Mono County
Local Transportation Commission

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PO Box 8
Bridgeport, CA 93517
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MEETING AGENDA

April 14, 2025 – 9:00 A.M.
Dana Room-Mono County Civic Center
1290 Tavern Rd Mammoth Lakes, CA

This meeting will be held in person at the location listed above. Additionally, a teleconference location will be available where the public and members of the Commission may participate by electronic means. Members of the public may participate in person and via the Zoom Webinar, including listening to the meeting and providing comment, by following the instructions below.

TELECONFERENCE INFORMATION
1.Bridgeport Teleconference Location- Mono County CAO Conferences Room, First floor Annex 1, 74 N. School Street, Bridgeport, CA 93517.
2. Joining via Zoom
You may participate in the Zoom Webinar, including listening to the meeting and providing public comment, by following the instructions below.
To join the meeting by computer
Visit: https://monocounty.zoom.us/j/86459217269
Or visit https://www.zoom.us/ and click on "Join A Meeting." *Use Zoom Meeting ID*: 864 5921 7269 To provide public comment (at appropriate times) during the meeting, press the "Raise Hand" hand button on your screen and wait to be acknowledged by the Chair or staff. Please keep all comments to 3 minutes.
To join the meeting by telephone
Dial (669) 900-6833, then enter *Webinar ID*: 864 5921 7269
To provide public comment (at appropriate times) during the meeting, press *9 to raise your hand and wait to be acknowledged by the Chair or staff. Please keep all comments to 3 minutes.

**Agenda sequence (see note following agenda).*

1. **CALL TO ORDER & PLEDGE OF ALLEGIANCE**

2. **PUBLIC COMMENT:** Opportunity to address the LTC on items not on the agenda. Please refer to the Teleconference information section to determine how to make public comment for this meeting.

3. **PUBLIC HEARING** – no earlier than 9:00 am
   a) Input on Unmet Transit Needs and Transportation Issues, with the Social Services Transportation Advisory Council (SSTAC) (*Phil Moores and Aaron Washco*) (pg. 1)

4. **CONSENT AGENDA ITEMS**
   b) Approval of minutes from March 10, 2025 (pg. 9)

c) Receive and accept 2022-2024 Triennial Performance Audit (*Deanna Tuetken*) (pg. 11)

d) Low Carbon Transit Operations Program (LCTOP) – Receive staff report and consider allocating $83,384 of FY 2024-25 funds to Eastern Sierra Transit Authority (ESTA); authorize Wendy Sugimura to sign the contributing sponsor letter. (pg. 53)

5. ADMINISTRATION

e) Caltrans comments on FY 25-26 Overall Work Program and proposed response (*Olya Egorov*) (pg. 56)

6. LOCAL TRANSPORTATION

f) Transmittal of Rural Counties Task Force Rural Induced Demand Study (*Erin Bauer*) (pg. 64)

g) Mono County Quarterly Report (*Chad Senior*) (pg. 144)

h) Town of Mammoth Lakes Quarterly Report (*Haislip Hayes*) (pg. 146)

7. CALTRANS

i) Update on Caltrans activities in Mono County *(CT staff)*
https://caltrans.maps.arcgis.com/apps/dashboards/67670a6e24ee42628f5a852c61b57abf

8. TRANSIT

j) ESTA Update *(Phil Moores)* (pg. 148)

k) YARTS Update *(Christine Chavez)*

9. CORRESPONDENCE

10. REPORTS

l) Co-Executive Directors (pg. 152)

m) Commissioners

11. INFORMATIONAL – none

12. UPCOMING AGENDA ITEMS

n) FY 25-26 Overall Work Program (OWP) adoption – May

o) Adoption of unmet transit needs – May/June

p) Local Transportation Fund (LTF) allocation – June

13. ADJOURN TO May 12, 2025, at 9:00 a.m.

***NOTE**: Although the LTC generally strives to follow the agenda sequence, it reserves the right to take any agenda item – other than a noticed public hearing – in any order, and at any time after its meeting starts. The Local Transportation Commission encourages public attendance and participation.

In compliance with the Americans with Disabilities Act, anyone who needs special assistance to attend this meeting can contact the commission secretary at 760-924-1804 within 48 hours prior to the meeting in order to ensure accessibility (see 42 USCS 12132, 28CFR 35.130).

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Staff Report

April 14, 2025

TO: Mono County Local Transportation Commission

FROM: Aaron M. Washco, Planning Analyst
Phil Moores, ESTA/CTSA

SUBJECT: 2025-26 Unmet Needs Public Hearing

RECOMMENDATION: Receive public and Social Services Transportation Advisory Council input and testimony, provide feedback to staff about the evaluation of unmet needs, and provide any other direction to staff.

FISCAL IMPLICATIONS: To be determined.

ENVIRONMENTAL COMPLIANCE: N/A

POLICY CONSISTENCY: Consistent with State law requirements for the unmet transit needs process and the annual public hearing for the citizen participation.

