CALTRANS SB 743 Implementation

Transportation Analysis Framework (TAF) & Transportation Analysis under CEQA (TAC)

Caltrans Webinar | October 6, 2020
Welcome

- Welcome and Introductions
- Caltrans Participants
  - Ellen Greenberg, Deputy Director, Sustainability
  - Zhongren Wang, Office Chief, Division of Traffic Operations
  - Jeremy Ketchum, Assistant Division Chief, Environmental Analysis
- Submit questions via chat feature to “All Panelists”

TAF and TAC online at: [https://dot.ca.gov/programs/transportation-planning/office-of-smart-mobility-climate-change/sb-743](https://dot.ca.gov/programs/transportation-planning/office-of-smart-mobility-climate-change/sb-743)
Topics for Today

1. Re-cap of Purpose and Process
2. Guidance Document Overview
3. TAF First Edition
4. TAC First Edition
5. Next Steps
6. Responses to Questions
1. Re-cap: Purpose and Process
SB 743

- Amended the California Environmental Quality Act (CEQA)
- Codified as Public Resources Code § 21099.
- Better aligned CEQA with State climate and planning goals by addressing transportation impacts and infill development

**Changing CEQA analysis of transportation impacts associated with both land development and infrastructure projects, with wider implications for project selection and prioritization.**

- CEQA Guidelines amended December 2018 to reflect SB 743.
- Caltrans launching related guidance: TISG, TAC, TAF
# Re-Cap: Process

### Getting to the Draft
- **Policy Direction from Leadership**
- Caltrans Working Group
- CEQA Guidelines
- OPR Technical Advisory
- Interagency Team
- Focused consultant input
- Stakeholder engagement

### Moving from Draft to First Edition TAF and TAC
- Stakeholder Feedback
- Expert Panel
- Interagency Work
- Legal review and input
- Policy Clarification
Transportation Analysis and LOS

- LOS is eliminated as a basis for CEQA significance determination in transportation analysis – this change is formalized in the CEQA guidelines.
- Caltrans is implementing VMT analysis as transportation impact assessment methodology.
- LOS reference in HDM Section 102 is not direction to add capacity to the State Highway System.
The State’s plan for reducing greenhouse gas emissions is CARB’s climate change Scoping Plan. The Plan’s overall transportation sector GHG reduction strategy has three main components:

- Increasing zero emission vehicles
- Converting to cleaner fuels in conventional vehicles
- **Reducing Vehicle Miles Traveled (vehicle use)**

Reducing vehicle miles traveled is the focus of SB 743.
Together, emissions from the transportation and industrial sectors account for half of statewide emissions of harmful greenhouse gases.

(Source: CARB, 2018. "California GHG inventory for 2016--by economic sector.")
3. Guidance Document Overview
Caltrans SB 743 Implementation
Two Focus Areas

1. Land Development Projects
Our review of land development projects, through the Local Development- Intergovernmental Review (LD-IGR) Program. Guidance (TISG) released on July 1, 2020

2. Transportation Projects: today’s focus
Delivery of projects on the State Highway System Guidance (TAF & TAC) released on September 10, 2020
Note: local agencies may select different approaches for CEQA analysis of local street and road projects.
What Projects are Affected?

- **Project Types Likely to Lead to a Measurable and Substantial Increase in Vehicle Travel**
  - Adding capacity to the State Highway System through construction of new or expansion of existing facilities

- **Project Types Not Likely to Lead to a Measurable and Substantial Increase in Vehicle Travel**
  - Rehabilitation, maintenance, replacement, safety & repair projects designed to improve the condition of existing assets
  - Over 30 project types in TAC Section 5.1.1.
Updated Transportation Impact Analysis Policy

- **CALTRANS Policy on Transportation Impact Analysis and CEQA Significance Determinations for Projects on the State Highway System – September 10, 2020**
  - Consistent with CEQA Guidelines – Caltrans concurs VMT is most appropriate measure of transportation impacts under CEQA
  - Includes update to April 13, 2020 Timing Memo and has attached VMT/CEQA memorandums dated May 8, 2020 and August 18, 2020
Relationship between TAF and TAC

- Together the TAF and TAC reflect a major shift in interpretation, analysis and mitigation of transportation impacts from projects on the State Highway System.

- Analysis of induced travel (TAF) feeds into the Determination of transportation impact significance under CEQA will now be based on assessment of “VMT attributable to the project” or induced travel (TAC).

- The TAF-TAC relationship is represented by Figure 1 in both documents.
Figure 1. Steps in CEQA Transportation Impact Analysis for SHS Projects

TRANSPORTATION ANALYSIS UNDER CEQA (TAC)

Start

Project scoping, see TAC Sec. 4

Screening: project type likely to induce travel?

No

Screen-out narrative documentation

Yes

Make findings, see TAC Sec. 5

Impacts significant?

