



**DATE:** April 20, 2017

**MEMO TO:** TRANSPORTATION TECHNICAL ADVISORY COMMITTEE

**FROM:** STEVE DEGEORGE, PLANNING & TECHNOLOGY DIRECTOR

**SUBJECT:** VENTURA COUNTY TRAFFIC MODEL (VCTM) UPDATE

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**RECOMMENDATION:**

- Receive Ventura County Traffic Model overview presentation.

**DISCUSSION:**

Last fall VCTC staff provided the TTAC membership an overview of the Ventura County Traffic (VCTM) model build approach and process. As a reminder, past VCTMs have been very basic land use based four step traffic models with the last update completed in 2008. The VCTM currently under development is a much more robust and comprehensive modeling package that is derived from the Southern California Association of Governments' (SCAG's) socio-economic based regional model. Remaining consistent with SCAG's Regional Transportation Plan and the associated modeling, the VCTM base year will be 2012 and the forecast year will be 2040.

Following the meeting last fall, Iteris Inc., the modeling consultant, sent out a request for information to the jurisdictions to help guide the model build so that acceptable inputs and validation criteria would be established. Staff appreciates the comments received and incorporated those comments into the build where appropriate. Attached to this item are the responses to comments and a memo on special generators.

The model build has proceeded on schedule with the basic functionality and land use tool nearly completed. The base year model has had an early validation run and the preliminary results are promising especially on the regional facilities. Staff has invited Iteris Inc. Project Leaders, Jennifer Martin and Mahmoud Ahmadi, to provide a project update, review additional requests of the jurisdictions and walk TTAC through the next steps.

**Response to Comment**

Project: Ventura County Model Update Review Agency: City of Thousand Oaks Division: Reviewer: Kathy Lowry (Klowry@toaks.org)		Submittal Date: January 24, 2017 Review Date: February 20, 2017 Resubmittal Date:				
No.	Pg.	Comment	Initial Action Code	Response	Author Initial	Final Action Code
1		The screen lines are fine; no comments.	N	No response necessary.	JAM	N
2		Special Generators: Add <ul style="list-style-type: none"> <li>• The Oaks Mall</li> <li>• Amgen (5,000 employees)</li> <li>• Costco</li> <li>• Home Depot, Lowe's, Walmart or any other "big box stores"</li> <li>• All community colleges - not just Moorpark College</li> <li>• CSUCI</li> <li>• All hospitals in the County - not just Los Robles Regional Medical Center</li> <li>• Oxnard and Ventura's Automall - not just the T.O. Automall</li> </ul> Delete <ul style="list-style-type: none"> <li>• Oaji</li> <li>• Port Hueneme</li> <li>• Westlake Village</li> </ul>	N	The new VCTM model (VCTM 2.0) has various employment types and the specified land use types are considered in the model. All community colleges and universities are included in the model.  Please see the brief write-up on special generators (attached).	MA	N C

Respondent Action Codes: C = Will Comply; D = Discuss; N = No Change/Not Applicable; A = Agency Action  
Reviewer Final Disposition Codes: A = Approved; N = No Change Required; R = Revise

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3		<p>Regarding the VCTM (2009) Trip Rates we recommend using these rates:</p> <ul style="list-style-type: none"> <li>• Low Density Households (10/DU)</li> <li>• High Retail (44/TSF)</li> <li>• Office (11/TSF)</li> <li>• Government Bldg. (69/TSF)</li> <li>• School - rates should different for Elem. and High School</li> <li>• College - This is a special generator</li> </ul>	N	<p>The new VCTM model is based on person trips, and the current VCTM model is a vehicle trip based model. The new model includes a mode choice model which converts the person trips to vehicle trips. The new VCTC model estimates number of person trips based a number of variables including car ownership, household income and household age group.</p> <p>In the new VCTM model, college is not handled as a special generator, but it is incorporated in the trip generation model.</p>	MA	N

