
- 2. Vehicle Miles Traveled (VMT)
 - i. Proposed General Plan policies
 - ii. Development review process and CEQA
 - iii. Screening map and criteria

VMT Policy Approach

New Policy: The City desires to achieve a reduction in the travel distances of automobile trips (VMT). Reductions in VMT can be accomplished through a combination of land use and mobility actions. To reduce VMT, the City has established the following metrics and limits. If the VMT for or induced by the project cannot be reduced consistent with the performance metrics outlined below, the City may consider approval of the project, subject to a finding of overriding consideration and mitigation of transportation impacts to the extent feasible, provided some other form of community benefit is achieved by the project.

VMT Review Process Approach

Proposed VMT Limits



VMT limits by <u>land use designation</u> (15% below a 2015 baseline)

- Citywide land use projects in accumulation and build-out cannot exceed baseline
- Study Area land use projects must achieve a VMT level 15% below the baseline



VMT limits for <u>transportation projects</u>

- **Short-term**, not to exceed the project's baseline
- Long-term, consistent with regional plans



Transportation Analysis Guidelines:

Provides a 4-step process for calculating and determining VMT impacts VMT limits established by land use designation

5 VMT Reduction Categories:

Outlines 5 types of strategies to reduce VMT within proposed projects

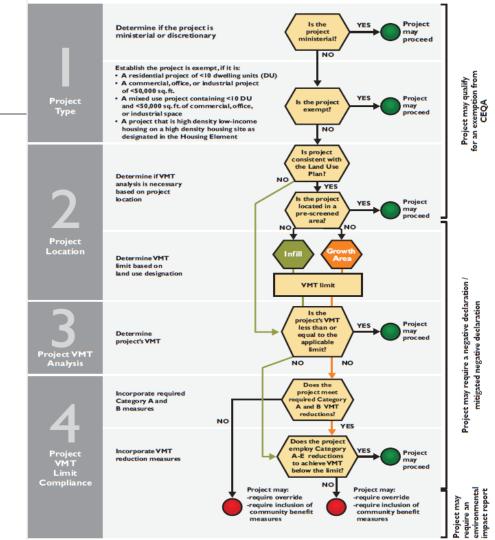
Land Use Designation	VMT Limit (Daily/SP)
Community Commercial	69.2
Regional Commercial	40.9
Employment Center	11.9
Light Industrial/Flex	26.2
Light Industrial	42.2
Heavy Industrial	31.1
Village Center Mixed Use	27.2
Residential Mixed Use	17.5
Parks and Open Space	01
Resource Management	01
Public Services	20.0
Rural Residential	20.1
Estate Residential	18.0 ¹
Low Density Residential	12.0
Medium Density Residential	10.9
High Density Residential	7.8
Agriculture	30.5

Notes: I.These designations are not anticipated to produce substantial VMT and are exempt from analysis.