No

Screen-out narrative documentation

Yes

Mitigation analysis, see TAC Sec. 5.7 & App. 3

VMT fully mitigated?

No

Statement of Overiding Considerations or alternative See TAC Appendix 1

End

TRANSPORTATION ANALYSIS FRAMEWORK (TAF)

See TAF Sec. 4

No

Quantitative analysis available?

Yes

Perform and document qualitative analysis

Adding capacity (GP or HOV Lanes) on Interstate Freeway or Class 2 & 3 State Routes?

No

Yes

Follow guidance for use of elasticities and travel demand models See TAF Sec. 4

Apply TDM or other methods See TAF Sec. 4

LEGEND

- TAC pathway
- TAF decision point
- TAF pathway
- TAC guidance
Purpose of the TAF

- Establishes new Caltrans procedures for analysis of transportation impacts of projects on the State Highway System, focusing on induced travel.
  - Capacity increasing projects will be analyzed
- Provides input for significance determinations under CEQA
- NOTE: The TAF is not to be used for NEPA analyses or other CEQA analyses (such as air quality and noise).
Induced Travel Overview

- When transportation system changes effectively reduce the cost of travel to individuals and businesses, there is typically a change in user behavior. **Induced travel** is the term used to describe this phenomenon.

- Central topic in the TAF, defined as VMT attributable to a specific project.

- Conceptual diagrams illustrate the concept for better understanding:
  - Reduced travel time (lower cost) related to capacity expansion leads to more driving.
  - Induced travel is driver response to reduced “cost.”
Scenario: New River Crossing

- Reduces VMT for all existing trips between A and B
- But project may also attract more trips between A and B
- Project may alter the land use pattern along the new river crossing and other places.
Induced Travel: Driver Response to Reduced “Cost”

\[ e = \frac{\Delta VMT}{\Delta LM} \]

- Quantity (VMT)
- Travel Demand
- Induced Travel
- Improved Network
- Existing Network
- Cost (Travel Time)
- Time Reduction
- \( VMT_1 \)
- \( VMT_2 \)
Induced Travel: VMT Attributable to Project

- VMT at Project Opening
- VMT at Horizon Year Without Project
- VMT at Horizon Year With Project
- VMT Attributable to Project
Induced Travel: Responses to Reduced Travel Cost

- **Driver Behavior Change**
  - Route changes (increase or decrease VMT)
  - Mode shift (increases or decreases VMT)
  - Longer trips (increases VMT)
  - More trips (increases VMT)

- **Land use change**
  - More dispersed development (increases VMT)
Assessing Induced Travel

The TAF provides references for several ways to assess induced travel

- NCST Induced Travel Calculator
- Travel Demand Models (TDMs): may be regional or Statewide
- Use of other quantitative assessment methods
- Use of Qualitative Assessment Methods
Induced Travel Calculator (NCST)

- Limited Applicability
  - County or MSA wide average long-term elasticity-based
  - MSA counties only, not 21 Rural Counties in CA
  - General Purpose/HOV lanes only
- TAF provides flexibility of using calculator to provide result or to use as a benchmark for modeling results, +/- 20%
- Upheld by Panel, and well supported by academic research
- Linear interpolation for intermediate years
- Additional research is underway
Travel Demand Models (TDM)

- Five checks are designed to assess both model capabilities and modeling practices
- Lack of land use variation in modeling can be a limitation, and in general should be checked before use
- Can be used exclusively if Calculator is not applicable
- Flowchart describes model use cases
- Modeling improvement will be the focus going forward
TDM Assessment: Five Checks

Check 1: Land use response to network changes
Check 2: Sensitivity of trip-making behavior to network travel times and travel costs.
Check 3: Sufficient detail and coverage of modelled roadway and transit networks.
Check 4: Network assignment processes
Check 5: Model Calibration and Validation

Model Capabilities
Modeling Practices
## Selecting the Preferred Assessment Method

1 If preferred methods are not available, qualitative assessment is acceptable as shown in Figure 5.

2 TDMs must be checked for applicability as described in Sections 4.4 and 4.5.

<table>
<thead>
<tr>
<th>Project Location</th>
<th>GP or HOV Lane Addition Interstate Freeway</th>
<th>GP or HOV Lane Addition Other State Facilities</th>
<th>Other VMT Inducing Projects and Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSA County with Interstate Freeway</td>
<td>NCST by MSA and/or TDM$^2$ benchmarked with NCST.</td>
<td>NCST by County and/or TDM$^2$ benchmarked with NCST.</td>
<td>TDM$^2$ or other quantitative methods</td>
</tr>
<tr>
<td>Other MSA County</td>
<td>TDM$^2$ or other quantitative methods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural County</td>
<td>TDM$^2$ or other quantitative methods</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 5. Detailed Assessment Method Selection Flow Chart

Start

Decision from Table 1.

NCST Calculator applicable?

Yes

TDM available?

Yes

Use NCST Calculator exclusively.

