



**COMMUNITY DEVELOPMENT AGENCY  
LONG RANGE PLANNING DIVISION**

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**TO:** Board of Supervisors

**FROM:** Claudia Wade, P.E., Senior Civil Engineer  
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**Subject: Workshop Addressing County's Travel Demand Model Update, Level of Service Calculations (LOS) and a Recent Public Workshop**

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**PURPOSE AND SUMMARY**

At the direction of the Board, this workshop is provided to discuss traffic and circulation issues underlying Measure E. This memo provides the following:

- Overview of the Travel Demand Model (TDM) Update Process
- Determination of Existing and 2035 Level of Service (LOS)
- Summary of Recent Public Outreach (Attachment 6B)
- Responses to Public Comments and Questions (Attachment 6F)

**BACKGROUND**

Measure E was passed by the voters on June 7, 2016. The election results were certified by the Recorder-Clerk-Registrar of Voters on July 1, 2016. On July 19, 2016, the Board of Supervisors (Board) declared the results of the official canvas of the election. In accordance with Election Code Section 9122, Measure E became effective 10 days after the vote was declared by the Board, which was on July 29, 2016. Measure E amended General Plan Policies TC-Xa, TC-Xf, and TC-Xg and included a number of statements under the heading "Implementation." A comprehensive background and discussion on Measure E was provided at the August 9, 2016 Board hearing.

On August 30, 2016, the Board of Supervisors directed staff to "conduct Board workshops to address the traffic and circulation issues underlying Measure E." Questions from the public were brought up relating to the TDM and how staff calculates LOS.

The discussion below provides information requested by the Board which includes an overview of the Travel Demand Model and the determination of LOS at existing and 2035 conditions.

## **DISCUSSION**

### **Overview of TDM Update Process**

On December 19, 2011, the Board received a Travel Demand Model Needs Assessment that reviewed the prior TDM and highlighted areas where it could be improved. As a result, on January 24, 2012, the Board authorized the TDM update and a contract with Kimley-Horn and Associates, Inc. (KHA). As part of the contract, KHA was directed to decline contracts for land development projects in El Dorado County in order to ensure there would be no conflict of interest in the development of the TDM.

The original scope of work for the TDM update included the following components:

- Component 1: Update the TDM to use 2010 traffic data as the “baseline” for existing traffic conditions.
- Component 2: Model the traffic impacts for the Targeted General Plan Amendment and Zoning Ordinance Update Environmental Impact Report.
- Component 3: Update the growth forecast through 2035 for use in the TDM (provide two forecast scenarios for the County’s consideration).

As a result of public and the Board’s desire to consider other growth forecast scenarios, the KHA contract was amended. The Board gave staff direction in April 8, 2014 (Legistar No.14-0245) to use a 2035 growth forecast of 1.03% of residential growth with a distribution of 75 percent to occur in the Community Regions, and 25 percent to occur outside of the Community Regions which is consistent with General Plan goals and policies.

As development of the TDM progressed, various updates were brought before the Board for input during the process. SACOG and Caltrans were involved throughout the entire TDM update process and have provided comments during the major steps, including those related to finalizing the 2010 Baseline roadway network, revising Traffic Analysis Zones, and determining the basic methodology used in the development of the forecast.

In April 2013, the County contracted with Kittelson & Associates, Inc. (Kittelson) to provide a peer review of the TDM. Kittelson does not perform developer-related traffic engineering within the County, and as such, was the most neutral third party available to conduct an impartial peer review. The purpose for Kittelson’s peer review was to provide an expert overview of model inputs, assumptions, and outputs. Kittelson also ensured that the TDM functions properly and meets the state-of-the-practice modeling guidelines, and produces reasonable results.

The County received letters of concurrency from the Sacramento Area Council of Governments (SACOG) (February 3, 2014) and Caltrans (September 22, 2014) stating that the El Dorado County TDM conforms to state-of-practice in subarea travel demand modeling, meets traffic assignment validation standards suggested by the Federal Highway Administration (FHWA) and Caltrans, and is an appropriate tool for the County’s long range planning purposes.

At the direction of the Board, staff provided a comprehensive overview of the TDM on February 4, 2014 (Legistar #14-0245). This presentation as well as several other Board and Public

Workshops provided information relating to how the TDM was established and its uses. See Attachment 6B for a list of the Board and Public Workshop dates.

