

## Chapter 3: Land Use Impact Program

2009 Ventura County Congestion Management Program

Adopted July 10, 2009

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### LAND USE IMPACTS ANALYSIS PROGRAM

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*“The [CMP] program shall contain...A program to analyze the impacts of land use decisions made by local jurisdictions on regional transportation systems, including an estimate of the costs associated with mitigating those impacts.”*

California Government Code Section 65089. (b)(4)

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#### 3.1 Purpose of the Land Use Impacts Analysis

The purpose of the Land Use Impacts analysis program is to identify future congestion problems throughout Ventura County based on expected changes in land use. This allows developers, local agencies and the Ventura County Transportation Commission (VCTC) to develop strategies, programs and projects that relieve congestion.

Some of the common strategies and projects used to ease traffic include operational and capacity improvements to local roads and highways, and improvements to public transit, bicycle and pedestrian paths.

The Land Use Impacts analysis is a two-step process: a ***Project-Level Impacts Analysis*** and a ***Cumulative Impacts Analysis***. Information from the analysis is made available for use by developers, local agencies and VCTC to plan strategies, programs and projects to reduce congestion where needed. The Project-Level Analysis and the Cumulative Impacts Analysis are described on pages 66 through 71.

Both cumulative and local-level impact reviews generate valuable information which is shared with local agencies to better coordinate transportation and land use planning in the County.

#### 3.2 Requirements of the Land Use Impacts Analysis Program

The Ventura County Congestion Management Program (CMP) conforms to voluntary State regulations under Government Code 65089(c) stipulating:

- Development of a county-wide uniform computer database on traffic impacts to determine the quantitative impacts of development on the road system. The *Ventura County Traffic Model* (VCTM) has been developed by VCTC to meet this requirement, and is the tool used to perform the *Project-Level Impacts analysis* and the *Cumulative Impacts Analysis* described in sections 3.3 and 3.4. The model provides a forecast of

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traffic that can be expected from individual large projects and the total of all existing and proposed new development. Information from the model is used to develop strategies, programs and projects to relieve or prevent traffic congestion. A description of the VCTM and data requirements is presented in Exhibit 16, page 65.

- Approval of local agency traffic impact computer models by VCTC to ensure consistency with the VCTM. The cities and County staff are required to work with VCTC staff to obtain approval for new traffic models or updates developed by local agencies. The process for obtaining approval of local agency traffic models from VCTC is explained in section 3.5, page 71.
- Consistency of computer models/databases with the modeling methodology and databases of the Southern California Association of Governments (SCAG), the Metropolitan Planning Organization for six counties in Southern California including Ventura County. The Ventura County Traffic Model (VCTM) and local agency traffic models shall be consistent with the SCAG regional model.

In addition, the voluntary requirements of Government Code Section 65089.3 stipulate that the Ventura County Transportation Commission (VCTC) determine, at least biennially, if the County and cities have adopted and implemented a program to analyze the impacts of land use decisions, including the estimate of costs associated with mitigating these impacts. Because all local agencies in Ventura County have established procedures to analyze the impacts of land use decisions within their jurisdiction, VCTC's Technical Transportation Technical Advisory Committee (TTAC) recommended that the biennial determination by VCTC be eliminated from the CMP. This is further discussed in section 3.6, page 71.

Federal regulations do not require or preclude the establishment of a land use impact program; however, the Land Use Impact Analysis Program in this CMP is consistent with the required federal Congestion Management Process elements described in Chapter 1.

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## Exhibit 16

### The Ventura County Traffic Model (VCTM)

#### DESCRIPTION

The Ventura County Traffic Model (VCTM) is a locally developed focused sub-regional model that provides an analytical tool to study the relationship between land-use and traffic on Ventura County's roadway network. The model provides a finer grain snapshot into traffic generation and trip distribution than does the SCAG regional model.