No

TDM available?

Yes

All five checks passed?

No

Use other quantitative or qualitative assessment methods.

Yes

Apply NCST Calculator and TDM.

NCST Calculator applicable?

No

TDM available?

Yes

All five checks passed?

No

Use TDM and other quantitative assessment methods. Disclose model deficiencies before use.

Yes

Use NCST Calculator exclusively; and/or adjust TDM input/outputs and disclose model deficiencies before use.

Do NCST Calculator and TDM results vary by more than 20%?

Yes

Use NCST Calculator exclusively; or use TDM and explain why the difference occurs.

No

Use TDM.
5. TAC First Edition
Transportation Analysis under CEQA (TAC)

1. Project Scoping – inclusion of VMT-reducing alternatives
2. Screening process – identifying projects not requiring VMT analysis because they will have no VMT impact
3. Tiering – potential for tiering, interaction between SB 743 and RTP/SCSs environmental documents
4. CEQA Significance Determination
5. Mitigation
Project Scoping

1. From TAC: “it may become increasingly difficult to achieve feasible and proportional project-level VMT mitigation as a roadway capacity-increasing project proceeds from initial scoping to final design. “Therefore, it is important to thoroughly consider a range of feasible project alternatives and/or mitigation which meet the purpose and need of the project, as well as feasible mitigation which can potentially minimize, or avoid altogether, the additional VMT from capacity-increasing projects”

2. Alternatives may include multimodal infrastructure and services and pricing-based strategies including expanded toll lane use.

3. Scoping also involves determination of the appropriate level of environmental document
Screening

Screening by Project Type: Non-Capacity-Increasing vs. Capacity-increasing Projects

1. TAC provides guidance to identify those projects that will lead to measurable and substantial increases in vehicle travel.

2. Many project types are not likely to lead to a measurable and substantial increase in vehicle travel. These are listed in the OPR TA.

Thank you for the project types provided as examples of those unlikely to lead to VMT increase and that were not included in the OPR list.
Project Types that generally will not require VMT Analysis

1. Maintenance & Rehabilitation projects
2. Reconfigurations & Traffic Calming
3. Safety Improvements
4. Pedestrian, Bicycle and Transit Projects
5. Paving Improvements

OPR Technical Advisory and TAC include a list of over 30 project categories

Tiering

1. Limited opportunities now

2. Future RTP/SCS EIRs may allow for tiering if:
   - Induced travel is adequately captured
   - Plans are consistent with State climate targets
   - Mitigation is enforceable
Traffic Studies

- Utilize guidance in TAF
- Calculate induced travel
- NCST and TDM approaches
Significance Determination

- Standard CEQA 3-step process for determining significance applies.
- Significance will be evaluated based on potential to increase induced VMT, using the future “no project” condition as a baseline.
- Within the MPO areas, a project that results in an increase in VMT when comparing the future build alternative to the future no-build alternative will generally be considered significant and mitigation will be required.
- For projects within the rural (non-MPO) counties, significance should be addressed on a case-by-case basis, taking into account context and environmental setting.
Mitigating VMT Impacts

1. TAC and web page include options - Examples include strategies to support mode shift, higher vehicle occupancy, shorter average vehicle trips, and transportation demand management, including telework

2. Explore compatible VMT and GHG mitigation measures

3. Mitigate to the maximum extent possible

4. Wide interest in possible mitigation banking/credit system. Ethan Elkind/UC Berkeley paper useful in framing challenges.
Statement of Overriding Considerations

Standard process for determining significance applies

1. When specific economic, social, or other conditions make mitigation measures or project alternatives infeasible, individual projects may be approved in spite of one or more significant effects of the project (PRC section 21002).

2. A project approved with unmitigated significant effects must state in writing the specific reasons to support its action based on the final EIR and/or other information in the record.

3. This “statement of overriding considerations” shall be supported by substantial evidence.
6. Next Steps
Next Steps

1. **Training and staff support**
2. TAF & TAC – best practices/uploads in future
3. Focus on VMT mitigation – strategies and mechanisms
4. Continued stakeholder engagement
5. Technical activities to address key issues...
Sustainable Transportation Planning Grants

- Approximately $3 million set-aside for technical project sub-category

Schedule

- **October 2020** – Release Draft for 30-day public comment period
- **November 2020** – Two virtual workshops to receive input for the final document, and release the call for applications (dates pending)
- **January 2021** - Grant application deadline (date to be determined)
- **June 2021** – Grant announcements
- **Fall 2021** – Grant recipients begin project activities
- **Winter-Summer 2024** – Grant projects completed, grant funds expire
Key Technical Issues

- Supporting enhanced modeling capability and improved practices
- Qualitative assessment approaches
- Addressing managed lanes impacts
- Freight vs. passenger vehicle impacts and mitigation
- Land use assumptions for future year modeling
- Others?
5. Responses to Questions
Thank You