**Project:** Ventura County Model Update  
**Review Agency:** City of Camarillo  
**Division:**  
**Reviewer:** Bill Golubics (bgolubics@cityofcamarillo.org)

**Submittal Date:** January 30, 2017  
**Review Date:** February 20, 2017  
**Resubmittal Date:**

No.	Pg.	Comment	Initial Action Code	Response	Author Initial	Final Action Code
4		The modeling screenlines appear acceptable for the vicinity of Camarillo.	N	No response.	JAM	N
5		California State University Channel Islands (CSUCI) should be added to the list of Special Generators.	N	CSU Channel Island is in the model.	MA	N
6		The following two projects on the Future Year No Build Project List have been completed and should probably be removed from the list: VEN040502 Santa Rosa Road VEN071104 Ponderosa Road	C	Please see the brief write-up on special generators (attached). These two projects will be evaluated and removed from the list if necessary. If they are projects which were completed prior to 2012, then they will be included in the base year. If they were completed after 2012, they will remain in the No Build project list, because they will be included in the network above and beyond the base year network.	JAM	A

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7		The land use categories look complete.	N	No response.	JAM	N

**Project:** Ventura County Model Update  
**Review Agency:** Caltrans District 7  
**Division:** Division of Planning  
**Reviewer:** Chao Wei ([chao.wei@dot.ca.gov](mailto:chao.wei@dot.ca.gov))

**Submittal Date:** January 31, 2017  
**Review Date:** February 20, 2017  
**Resubmittal Date:**

No.	Pg.	Comment	Initial Action Code	Response	Author Initial	Final Action Code
8		I notice you're using the 2016 SCAG RTP which has 8 vehicle classes in Highway Assignment, three of which are Heavy Duty vehicles. Given Truck traffic on US-101, the flow of goods from Port Hueneme and the like, I wonder whether you intend to reflect goods movement in your model? If not, why bother with warehouses, and the Ports?	D	Goods movement will be handled within the VCTM model identical to goods movement within the SCAG regional model, meaning that we will retain the warehouses and Ports within the model in order to reflect current and future regional heavy-duty truck patterns.	JAM	N
9		More problems are caused by inconsistent projections at regional boundaries. Attempt to meet with Santa Barbara COG, LAMTA and SCAG to negotiate accepted projections at key boundaries. I am not arguing for accepting their projections, but work done now to negotiate consistent values will save heartache later on when interregional projects comes into play.	C	As a part of the VCTM Update will be validating the model to existing conditions, including a screening that verifies boundary counts. We will be verifying cordon volumes at all neighboring county locations. We agree with, and understand, your concern.	JAM	N

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10	<p>Special generators are not merely large land uses. They should be used for land uses that have patterns of use that do not conform to the general work-a-day pattern of trip making. Workers at the Caltrans offices, for example, are the same folk, week in, week out. The pattern of travel is consistent whether observed by the individual trip, or in the aggregate of all trips. Another person may decide to take a vacation in Hawaii on a Wednesday in April, and go to LAX but they will not make that same trip the next day. Someone, however, probably from a different TAZ, <b>will</b> make the trip the next day, but the regularity of behavior exists only in the aggregate. Special generators also apply to land uses that do not follow regular daily patterns that are likely to be captured in a travel behavior survey. Sports, concert venues and amusement parks fit this pattern.</p> <ul style="list-style-type: none"> <li>• Cal State Channel Islands should probably be included. Is it mainly a residential or commuter college (kids in dorms versus local kids)? Travel patterns will differ</li> <li>• It's your model, but why is the City of Ojai a special generator? If there is a special festival site in Ojai, perhaps it could be one.</li> <li>• California State Parks, of which there are several, might be candidates for special generators. They experience trips that are not local in origin, and their temporal distribution throughout the week and throughout the day do not follow standard patterns</li> </ul>		<p>The VCTM is designed to replicate an average weekday traffic in Spring / Autumn. Hence, special events such as sports or concert venues are not considered in the model. If necessary, the model could be enhanced to handle special situations, but that is outside of the current scope of the project.</p> <p>CSU Channel Island is in the model as a traditional trip generator.</p> <p>City of Ojai will not be considered as special generators in the new model.</p> <p>Please see the brief write-up on special generators (attached).</p>	MA	N