### **Determination LOS**

The Measure E Memo (Attachment 4A) includes a discussion on why the County cannot substantiate Caltrans' reported LOS in their *Transportation Concept Report and Corridor System Management Plan, United States Route 50*, dated June 2014. At the August 30, 2016 Board hearing, staff provided a comprehensive discussion of how LOS is determined for existing and 2035 conditions (Attachment 5B). In addition, staff discussed the differences between Caltrans data and the County's LOS calculations. Attachment 5B addresses why the Caltrans LOS for existing conditions, specifically Highway 50 westbound at the County line, differs from the County's analysis.

The County used Caltrans Performance Measurement System (PeMS) data provided by Caltrans on all of the Highway 50 facilities as the basis for determination of LOS. In a letter provided by Caltrans on the Major Update to the Capital Improvement Program (CIP) and Traffic Impact Mitigation (TIM) Fee Program on July 5, 2016, Caltrans stated that they "agree with the traffic analysis methodology, traffic analysis assumptions, and associated analysis results for US 50 for the existing and future scenarios." Staff held a meeting with Caltrans on September 14, 2016 to discuss the existing LOS on Highway 50 at the County line. At the meeting, Caltrans reiterated that they agree with the County's results for the existing and future scenarios. See Attachment 6C for the October 11, 2016 letter provided by Caltrans which reiterates that El Dorado County's LOS determination, specifically at the west bound US50 segment between El Dorado Hills Blvd/Latrobe Rd and Scott Road is operating at LOS E under existing conditions and **not** at LOS F.

### **Summary of Recent Public Outreach**

On October 10, 2016, Long Range Planning staff held a public workshop at the El Dorado Hills Fire Station 85 (1050 Wilson Blvd, El Dorado Hills, CA) from 6:30 – 8:00 PM. The purpose of the workshop was to discuss how the County calculates LOS for County roadways and State highways in the unincorporated West Slope of El Dorado County. Additionally, staff provided a brief discussion on the County's TDM and the Major CIP and TIM Fee Program Update. The workshop provided an opportunity for the public to pose questions and comments on all of these topics and other transportation-related concerns.

The workshop was publicized in various ways. On October 5, 2016, an advertisement was placed in the Mountain Democrat. On September 30, 2016, a press release was issued by Long Range Planning. The information was posted to the County's Home Page under "News and Hot Topics" and on the Long Range Planning website under "What's New" on October 5, 2016. The newspaper advertisement, press release, and website post are contained in Attachment 6D.

In addition to the Community Development Agency staff, several transportation engineers and planners attended the workshop. The transportation professionals included a mix of public agency staff (from El Dorado County and Caltrans) and private consultants (from Kittelson & Associates, DKS Associates, and Kimley-Horn and Associates). This allowed the public an

opportunity to ask questions of multiple experts and get one-on-one time with transportation professionals. The table below displays the transportation professionals who attended the workshop on behalf of the County.

Name	Agency/Company	Title	License/ Certification	Years of Experience
<b>Andrew Brandt</b>	Caltrans	Deputy District Director for Maintenance & Traffic Operations	Civil Engineer	28 Years
<b>Mike Schmitt</b>	Kimley-Horn and Associates, Inc.	Senior Consultant	AICP CTP and PTP <sup>1</sup>	22 Years
<b>Mike Aronson</b>	Kittelson & Associates, Inc.	Principal Engineer	Civil Engineer	34 Years
<b>John Long</b>	DKS Associates	Principal	Civil Engineer (CA, NV, & OR) Traffic Engineer	40 Years
<b>Claudia Wade</b>	El Dorado County	Senior Civil Engineer	Civil Engineer	21 years
<b>Natalie Porter</b>	El Dorado County	Traffic Engineer	Civil Engineer, Traffic Engineer	33 Years
<b>Katie Jackson</b>	El Dorado County	Transportation Planner	Civil Engineer	7 Years
<sup>1</sup> ACIP CTP – American Institute of Certified Planners, Certified Transportation Planner, PTP – Professional Transportation Planner (license issued by the Institute of Transportation Engineers, ITE)				

Each of the consultants listed was invited to participate due to their specific technical expertise or experience in County projects. Mike Schmitt, of Kimley-Horn and Associates, was the project manager of the County’s TDM Update. Mike Aronson, of Kittelson & Associates, is the Principal Engineer for the County’s Major CIP & TIM Fee Program Update. John Long, of DKS Associates, was selected based on his extensive experience in traffic operations projects and working with Caltrans in the Sacramento Region. Also, DKS Associates conducts independent reviews of traffic impact studies submitted to the County. DKS Associates primarily conducts work for public agencies and has no ties to the development community in El Dorado County.