SP -> Service Population = Residents + Employees

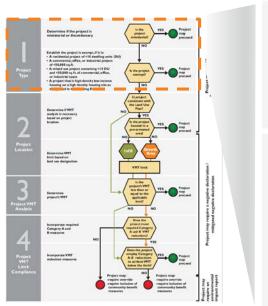


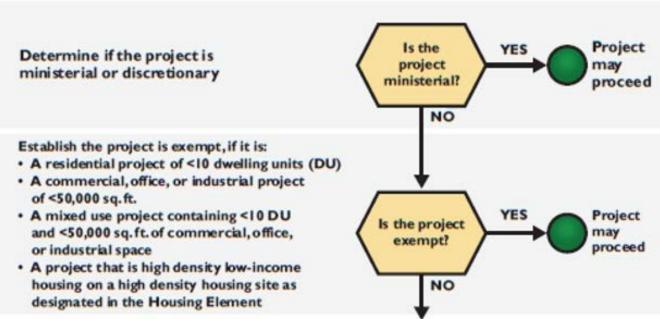
The 4-step process





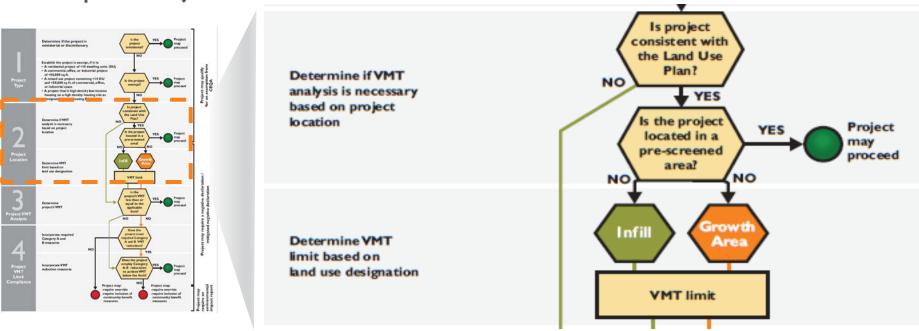
Step 1: Project Type





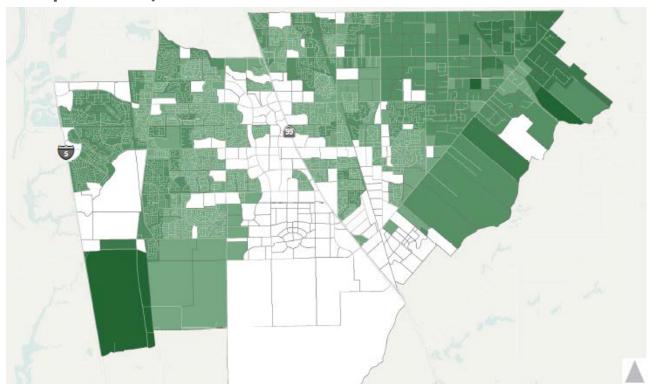


Step 2: Project Location





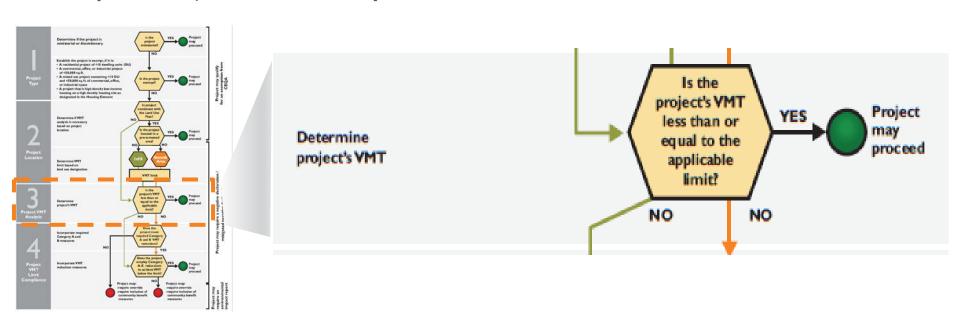
Step 2: Project Location



Pre-screened areas are shown in white and have been determined to result in 15% or below the average VMT/service population established for the land use designation if developed to the specifications of the Land Use Plan.

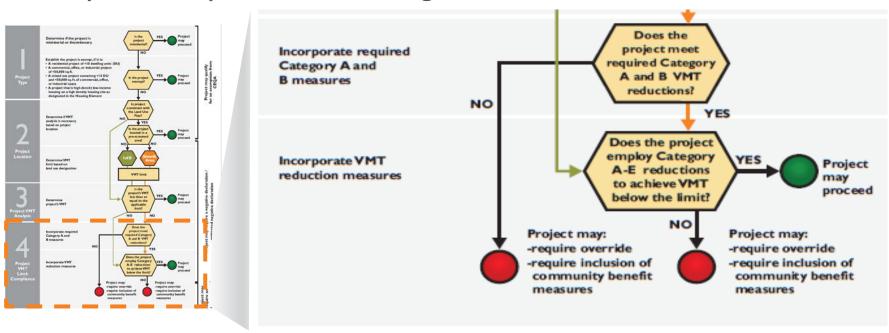


Step 3: Project VMT Analysis





Step 4: Incorporate VMT Mitigation Measures





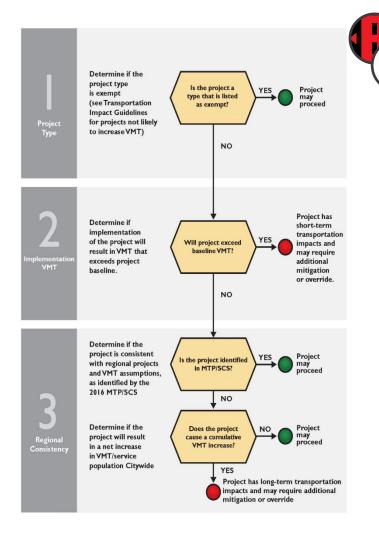
Step 4: Incorporate VMT Mitigation Measures