DISCUSSION:

Background
State law provides for a Citizen Participation Process that requires the LTC to hold at least one public hearing to ensure broad community participation and solicit the input of transit-dependent and transit-disadvantaged persons, including the elderly, handicapped, and persons of limited means. A public hearing on unmet transit needs is also required prior to the LTC allocating any funds not directly related to public transportation services, specialized transportation services, or facilities provided for the exclusive use of pedestrians and bicycles. The purpose of the hearing is to solicit comments on unmet transit needs that may exist within Mono County and that might be reasonable to meet by establishing or contracting for new public transportation or specialized transportation services or by expanding existing services.

To meet the public hearing requirement for both the Citizen Participation Process and unmet transit needs, and facilitate public input on transit needs, the LTC scheduled this public hearing for April 14, 2025, at 9:00 a.m., to be conducted online with videoconferencing and in person at the Mono County Civic Center in Mammoth Lakes. Public notices of these hearings have been published in accordance with state law in local newspapers.

An additional requirement of the Citizen Participation Process and unmet transit needs process is the LTC must consult with the Social Services Transportation Advisory Council (SSTAC) on transit needs in Mono County. SSTAC members are appointed by the LTC to ensure a broad representation of social service and transit providers representing the elderly, the handicapped,

and persons of limited means. The SSTAC is jointly hosting this public hearing in order to provide direct input to the Commission.

Before August 2025, the LTC must adopt, by resolution, a finding that there are no unmet needs, there are no unmet transit needs that are reasonable to meet, or there are unmet transit needs, including needs that are reasonable to meet. If the LTC finds that there are unmet transit needs, including needs that are reasonable to meet, then the unmet needs shall be funded by Local Transportation Fund (LTF) dollars before any allocation is made for streets and roads. It should be noted that the law specifically prohibits comparing unmet transit needs with the need for streets and roads. It should also be noted that the LTC has not allocated any LTF funds to streets and roads for at least several years.

LTC Resolution 98-01 (Attachment #1) defines "unmet transit needs" and "reasonable to meet" transit needs as follows:

- Unmet Transit Needs: A need of the Mono County elderly, disabled, low income, youth, and other transit-dependent groups for transit service that is currently not available and, if provided for, would enable the transit dependent person to obtain the basic necessities of life primarily within Mono County. "Necessities of life" are defined as trips necessary for medical and dental services, essential personal business, employment, social service appointment, shopping for food or clothing, and social and recreational purposes.

- Reasonable to Meet: Transit needs for the necessities of life which pertain to all public and/or specialized transportation services that:
    a. Can be proven operationally feasible;
    b. Can demonstrate community acceptance;
    c. Would be available to the general public;
    d. Can be proven to be economical; and
    e. Can demonstrate cost effectiveness by meeting current fare box revenue requirements of the Mono LTC within two years.

Public Outreach and Comments

The Eastern Sierra Transit Authority, in its role as the Consolidated Transportation Services Agency (CTSA) for Mono County and with assistance from LTC/County staff, attended Regional Planning Advisory Committee (RPAC) meetings in Long Valley, Antelope Valley, Bridgeport Valley, June Lake, and Mono Basin to solicit public input.

Public comments received by the time this staff report was published have been summarized in the attached matrix (Attachment 2). Because this process also collects general comments on transit, the last column in the matrix offers actions and/or solutions to address input not considered unmet needs. Any input provided after the staff report was written or at the public hearing will be added to this matrix and presented at the public hearing or evaluated for the May meeting.

Staff recommends the Commission receive further public input at the public hearing, provide feedback to staff about the evaluation of unmet needs in this staff report, and provide any other direction to staff regarding unmet needs or transit services. At the May meeting, an analysis of whether the unmet needs are reasonable to meet and a resolution for adopting unmet needs findings is anticipated. The Commission may adopt the unmet needs resolution at either the May or June meeting.

Analysis of RTP Objectives

The following objectives under Transit, Goal 13, Policy 13.A. of the Regional Transportation Plan are to be reviewed annually at the unmet needs hearing:

Objective 13.A.2: Maintain and improve transit services for transit dependent citizens in Mono County, including the continuation and improvement of social service transportation services. Ensure that transit services comply with the requirements of the Americans with Disabilities Act (ADA).

Review: Social service providers are represented on the SSTAC, and services are intended to be maintained for the coming year. Transit services provided by ESTA comply with ADA requirements.

Objective 13.A.3: Annually conduct the "unmet transit needs process" and support public transit financially to the level determined 1) by the "reasonable to meet" criteria, and 2) by the amount of available funds.

Review: The commission typically allocates all available funds to transit, taking into consideration identified unmet needs, and does not fund local streets and roads.

Objective 13.A.4: Continuously survey transit use to determine the effectiveness of existing services and to identify possible needed changes in response to changes in land use, travel patterns, and demographics. Expand services to new areas when density is sufficient to support public transit or supported by a financial plan. Promote the provision of year-round scheduled transit services to link the communities of Mono County with business, employment centers, and recreational sites in a concerted effort to reduce vehicle miles travels by single-use vehicles.