The VCTM is based on accepted modeling techniques in use throughout the southern California region and by SCAG. The model segregates Ventura County geographically into 515 *traffic analysis zones*, each containing land use information that determines trip generation and trip attractions. Land use information used in the model is provided by the cities and the County.

The model overlays the *traffic analysis zones* with a representative highway network that primarily reflects the adopted Congestion Management Plan (CMP) roadway network. Travel patterns are determined on a zone-to-zone basis, and when applied to the network, produce forecasts of traffic volumes on individual links of the highway network. Two versions of the model are typically in use, a base year model which is calibrated against known traffic counts and a forecast year which applies future land uses on the network to predict traffic volumes in the forecast year. For the 2009 CMP Update, the base year is 2005 and the forecast year is 2030.

#### DATA REQUIREMENTS

The success of the CMP Land Use Impact Analysis is directly related to the land use data contained in the VCTM. This is because the land use impact analysis is based on the traffic projections generated by the model. Therefore, it is essential that the land use and transportation data which support the model be as accurate and up-to-date as possible.

The cities and the County are the primary sources of the data which support this program. Each local jurisdiction must work with VCTC staff to update the CMP forecast year model database. The forecast year data requirements are basic and as follows:

- **Land Use Projection** – A description of land uses by type, density (i.e. square footage, acreage or number of dwelling units), and location (i.e. traffic analysis zone or, in some cases, census tract). Land use assumptions are also reviewed to ensure consistency with forecasts adopted by regional agencies such as the Ventura Council of Governments (VCOG) and SCAG as applicable.

- **Network Improvements** – Identification of all anticipated (reasonably certain) capacity-enhancing road network improvement projects. Each project must, at a minimum, be described by the name of the roadway, the project limits, and the type of project (i.e. widening, turn lanes, extension, etc.). Network assumptions are reviewed and revised as needed to reflect the most recent development activity and construction schedules.

Typically, the biennial preparation of the VCTM will consist of a simple updating of the previous year's projection. Unless a significant amount of unanticipated development activity has taken place during the previous two years, the typical annual update should not represent a difficult or time-consuming task and may be accomplished by the submittal of a brief letter/summary to VCTC outlining updated information.

However, approximately every five years, it is necessary to establish a new CMP forecast year. For the 2009 CMP Update, the traffic model forecast year has been revised from the previous Update from 2025 to 2030, with the base year of 2005.

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### 3.3 Project-Level Impacts Analysis

The Project-Level Impacts analysis looks at the specific congestion-related consequences of all significant projects proposed for development in the County. Unlike the Cumulative Impact Analysis described in section 3.4 which is conducted every two years, the Project-Level Impacts Analysis occurs on an ad hoc basis year-round as VCTC reviews the draft environmental documents of proposed developments. The goal of the Project-Level Impacts Analysis is to provide assistance to local staff as they review development proposals and to identify potential future problems in meeting Level of Service (LOS) standards required by the Congestion Management Program (CMP).

Proposed developments which meet the following criteria are evaluated by VCTC as part of the Project-Level Impacts analysis:

- The proposed land use is not included in the Ventura County Traffic Model because the project was not anticipated in the jurisdiction's general plan and the project will generate 200 or more peak hour trips in either peak hour; or
- The proposed land use is included in the VCTM as provided by the local agency, but because of an increase in project size or density the project will generate an additional 100 or more peak hour trips.

The analysis focuses on the volume and distribution of traffic generated by the proposed project. The results from the analysis will be in the form of traffic projections from the VCTM. VCTC does not comment on the worthiness of the proposed project nor will it recommend specific mitigation measures. Findings from the analysis are forwarded to the lead agency for their information as they consider the traffic and air quality impacts associated with proposed development.

VCTC shall attempt to complete specific requests for analysis of project-level impacts within two weeks of receiving the project description and transportation planning data from the lead agency. All requests shall be submitted in writing to the VCTC Director of Planning, along with a copy of the environmental document and traffic studies.