	Category	Description
A	Land Use/ Location	E.G. density, location, and efficiency; diversity of uses within the project. Also access and proximity to destinations, transit stations
В	Site Enhancement	E.G. connection to a pedestrian/bike network; traffic calming; car sharing programs
С	Transit System	Improvements to the transit system E.G. service frequency, types of transit, access to stations, station safety and quality
D	Commute Trip Reduction ¹	For residential E.G.: transit fare subsidies, rideshare programs, shuttle programs For employer sites E.G.: transit fare subsidies, parking cash-outs, paid parking
E	In-Lieu Fee	A fee is leveed to provide non-vehicular transportation services

The 3-step process for calculating and determining VMT impacts:

Exemptions:

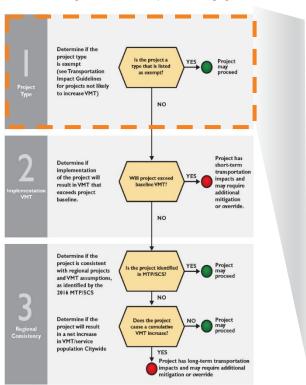
Projects that would not result in measurable increases in VMT



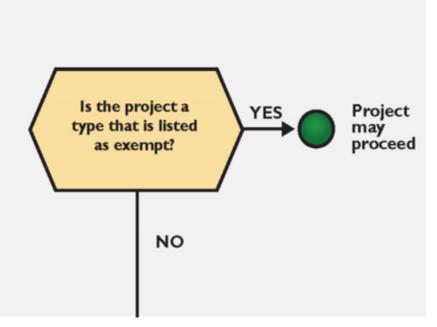
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Step 1: Project Type

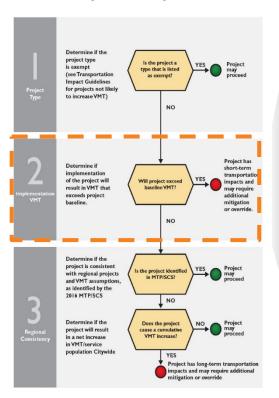


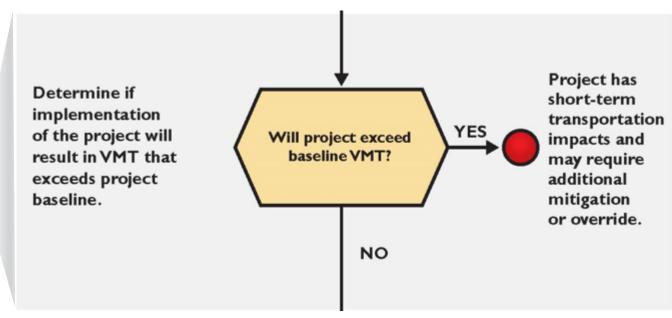
Determine if the project type is exempt (see Transportation Impact Guidelines for projects not likely to increase VMT)





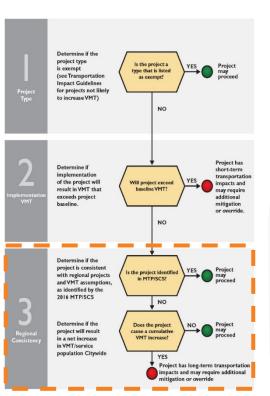
Step 2: Implementation VMT







Step 3: Regional Consistency



Determine if the project is consistent YES Project Is the project identified with regional projects may in MTP/SCS? proceed and VMT assumptions, as identified by the 2016 MTP/SCS NO Determine if the Project Does the project NO may project will result cause a cumulative proceed VMT increase? in a net increase in VMT/service population Citywide YES Project has long-term transportation impacts and may require additional mitigation or override

Example Projects

- Project in a master planned area (with a program EIR)
 - Consistent with the master plan
 - Requires amendment to the master plan
- Infill residential project
- Rural Residential project
- Commercial project