Review: ESTA periodically surveys riders, the Town of Mammoth Lakes reviews transit service and routes twice a year, and Mono County solicits RPAC input annually. Services are expanded as feasible.

Objective 13.A.5: Pursue all available funding for the provision of transit services and facilities, including state and federal funding and public/private partnerships.

Review: A variety of federal, state, and local dollars are used to fund transit, including 5311 grants, transit security/PTMISEA/low carbon grants, and local transient occupancy taxes (within the Town of Mammoth Lakes). Mammoth Mountain Ski Area and ESTA also has a public/private partnership to fund transit. Other sources are included in the transit funding mix, and these are meant as examples to demonstrate the breadth and depth of funding sources.

Objective 13.A.6: Maximize the use of existing transit services by actively promoting public transportation through mass media and other marketing strategies. Encourage Town and County employees to utilize the existing transit services as part of a flexible schedule policy.

Review: ESTA regularly markets transit services through newspaper and radio outlets, and maintains a website (http://www.estransit.com).

Objective 13.A.7: Work with appropriate agencies to coordinate the provision of transit services in the county in order to provide convenient transfers and connections between transit services.

Review: The Mono County LTC, ESTA and YARTS have been coordinating when creating new schedules in attempts to provide convenient transfers and connections.

ATTACHMENTS

1. LTC Resolution 98-01 defining “unmet transit needs” and “reasonable to meet.”
2. Unmet Needs Matrix - current requests

RESOLUTION 98-01

A RESOLUTION OF THE MONO COUNTY LOCAL TRANSPORTATION COMMISSION DEFINING "REASONABLE TO MEET" AND "UNMET TRANSIT NEEDS"

WHEREAS, the Mono County Local transportation Commission (MCLTC) is the designated transportation planning agency for the County of Mono pursuant to Government Code Section 29532 and action of the Secretary of Business, Transportation and Housing and, as such, has the responsibility under Public Utilities Code Section 99401.5 to determine definitions of "unmet transit needs" and "reasonable to meet"; and

NOW, THEREFORE, BE IT RESOLVED THAT the Mono County Local Transportation Commission does hereby define "unmet transit needs' as a need of Mono County elderly, disabled, low income, youth, and other transit dependent groups for transit service that is currently not available and, if provided for, would enable the transit dependent person to obtain the basic necessities of life primarily within Mono County. "Necessities of life" are defined as trips necessary for medical and dental services, essential personal business, employment, social service appointment, shopping for food or clothing, and social and recreational purposes.

BE IT FURTHER RESOLVED that the Mono County Transportation Commission does hereby define "reasonable to meet" as transit needs for the necessities of life which pertain to all public and/or specialized transportation services that:

a. can be proven operationally feasible;
b. can demonstrate community acceptance;
c. would be available to the general public;
d. can be proven to be economical; and
e. can demonstrate cost effectiveness by meeting current fare box revenue requirements of the Mono LTC within two years

NOW, THEREFORE, BE IT RESOLVED that the herein contained definition and findings are consistent with the Mono County Regional Transportation Plan, 1998 Update.

PASSED, AND ADOPTED this 1st day of June, 1998 by the following Commission:
Ayes: Ronci, Hunt, Cage, Eastman, Inwood, Rowan.
Noes:
Absent:
Abstain:

Attest:

Joann Ronci, Chairperson
Mono LTC

Gwen Plummer, Secretary
Mono LTC

SUMMARY AND ANALYSIS OF PUBLIC TRANSIT REQUESTS FOR FISCAL YEAR 2025-26

	RPAC	Request/Comment	Unmet Need	Reasonable to Meet/Explanation	Costs/Actions/Solutions
Unmet Transit Needs That Are Not, or May Not Be, Reasonable To Meet					
1.	June Lake	Locals struggle to make it to Mammoth for medical appointments, shopping, etc. Potential solutions offered include expanding the route that runs Tuesdays to more days of the week, a June Lake dial-a-ride service, expanded advertising and better placement on website for Tuesday route, and a Mammoth/June express route.	Yes. This request would involve an expansion of existing services or new services to assist transit-dependent individuals in obtaining necessities of life, such as medical appointments.		
2.	June Lake	Better service is needed in June Lake. A summer June Lake loop route to service the village, beach, trailheads, etc. would be beneficial. Needs to be well marked and advertised.	Yes. This request would involve a new service to assist transit-dependent persons in obtaining necessities of life.		ESTA is exploring possibilities and trying to hire a local driver.
3.	June Lake	More pickups at the Bishop airport are required. The only pickup there is at 6 a.m., which means most who fly in would need to stay in Bishop overnight to catch the bus to Mono County.	Yes. It would be an expansion of service for transit-dependent individuals to obtain necessities of life, including recreation.		
4.	Bridgeport	There should be an ESTA stop at Sonora Junction for backpackers.	Yes. It would be an expansion of service for transit-dependent individuals to obtain necessities of life.		ESTA has submitted the idea to Caltrans and it is now up to Caltrans.
5.	Antelope Valley	People who are transient or have car problems, etc. often need transportation to Carson City or Reno, but if they do not have a reservation, they cannot get on the bus in Walker. The Northbound stop should be a regular stop and not require a reservation. The Southbound stop was addressed earlier this year.	Yes, it would be an expansion of service for transit-dependent individuals to obtain necessities of life.		The issue has already been corrected by ESTA. Reservations are no longer required to be picked up at the northbound ESTA stop in Walker.