### 3.4 Cumulative Impacts Analysis and Findings

The Cumulative Impacts Analysis consists of a countywide traffic analysis that evaluates the cumulative traffic impact of all existing and anticipated development in Ventura County. The analysis is conducted as part of the Congestion Management Program (CMP) update process, and utilizes the Ventura County Traffic Model (VCTM) as the analytical tool for the analysis. A description of the VCTM and data requirements is presented in Exhibit 16, page 65. The VCTM is required to be updated prior to performing a new Cumulative Impacts Analysis.

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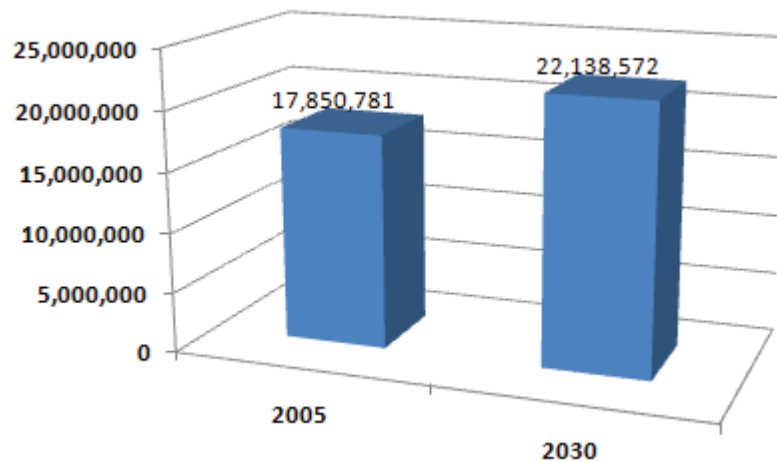
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For the 2009 Cumulative Impacts Analysis, the VCTM provides a forecast of Annual Average Daily Travel (AADT) that can be expected by the year 2030 from all existing and proposed new development based on traffic data from 2005. The map in Exhibit 19 on page 69 presents the projected AADT for the year 2030 for the state highway system in Ventura County, and Exhibit 18 on page 68 presents the AADT for base year 2005.

The 2009 VCTM also produces a total estimate of daily Vehicle Miles Traveled (VMT) for the year 2030 based on the 2005 estimate. According to the model, daily VMT in Ventura County will increase by 24% between 2005 and 2030, from 17.85 million to 22.13 million VMT respectively as illustrated in Exhibit 17 below.

Exhibit 17  
**Comparison of Estimated Daily Vehicle Miles Traveled (VMT)  
In Ventura County: Years 2005 & 2030**