Example **①**

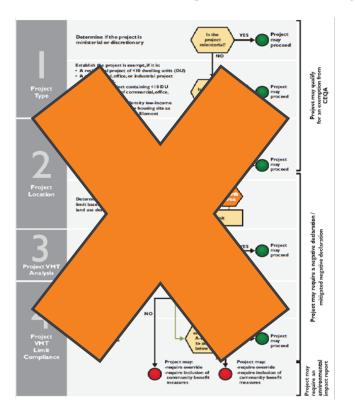
Project in a master planned area (consistent with plan)



- 200 dwelling units
- Office and retail
- Consistent with the master plan and General Plan
- Master Plan has a Program EIR

Example **①**

Project in a master planned area (consistent with plan)



No other project-specific CEQA is required because of the master plan

General Plan Update considered the VMT impacts

VMT analysis not necessary since project is consistent with the Master Plan and has a program EIR

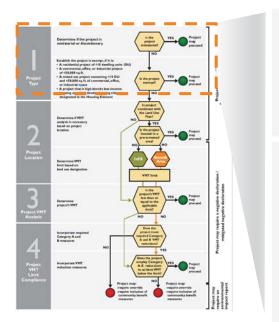
Example 2

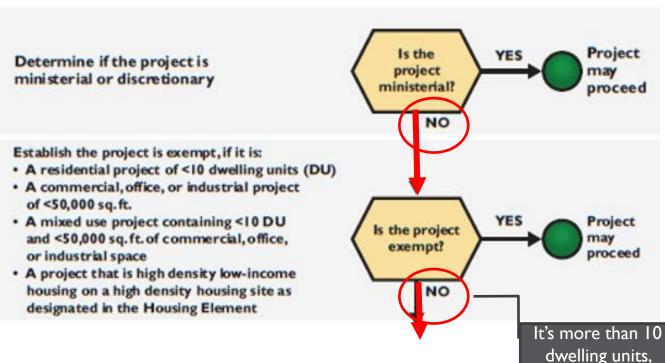
Project in a master planned area (inconsistent with plan)



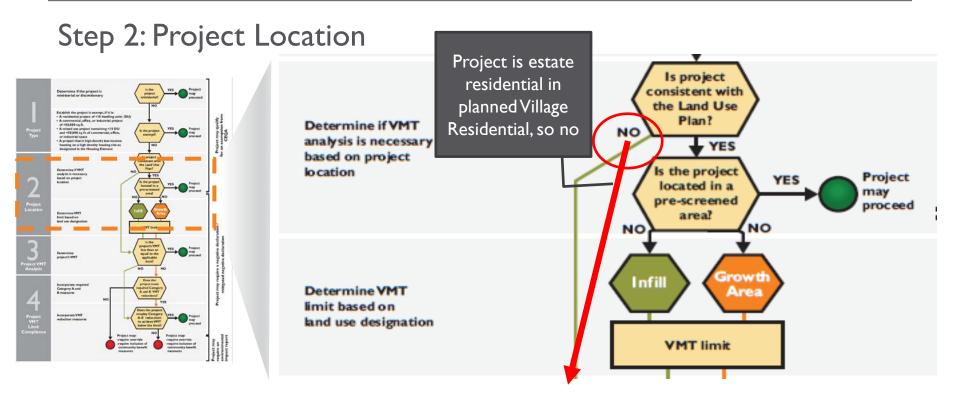
- 14 dwelling units
- Estate Residential Density proposed in an area planned Residential Mixed Use >> NOT consistent with the Master Plan
- With a Program EIR