6.	Long Valley	The bike racks on buses are often already full when the bus arrives. More bike storage should be available.	Yes, it would be an expansion of service for transit-dependent individuals to obtain necessities of life such as recreation.		ESTA will train drivers to utilize additional space at the rear of the bus for additional bike storage.
7.	Countywide (SSTAC meeting)	Language access for dial-a-ride, mainly for Mammoth Lakes and Spanish speakers, requires improvements.	Yes, it would be an expansion of service for transit-dependent individuals to obtain necessities of life.		
8.	Mammoth Lakes (SSTAC meeting)	Disabled individuals are often unable to find handicap parking at Main Lodge. Dial-a-ride could fill the gap.	Yes, it would be an expansion of service for transit-dependent individuals to obtain necessities of life.		
Not Unmet Transit Needs					
1.	June Lake	North Shore Drive road improvements (e.g., fixing the cracks) are required for bicycle riders.	No, not transit related.	N/A	
2.	Antelope Valley	There is no southbound ESTA stop in Walker.	No, not a new transit service. The Reno to Lone Pine route runs seven days a week.	N/A	ESTA has created a southbound Walker stop at the Walker Wellness Center located at 107655 Highway 395.
3.	Bridgeport	Transit from Bridgeport to Walker and back is required for seniors who attend events (e.g., bingo night, monthly birthday celebrations, etc.) in Walker.	No. This is a charter request rather than a request for additional service that would be available to the general public.	N/A	There is a route from Bridgeport to Walker on Wednesdays, but it requires a reservation and the schedule does not allow for evening events.
4.	Countywide (SSTAC meeting)	Buses should be updated to include wireless data since many transit-dependent individuals do not have data plans.	No, not a new service or expansion of an existing service.	N/A	

5.	Countywide (SSTAC meeting)	Outreach should be expanded for available transit options. Many people in rural areas of Mono County are transit-dependent and often need transportation but are unaware of the available options.	No, not a new service or expansion of an existing service.	N/A	
6.	Countywide (SSTAC meeting)	During PSPS events, those who are energy-dependent for oxygen, etc., need to get to community centers to obtain power. These individuals also tend to be transit dependent.	No. This is a charter request rather than a request for additional service that would be available to the general public.	N/A	

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Draft Minutes

March 10, 2025 – 9:00 A.M.

Dana Room-Mono County Civic Center
1290 Tavern Rd Mammoth Lakes, CA
Zoom: https://monocounty.zoom.us/j/85467870748

COUNTY COMMISSIONERS: Jennifer Kreitz, Paul McFarland, Rhonda Duggan

TOWN COMMISSIONERS: Bill Sauser, Brent Truax, Rob Patterson

LTC STAFF: Heidi Willson, Deanna Tuetken, Aaron Washco, Wendy Sugimura, Marcella Rose, Olya Egorov

CALTRANS: Jill Tognazzini, Rick Franz

ESTA: Phil Moores

YARTS: Serenity Anderson, Mari Bautista

Public: Karl Seiberling, Kim, Lynn Boulton

1. **CALL TO ORDER & PLEDGE OF ALLEGIANCE**
   Meeting called to order at 9:03 am and the Commission led the Pledge of Allegiance.

2. **PUBLIC COMMENT:** Opportunity to address the LTC on items not on the agenda. Please refer to the Teleconference information section to determine how to make public comment for this meeting.
   - No public comment

3. **CONSENT AGENDA ITEMS**
   a) Approval of minutes from February 10, 2025
   b) Receive and file Local Transportation Fund (LTF) FY 25-26 estimate

   Motion: Approve the consent agenda as presented.
   Kreitz motion; Duggan second.
   Roll-call vote – Ayes: Sauser, Duggan, Patterson, McFarland, Kreitz. Absent: Truax
   Motion Passed 5-0 with one absent.

4. **ADMINISTRATION** –none

5. LOCAL TRANSPORTATION

a) WORKSHOP: Presentation on Mono County trails policies and programs *(Olya Egorov/ Marcella Rose)*

- Rose and Egorov provided a presentation to the Commission and answered questions from the Commission.

b) WORKSHOP: Presentation on Town of Mammoth Lakes trails policies and programs (*Lawson Reif*)

- Reif provided the Commission with an overview of the Town of Mammoth Lakes trails policies and programs and answered questions from the Commission.