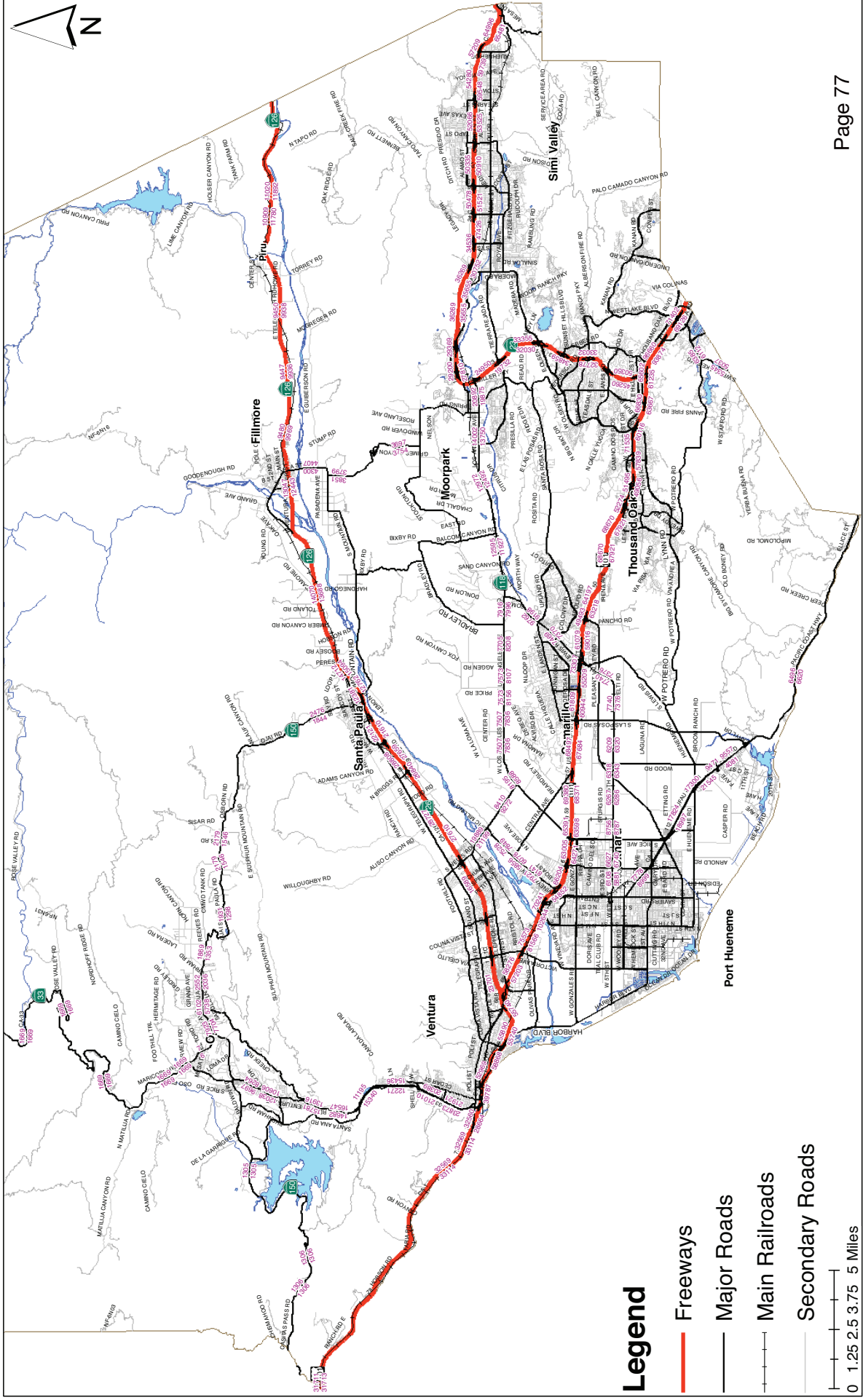


The VMT figures from the VCTM were used to calculate emission rates from all motor vehicles operating in Ventura County for years 2005 and 2030 utilizing the EMFAC2007 model developed by the California Air Resources Board (ARB). The results from the EMFAC2007 model analysis are presented in Exhibit 20, page 70.