Step 1: Project Type



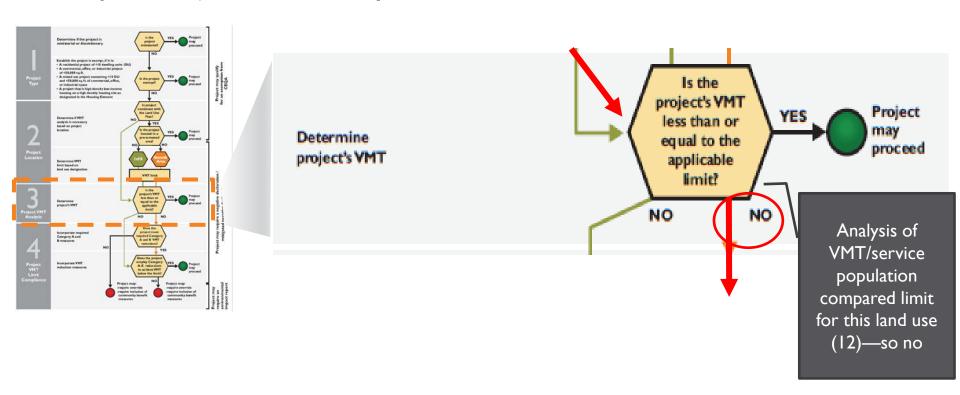


so no

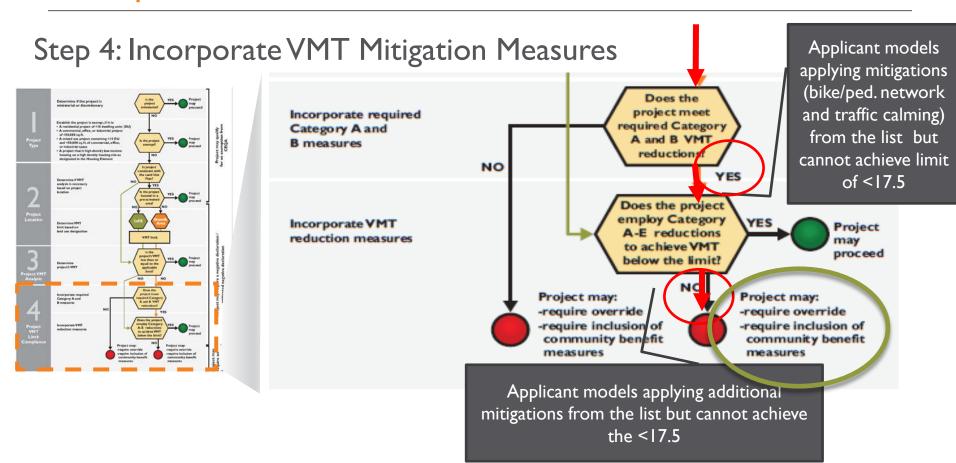


Example 2

Step 3: Project VMT Analysis

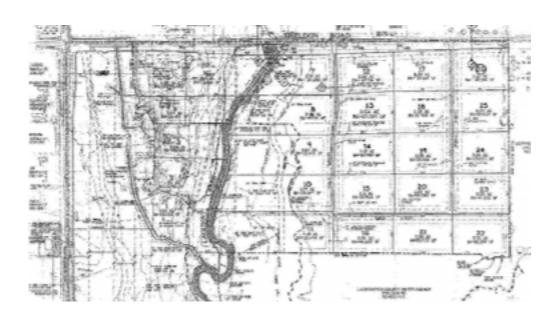


Project in a master planned area (inconsistent with plan)



Example 3

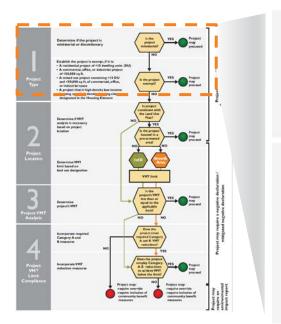
Rural Area Project

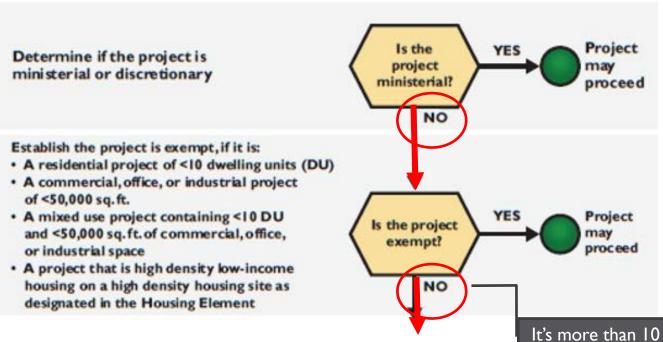


- 26 dwelling units
- Rural Residential Designation
- Consistent with the General Plan and Zoning
- New MND

Rural Area Project

Step 1: Project Type

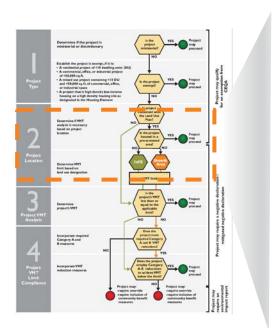




dwelling units, so no

Rural Area Project

Step 2: Project Location



Determine if VMT analysis is necessary based on project location

Determine VMT limit based on land use designation Project is rural density residential in an area designated for rural residential, so yes

YES

Area

Is project

consistent with

the Land Use

located in a

pre-screened

area?