6. CALTRANS

a) Update on Caltrans activities in Mono County *(CT staff)*

- Tognazzini gave a Caltrans update and answered questions from the Commission.

7. TRANSIT

a) Social Services Transportation Advisory Council (SSTAC) Appointment *(Aaron Washco)*

- Wascho gave a brief overview of the SSTAC and the requested appointment.

Motion: Appoint Hunter Harvath, Disabled Sports Eastern Sierra to the Social Services Transportation Advisory Council.
Duggan motion; Patterson second.
Roll-call vote – Ayes: Sauser, Duggan, Patterson, McFarland, Kreitz. Absten: Truax
Motion Passed 5-0 with one abstention.

b) ESTA Update *(Phil Moores)*

- Moores gave a brief ESTA update.

c) YARTS Update *(Christine Chavez)*

- Bautista gave a brief YARTS update.

8. CORRESPONDENCE

a) SF Gate article on ESTA's services

9. REPORTS

a) Co-Executive Directors, including update on status of Reds Meadow Road

- Sugimura gave a brief overview of the provided Directors report.

b) Commissioners

- No Commissioner reports provided

10. INFORMATIONAL – none

11. UPCOMING AGENDA ITEMS

a) Unmet Transit Needs Public Hearing with the Social Services Transportation Advisory Council (SSTAC)

12. ADJOURN at 10:59 am TO April 14, 2025, at 9:00 a.m.

COUNTY OF MONO

P.O. BOX 347, MAMMOTH LAKES, CALIFORNIA 93546

April 14, 2025

To: Mono County Local Transportation Commission

From: Deanna Tuetken, Fiscal and Administrative Services Officer

RE: Mono County Local Transportation Commission Triennial Performance Audit

RECOMMENDED ACTION
Accept the Mono County Local Transportation Commission Triennial Performance Audit: July 1, 2022 through June 30, 2024.

DISCUSSION
The Mono County Local Transportation Commission has received the triennial audit for July 1, 2022 through June 30, 2024. The audit was performed by Michael Baker International, conducted under the rules and guidelines provided by the September 2008 edition of the California Department of Transportation's *Performance Audit Guidebook*. The audit reviewed each one of the following functional areas: Administration, Management, and Coordination, Transportation Planning and Programming, Claimant Relationships and Oversight, Marketing and Transportation Alternatives, and Grant Applications and Management. The audit concluded that the Commission was in compliance with TDA rules.

ATTACHMENTS
- FY 2022-2024 Triennial Performance Audit

Submitted to:

COUNTY OF
MONO

FY 2022-2024
Triennial Performance Audit
Mono County Local Transportation Commission

MONO
COUNTY
CALIFORNIA

Final

April 2025

Submitted By:

Michael Baker
INTERNATIONAL

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Executive Summary

The Mono County Local Transportation Commission (Mono LTC, MCLTC, Commission) retained Michael Baker International to conduct its Transportation Development Act (TDA) performance audit for fiscal years (FY) 2021–22 through 2023–24. As a Local Transportation Commission created to fulfill the responsibilities of a Regional Transportation Planning Agency (RTPA), the Mono LTC is required by Public Utilities Code Section 99246 to prepare and submit an audit of its performance on a triennial basis to the California Department of Transportation (Caltrans). TDA funds are used for Mono LTC administration and planning and are distributed for public transit services and non-motorized projects.

This performance audit is intended to describe how well the Mono LTC is meeting its administrative and planning obligations under the TDA, as well as its organizational management and efficiency. The *Performance Audit Guidebook for Transit Operators and Regional Transportation Planning Entities* (September 2008), published by Caltrans, was used to guide the development and conduct of the audit. To gather information for the TDA performance audit, Michael Baker conducted interviews with agency staff, reviewed various documents, and evaluated the Mono LTC's responsibilities, functions, and performance of the TDA guidelines and regulations.

The audit comprises several sections, including compliance with TDA requirements, status of implementing prior audit recommendations, and review of functional areas. Findings from each section are summarized below, followed by recommendations based on our audit procedures.

Compliance with TDA Requirements

The Commission satisfactorily complied with applicable state legislative mandates for RTPAs. One requirement was not applicable to Mono LTC operations (determination of farebox recovery ratios for urbanized areas). In relation to other compliance requirements, to its credit, the Mono LTC conducts the annual unmet transit needs process to solicit comment and feedback on potential transit needs, although the TDA only requires an unmet transit needs process when TDA funds could be used for roadway projects.

Status of Prior Audit Recommendations

The MCLTC has implemented or is in the process of implementing the prior four audit recommendations. The prior recommendations pertained to the development of a centralized document archive; expounding upon the TDA reserve balance policy;

maintaining on file evidence of submission of TDA fiscal and performance audits; and providing an estimate of MCLTC employee time allocation for Overall Work Program (OWP) elements.