# 2009 Ventura County CMP - 2005 Estimated Average Daily Travel

Exhibit 18

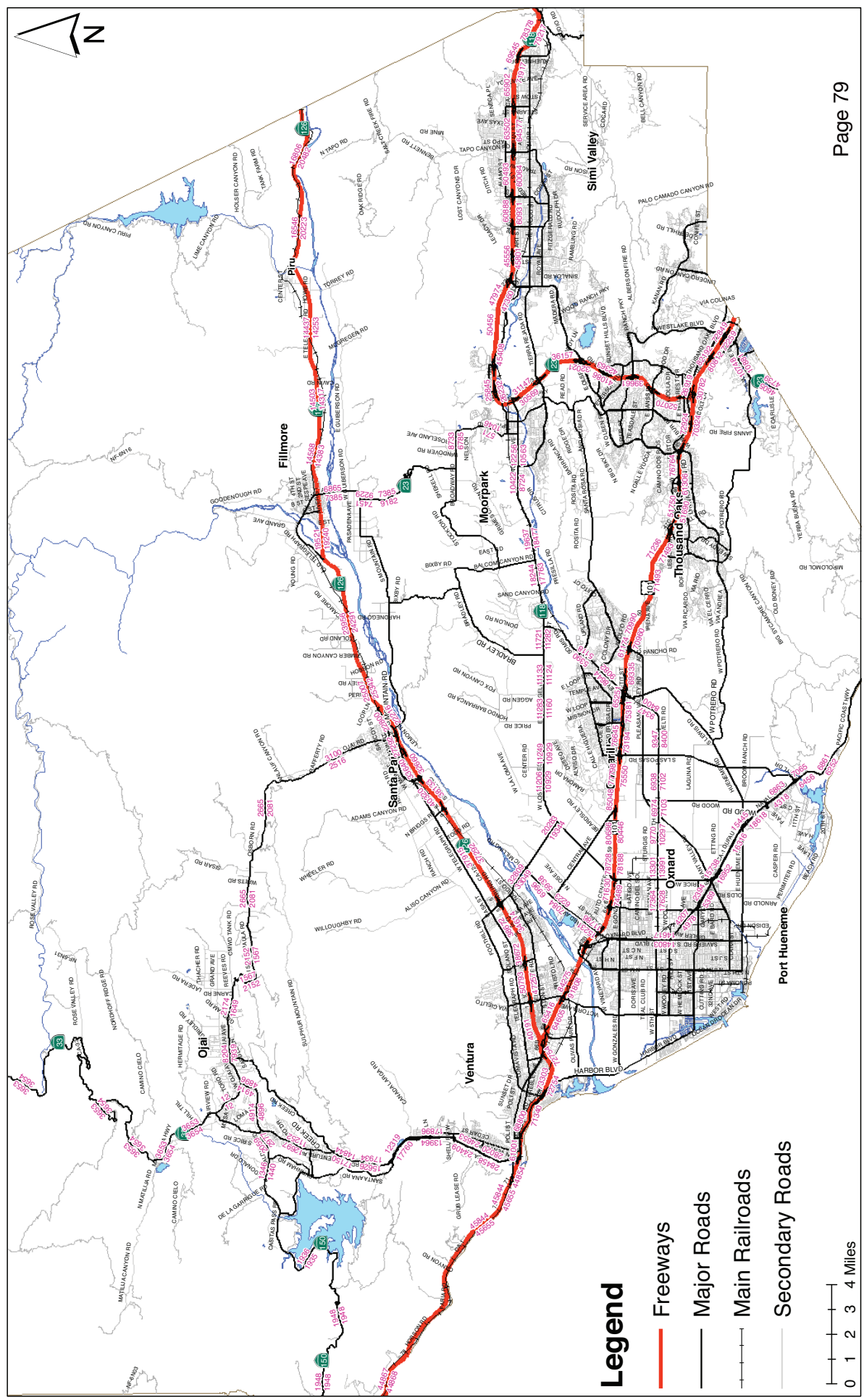






# 2009 Ventura County CMP - 2030 Estimated Average Daily Travel

Exhibit 19



0 1 2 3 4 Miles



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### Exhibit 20

#### Comparison of Estimated Emissions from all Motor Vehicles In Ventura County: Years 2005 and 2030 (Tons per Day)

Motor Vehicle Emissions*	Year 2005	Year 2030	% Change
Total Organic Gas <b>TOG</b>	17.36	5.5	-68.3%
Carbon Monoxide <b>CO</b>	142.68	33.61	-76.4%
Nitrogen Oxides <b>NOx</b>	26.52	5.89	-77.8%
Carbon Dioxide <b>CO2</b>	9.84	12.33	+25.3%
Particulate matter <sub>≤10</sub> microns in diameter <b>PM10</b>	0.65	0.53	-18.5%

\*Calculated using the EMFAC2007 Model developed by the California Air Resources Board

Based on the results from the EMFAC2007 model listed in Exhibit 20 above, three of the five daily vehicle emissions listed (TOG, CO & NOx) are expected to decrease by more than 50% by 2030. Daily vehicle emissions from Nitrogen Oxides (NOx), which includes the greenhouse gas emission Nitrous Oxide (N<sub>2</sub>O), is expected to decrease by over 70%. However, vehicle emissions from Carbon Dioxide (CO<sub>2</sub>), the only other greenhouse gas calculated by the EMFAC2007 model, is predicted to increase by 25%.