VMT limit

NO

NO

Infill

Check Screening
Map. It's in an
area shown in
green, so not
prescreened

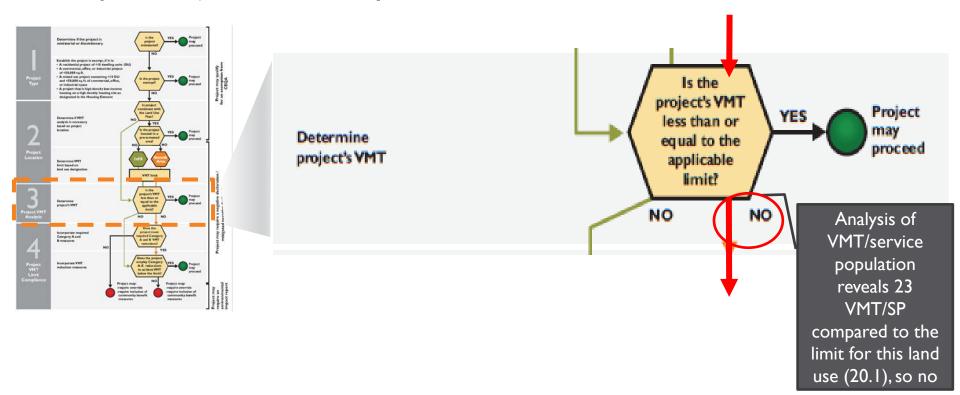
Project

proceed

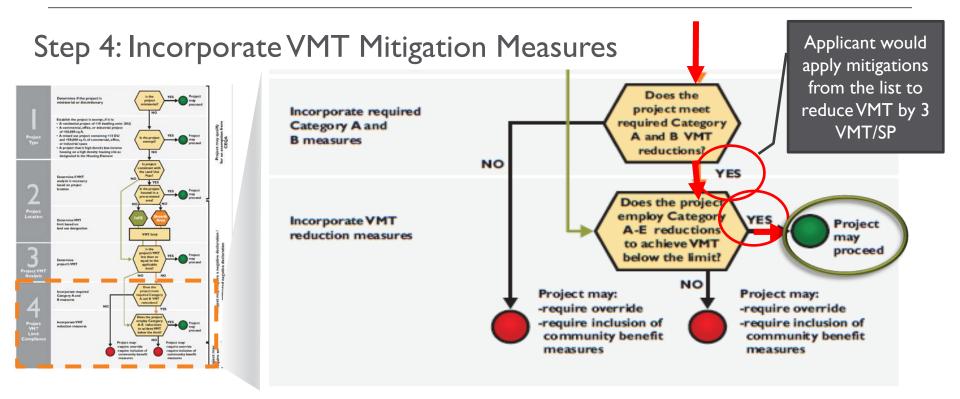
may



Step 3: Project VMT Analysis



Rural Area Project





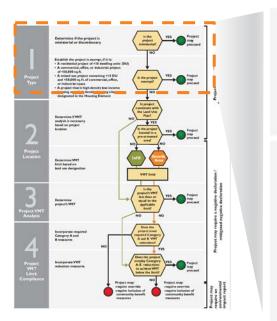
Infill Project

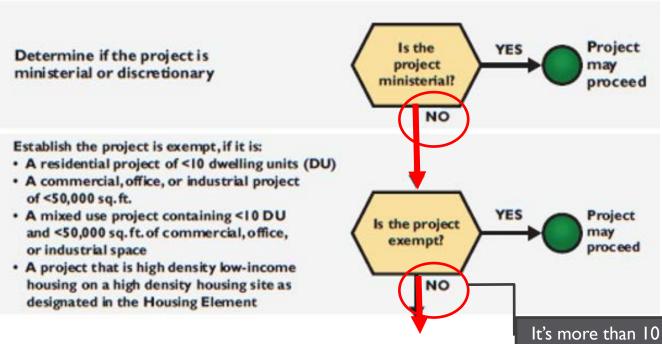


- 16 dwelling units
- Infill Low Density
 Residential units within
 RD-5

Example 4

Step 1: Project Type