Functional Review

1. MCLTC policies and procedures are well documented in the Mono County *LTC Handbook/Bylaws,* which was updated in May 2022. The handbook provides a detailed overview of the MCLTC background and purpose, organization structure, and administrative structure and duties, as well as its procedures for TDA funding allocation and development of the Regional Transportation Plan (RTP), Regional Transportation Improvement Program, and Overall Work Program (OWP). The document also contains supporting appendices such as the staffing Memorandum of Understanding (MOU) and TDA reporting dates.

2. The MCLTC develops an OWP annually, which includes a budget and tasks outlining the transportation planning activities for the coming year. The OWP is prepared in accordance with annual guidance provided by Caltrans and serves several functions including as a comprehensive listing of transportation planning activities in Mono County; a convenient regional transportation planning reference document for MCLTC partners and members of the public; the MCLTC's proposal to program and use Rural Planning Assistance (RPA) funds; and the basis of a contract with the state for use and disbursement of RPA funds.

3. The Commission embarked on an update to the Mono County RTP during the audit period. The 2024 Mono County RTP, adopted in December 2024 after the current audit period, succeeded the 2019 Mono County RTP. This is a collaborative effort between the Mono County LTC, Mono County Community Development Department, Mono County Public Works Department, Town of Mammoth Lakes Community Development Department, and Town of Mammoth Lakes Public Works Department. Each jurisdiction is responsible for delivering their plans, which are rolled up into the RTP. The time horizon for the RTP is a 20-year period and the plan is updated every four years. The plan is intended to achieve a coordinated and balanced regional transportation system of all travel modes.

4. Mono County and the Town of Mammoth Lakes have provided staff services of the MCLTC via an MOU. The MOU provides for planning services, staff, and administrative support for the MCLTC to fulfill the requirements of the California TDA, accomplish the mandated functions of the MCLTC, and carry out the annual OWP.

5. On an annual basis, the MCLTC was responsible for managing the apportionment of between $821,000 and $876,000 in Local Transportation Fund (LTF) revenues and between $229,132 and $391,454 in State Transit Assistance funds. The MCLTC claims a fixed amount of $30,000 annually for TDA administration and planning and generally

sets aside no less than 5 percent or more than 15 percent of annual allocations in reserve unless funds are set aside for a specific purpose, such as a grant match. As of FY 2024, the LTF reserve balance was over $1 million.

Recommendations

Two recommendations are provided to improve the MCLTC's administration and management of the TDA and its organization.

Performance Audit Recommendation	Background
1. Expound upon the TDA Fund Procedures in the *LTC Handbook/Bylaws*	The *LTC Handbook/Bylaws* was updated in May 2022 to provide clarification and guidance on the LTF reserve policy. Overall, the TDA procedures contained in the handbook are quite basic since the claimants are limited to Eastern Sierra Transit Authority, Town of Mammoth Lakes, Yosemite Area Regional Transportation System, and Mono County Social Services. Furthermore, the annual resolutions allocating LTF are methodical and detailed. However, it would be useful to detail in a succinct manner how the TDA is apportioned in Mono County as well as to incorporate any relevant legislative changes in the TDA statute. For example, the procedures could summarize how the changes in the TDA statute under Senate Bill 508, Assembly Bill (AB) 1113, AB 90, and AB 149 are applicable to Mono County. In addition, it is suggested that the handbook provide a brief outline of the TDA statute articles as shown in the annual allocation resolutions. Claims often reference the article of the statute under which they are filed. These addendums would provide further guidance and clarity in the administration of TDA.
2. Update the Title VI Plan	Pursuant to the federal Civil Rights Act of 1964, the Commission develops and adopts a Title VI and Public Participation Plan. Title VI of the Civil Rights Act of 1964 requires that no person in the United States, on the grounds of race, color, or national origin, be excluded from, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. Title VI plans are generally updated every three years. The current Title VI Compliance Plan was adopted on October 19, 2020. Program compliance includes Title VI notices and complaint forms published in English and Spanish. However, an update has yet to be adopted after more than three years. It is recommended as part of Title VI compliance and best practice that the Title VI Plan be updated and posted on the Commission's website.

Section I

Introduction – Initial Review of MCLTC Functions

The Mono County Local Transportation Commission (MCLTC, Mono LTC, Commission) retained Michael Baker International to conduct its Transportation Development Act (TDA) performance audit covering the most recent triennial period, fiscal years (FY) 2021–22 through 2023–24. As a Local Transportation Commission created to fulfill the responsibilities of a Regional Transportation Planning Agency (RTPA), the MCLTC is required by Public Utilities Code (PUC) Section 99246 to prepare and submit an audit of its performance on a triennial basis to the California Department of Transportation (Caltrans).

This performance audit, as required by the TDA, is intended to describe how well the MCLTC is meeting its administrative and planning obligations under the TDA.