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11	<p>Land Use Categories People need to read SCAG's descriptions of the Categories used by SSCAG for their categorization. <a href="http://egis3.lacounty.gov/dataportal/2012/04/10/countywide-zoning/">http://egis3.lacounty.gov/dataportal/2012/04/10/countywide-zoning/</a></p> <ul style="list-style-type: none"> <li>1244 While you lack a land use category for medical/hospitals, I tend to think most hospitals would not constitute special generators, and a land use should be added.</li> <li>1300-1321 Given the trip generation rates are all the same, I wonder about the distinction between all of the industrial land uses</li> <li>1260 Education K-12 May be better separated into K-8 Primary and 9-12 Secondary. High Schoolers probably lead more independent lives than primary students, possibly having a car or other independent form of transportation.</li> <li>2000 Agriculture. I'm unclear about the variety of agriculture in Ventura County, but just as there are light and heavy industrial land uses, there are also more or less labor intensive forms of agriculture. I'd suspect the strawberry fields in and around Ventura and Oxnard are fairly labor intensive while other forms may be less so. (grain farming comes to mind), but I am uncertain to about the relevancy of this distinction throughout Ventura County.</li> </ul>	D	The new VCTM land use categories are updated and consistent with SCAG's latest land use categories. The VCTM Updated model has less disaggregated land use codes than the existing SCAG codes, but more disaggregated land use codes than the general plan SCAG codes.	MA	N

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## Special Generators

Special generators are facilities with unique trip making characteristics that trip generation models cannot truly account for with household and employment variables. Universities, military bases, and airports are usually considered as special generators. To capture the special generators' trip making characteristics, special generator models are developed, often based on ITE trip rates or special surveys.

The current VCTM has a number of special generators as presented in **Table 1**. The updated VCTM (VCTM 2.0) includes a majority of the special generators as they are accounted for in the model structure. VCTM 2.0 is based on the SCAG 2016 RTP travel demand forecasting model, which has gone through major improvements since the current VCTM was developed. Hence, the majority of the current VCTM's special generators are incorporated in the new model stream and they do not need to be accounted as special generators in VCTM 2.0.

**Table 1. Special Generators**

Type	Comment
Airports	Incorporated in the new VCTM based on SCAG Airport model.
Church	Not a major trip generator for average weekday. New trip generation model estimation is sufficient.
Fire Station	Not a major trip generator for average weekday. New trip generation model estimation is sufficient.
Hospital	New trip generation model estimation is sufficient.
Landfill	Not a major trip generator for average weekday. New trip generation model estimation is sufficient.
Marina	Not a major trip generator for average weekday. New trip generation model estimation is sufficient.
Metrolink Station	Incorporated in the new VCTM (Mode Choice Model).
Park and Ride Fac.	Incorporated in the new VCTM (Mode Choice Model).
Police Station	New trip generation model estimation is sufficient.
Port of Hueneme	Use existing VCTM model assumptions.
School	New VCTM trip generation model estimates K1-12 school trips as a separate trip purpose.
University/College	New VCTM trip generation model estimates university/college trips as a separate trip purpose.
Public Utility	Not a major trip generator for average weekday. New trip generation model estimation is sufficient.
Reagan Library	Not a major trip generator for average weekday. New trip generation model estimation is sufficient.
Recreational Comm.	Not a major trip generator for average weekday. New trip generation model estimation is sufficient.
Rockedyne	Trip generation model estimation is sufficient.
Transportation Centre	Trip generation model estimation is sufficient.
Treatment Plant	Not a major trip generator for average weekday. New trip generation model estimation is sufficient.
U.S. Naval Base	Use existing VCTM model assumptions.