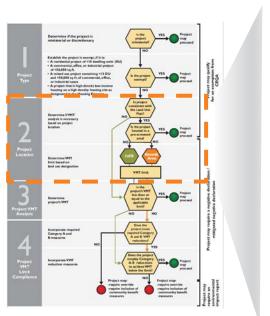


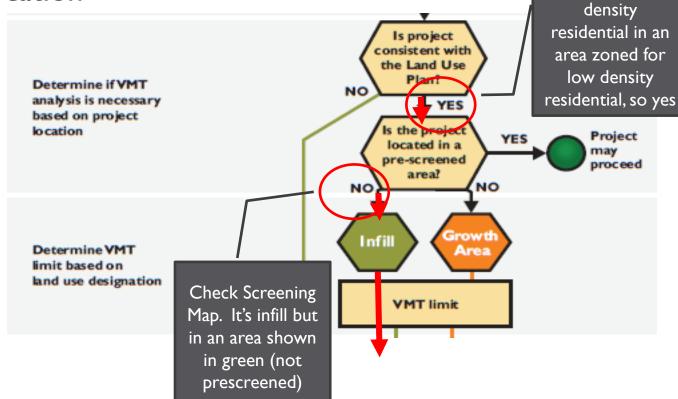


dwelling units, so no



Step 2: Project Location

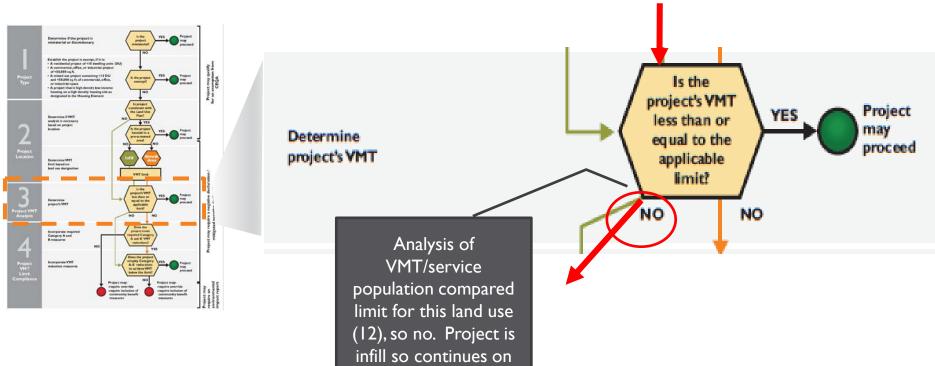




Project is low

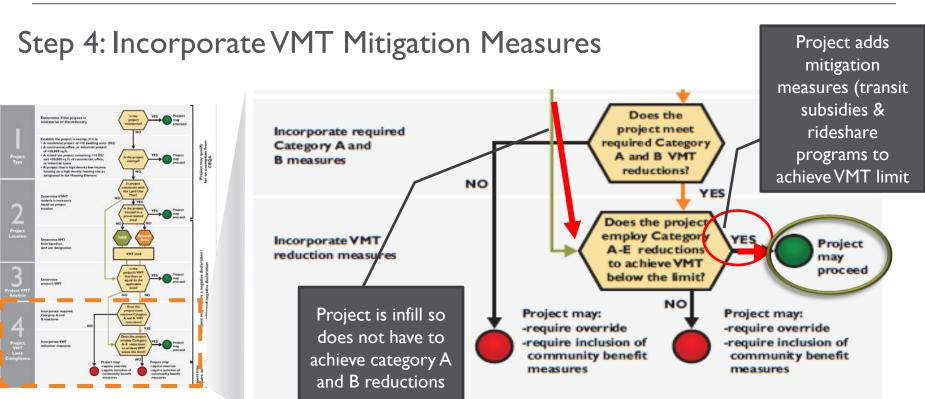


Step 3: Project VMT Analysis



"green" line path





Next Steps

- Q&A
- Public Comment
- Direction to proceed with draft Mobility policies as presented

GENERAL PLAN UPDATE

Joint Study Session

June 21, 2017