Overview of the MCLTC

The MCLTC was established pursuant to California Government Code Section 29535 in August 1984, by joint resolutions of the Mono County Board of Supervisors and the Mammoth Lakes Town Council. This entity was then designated as the transportation planning agency for Mono County by the State Secretary of the Business, Transportation and Housing Agency (now the California State Transportation Agency) on October 1, 1984. The MCLTC replaced the Mono County Transportation Commission, which served as the transportation planning agency for Mono County from April 1, 1972, through December 1984.

The MCLTC is authorized to act as the lead transportation planning and administrative agency for transportation projects and programs in Mono County. As the County's RTPA, the MCLTC is responsible for transportation planning, programming, and fund allocation, as required by the state statutes. This includes the annual allocation of TDA funds, as well as federal and local funds for highway, transit, rail, bicycle, and other transportation projects. The primary duties of the MCLTC consist of the following:

1. Administration of TDA funds.

2. Development and implementation of the Mono County Regional Transportation Plan.

3. Preparation and implementation of the annual Overall Work Program (OWP).

4. Review of and comment on the Interregional Improvement Plan contained in the State Transportation Improvement Program.

5. Preparation of the Regional Transportation Improvement Program, in collaboration with Caltrans, and submitted for adoption by the California Transportation Commission.

6. Review of and prioritization of grant applications for various funding programs.

7. Facilitation of public education, awareness, and involvement in regional transportation planning and programming.

Mono County is located in the central eastern part of the state and is situated east of the Sierra Nevada mountain range between Yosemite National Park and Nevada. Mono County is bounded by Tuolumne County to the west, Fresno and Madera Counties to the southwest, Alpine County to the northwest, Inyo County to the south, and the state of Nevada to the north and east. The County was formed in 1861 from parts of Calaveras, Fresno, and Mariposa Counties. A portion of northern Mono County was ceded to Alpine County in 1864, and a southern portion was ceded to Inyo County in 1866.

Mono County has a land area of 3,049 square miles. About 94 percent of Mono County is public land administered by the United States Forest Service, the federal Bureau of Land Management, the State of California, and the City of Los Angeles Department of Water and Power. Approximately 80 percent of all employment is associated with these public agencies. Annually, more than 6 million visitor-days of use occur on public lands in Mono County. The majority of these visitors travel to and through the County on the state highway system. Major attractions include the Mammoth and June Mountain ski areas, Yosemite National Park, Mono Lake, Devils Postpile National Monument, Bodie State Historic Park, and the many lakes, streams, and backcountry attractions accessed through Mono County communities.

A demographic snapshot of the County is presented in Table I-1.

Table I-1
Mono County Demographics

City/Jurisdiction	2020 US Census Population	Change from 2010 US Census %	Population 65 Years & Older % (2022 ACS 5-Yr Estimates)	2024 DOF Population Estimates	Land Area (in square miles)
Total Mono County	**13,195**	**-7.1%**	**15.73%**	**12,861**	**3,049.00**
Town of Mammoth Lakes	7,191	-12.7%	11.53%	7,110	24.87
Unincorporated Area	6,004	+0.6%	20.75%	5,751	3,024.13

Source: 2020 US Census; 2022 American Community Survey, 5-Year Estimates; California Department of Finance (DOF), 2024 Population Estimates

The community of Bridgeport is the County seat, and the Town of Mammoth Lakes is the County's only incorporated city as well as the largest population center. The County's population decreased 7.1 percent between the 2010 and 2020 US Censuses. Based on the 2022 American Community Survey 5-year Estimates, seniors comprised just under 16 percent of the County's population. The 2024 population for Mono County was estimated to be 12,861 as reported by the California Department of Finance, a 2.5 percent decrease from the 2020 Census figure. Other communities and census-designated places include Aspen Springs, Benton, Chalfant, Coleville, Crowley Lake, June Lake, Lee Vining, McGee Creek, Mono City, Paradise, Sunny Slopes, Swall Meadows, Topaz, Twin Lakes, Virginia Lakes, and Walker.

Major highways include US Highways 395 and 6 as well as State Routes (SR) 89, 108, 120, 158, 167, 168, 182, 203, 266, and 270. US 395 is the main north–south arterial, connecting Mono County to Inyo County and Reno, Nevada. SR 120 at the junction with US 395 in Lee Vining connects Mono County with Yosemite National Park via the Tioga Pass. The community of June Lake is located along SR 158. The Town of Mammoth Lakes is located on SR 203 and serves as the Town's main street. The communities of Chalfant, Hammil Valley, and Benton are located on US Highway 6. The community of Oasis is located on SR 266/168 in the southeastern portion of the County. The communities are generally small, rural in character, and oriented primarily to serving recreational and tourist traffic. Walker, Topaz, Coleville, Bridgeport, and Lee Vining share US 395 as their main street for commerce and community activities. SR 158 serves as the main street for June Lake. US 6 serves as a main street for Benton and Chalfant.