Public Workshop Content

The public workshop began with a brief presentation (Attachment 6E). County staff provided a brief overview of the County’s major projects, including the County’s TDM Update and the Major CIP/TIM Fee Program Update. Staff discussed the Highway Capacity Manual (HCM). The HCM is the state-of-the-practice methodology for determining LOS on roadways,

intersections, and freeways. The HCM is the prevailing methodology across the United States and is even used in other countries. General Plan Policy TC-Xd states that “Level of Service will be defined in the latest edition of the Highway Capacity Manual (Transportation Research Board, National Research Council) and calculated using the methodologies contained in that manual.” It is important to note that the County’s TDM model does not calculate LOS. In fact, the TDM is not utilized in calculating the existing conditions LOS. This is a common misconception about the TDM.

Mike Schmitt, of Kimley-Horn, provided an overview of the County’s TDM. This included details about how the model works, the process used to update the model, and the public outreach process. He also explained that the County’s TDM went through a thorough peer review process and was provided to both Caltrans and SACOG for review and comment. Comments from all three reviews were addressed prior to finalizing the model. Both Caltrans and SACOG issued letters to the County which state that the model conforms to the state-of-practice in travel demand modeling; meets overall traffic assignment validation standards suggested by FHWA and Caltrans; and is an appropriate tool for the County’s long range planning purposes (see Exhibit A and B of Attachment 5B).

Mike Aronson, of Kittelson & Associates, provided an overview of the Major CIP & TIM Fee Program Update. This overview was similar to the recent presentations before the El Dorado County Transportation Commission and the Planning Commission. He explained how we evaluate the existing and future deficiencies, how projects are identified for inclusion into the CIP and TIM Fee Program, and how projects are scheduled to maintain acceptable LOS on County roadways.

John Long, of DKS Associates, and Andrew Brandt, of Caltrans, addressed the public’s concerns of LOS on Highway 50. This discussion focused on Highway 50 at the County Line, specifically addressing the westbound direction in the AM peak hour. The presentation discussed the differences in the existing LOS between the Caltrans *Transportation Concept Report and Corridor System Management Plan (TCR/CSMP)* and the County’s recent LOS calculations (refer to Attachment 5B for the full discussion and technical calculations).

Peak hour traffic volumes and speed data were collected from Caltrans PeMS database and displayed during the presentation. Andrew Brandt, of Caltrans, stated that Caltrans staff has reviewed the PeMS data used by the County and even provided some of the data used for analysis. The analysis concludes that Highway 50 operates at acceptable LOS during the AM peak hour in the westbound direction at the County line. As stated in the October 11, 2016 letter, Caltrans concurs with the traffic volumes, assumptions, methodology, and conclusions presented by County staff for existing conditions.

#### Public Comments and Questions

At the workshop, the public was encouraged to ask questions on any traffic-related topic, including the methodology for calculating LOS and the County’s TDM. Comments were submitted orally at the meeting, through comment cards and via e-mail after the presentation. Comments were taken via e-mail through Friday, October 14, 2016. Attachment 6F contains

the public comment cards and e-mails submitted to the County along with responses from the County.

In conclusion, County staff will continue to follow General Plan Policies and state-of-the-practice methodologies, including:

- Continue using the County's Travel Demand Model and the Highway Capacity Manual to forecast Level of Service on roads within the County for public and private projects;
- Continue current practice of routing traffic studies with identified Caltrans facilities to Caltrans for review and comment; and
- Continue coordination with Caltrans to obtain verified traffic count data as input into the Level of Service determinations.

### **RECOMMENDATION**

At the conclusion of the Board hearing on August 30, 2016, the Board requested workshops on traffic and circulation, impacts to the County's Regional Housing Needs Allocation, General Plan inconsistencies, and the County's budget. At the conclusion of those workshops, staff will return for direction on the implementation of Measure E.

### **CONTACT**

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