It is important to note that ARB's EMFAC2007 model does not yet incorporate any of the regulatory changes anticipated from the implementation of AB 32 and SB 375 that may result in cleaner and more efficient vehicles that pollute less and other factors not currently predicted in the model. AB 32, the Global Warming Solutions Act of 2006, requires California to reduce its greenhouse gas emissions to 1990 levels by 2020. As the lead agency responsible for implementing AB 32, ARB adopted the required Scoping Plan in December 2008 that outlines the State's strategy to achieve the 2020 greenhouse gas emissions limits. ARB is currently developing detailed strategies to implement all of the recommended measures.

To achieve the goals of AB 32, SB 375 was signed into law in 2008 to establish mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions. SB 375 requires SCAG as the Metropolitan Planning Organizations (MPO) for the region to prepare a sustainable communities strategy to reach the regional target to be provided by ARB. SCAG would incorporate the sustainable communities strategy in the land use pattern

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underlying the Regional Transportation Plan (RTP). If the strategy developed by SCAG does not meet the target, SCAG must document the impediments and show how the target could be met with an alternative planning strategy. Future CMPs would continue to be developed to be consistent with future RTPs.

### 3.5 Local Traffic Impact Models

Voluntary requirements of Government Code 65089(c) stipulate that VCTC approve local agency traffic impact models and updates for consistency with the Ventura County Traffic Model (VCTM) and the SCAG regional model.

Certification of local traffic impact models is conducted by VCTC when new models are developed or updated. For new or revised traffic models, local agencies are required to submit a letter to the VCTC Executive Director certifying that the proposed traffic model meets the four criteria listed below.

Local traffic impact models must be consistent with the VCTM as follows:

1. Consistent with the Traffic Analysis Zones of the VCTM and should aggregate into U.S. census tracts.
2. Consistent in the use of land use data.
3. Consistent with trip generation methods approved by the Institute of Transportation Engineers.
4. Consistent "Cordon" Values.

Local agencies may submit requests for review and certification of local traffic impact models to VCTC at any time.

For traffic models that remain unchanged from previous VCTC certification, local agencies are required to submit a letter addressed to the VCTC Executive Director to certify that the local traffic model has not changed as part of each CMP process.

### 3.6 Local Land Use Impact Program Requirement

Voluntary requirements of Government Code Section 65089.3(b) stipulate that VCTC determine at least every two years if the County and cities in Ventura County have adopted and implemented a program to analyze the impacts of land use decisions, including the estimate of the costs associated with mitigating these impacts.

The determination by VCTC as to the adequacy of a local land use program is based on the following criteria:

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1. Has the program been formally adopted by the local jurisdiction (i.e. city council, Board of Supervisors or Planning Commission)?
2. Is the threshold at which the traffic impact assessment is required at least as strict as that in the CMP Land Use Impact Analysis?
3. Does the program set out procedures for analyzing the impacts of proposed land use upon, at a minimum, that portion of the CMP network within the project's traffic impact area?
4. If the analysis is based upon use of a local traffic model, is that model consistent with the Ventura County Traffic Model (VCTM).
5. Does the program include or require an estimate of the costs of providing the improvements needed to maintain, at a minimum, the CMP level of service standard on the CMP network?

Because all local agencies in Ventura County have established procedures to analyze the impacts of land use decisions within their jurisdiction, VCTC has eliminated the biennial determination from the CMP.