Organizational Structure

Consistent with state law, the MCLTC consists of six commissioners—three commissioners appointed by the Town of Mammoth Lakes Town Council and three commissioners appointed by the Mono County Board of Supervisors. Each appointing authority may also select up to three alternative members to serve in the absence of their respective regular members. In most instances, the appointing authorities select commissioners that also serve as members of the Mammoth Lakes Town Council and Mono County Board of Supervisors. The MCLTC historically has included the Caltrans District 9 director as a non-voting ex officio member. The ex officio membership allows for participation by the District 9 director or staff designee in Commission discussions before and after public testimony, but without the ability to vote on Commission matters.

The MCLTC appoints the Mono County Social Services Transportation Advisory Council (SSTAC) to advise the Commission on transit needs, major transit issues, and coordination of specialized transportation services, particularly during the unmet needs hearing process. Members of the SSTAC are appointed by the Commission in compliance with the membership composition requirements of the TDA (Section 99238). Consistent with the California legislature's intent to avoid duplicative transit advisory councils, the Mono

County SSTAC serves as the sole advisory council for regional transit matters within Mono County.

To better integrate regional transportation planning efforts with local and County planning systems, the MCLTC utilizes the existing committee structure of the area's two general purpose governments: the Town of Mammoth Lakes and Mono County. These include the Town of Mammoth Lakes Planning Commission, Mono County Planning Commission, the Mono County Airport Land Use Commission, Mammoth Lakes Airport Commission, the Town of Mammoth Lakes Mobility Commission, and the Regional Planning Advisory Committees, which are planning advisory committees serving unincorporated communities.

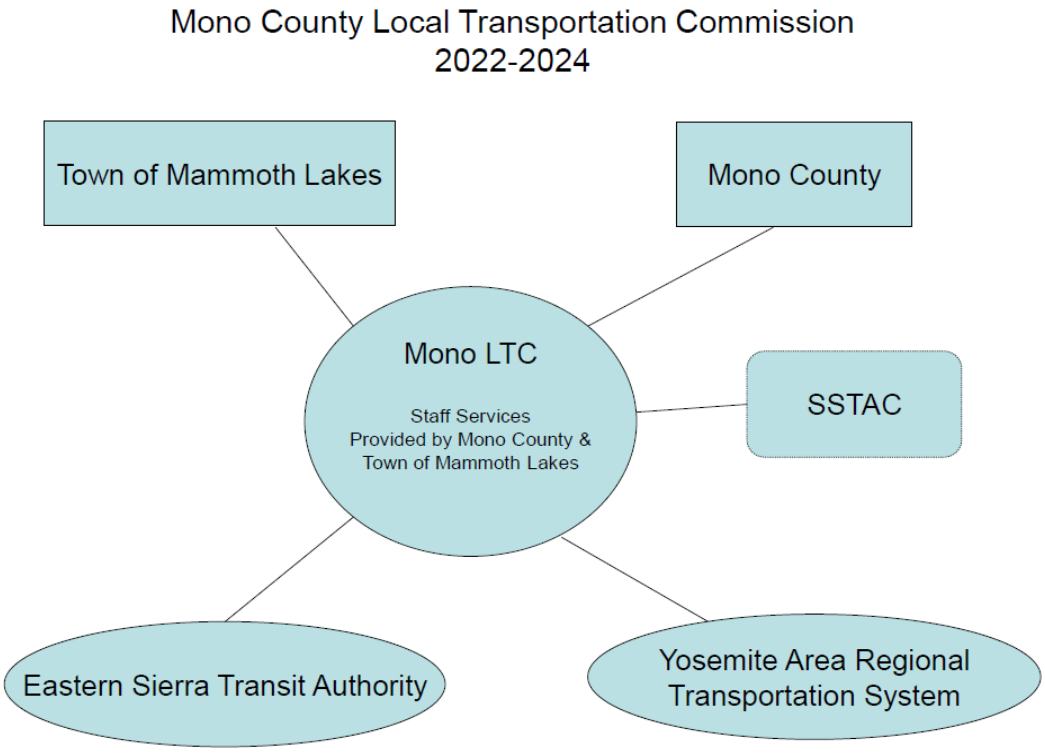
A staff-level Transportation Technical Advisory Committee, consisting of representatives from Mono County, the Town of Mammoth Lakes, the local transit provider (presently Eastern Sierra Transit Authority [ESTA]) and Caltrans, meets monthly to coordinate agenda items, Commission follow-ups, and related planning matters. The advisory committee, which generally meets after regular MCLTC meetings or as needed, provides technical staff support and recommendations to the MCLTC on state, regional, County, and Town transportation matters.

In recent years, Mono County and the Town of Mammoth Lakes have provided staff services of the MCLTC via a memorandum of understanding (MOU). The MOU provides for planning services, staff, and administrative support for the MCLTC in order to fulfill TDA requirements, accomplish the mandated functions of the MCLTC, and carry out the annual OWP. The MOU notes that it is in the best interest of the County, Town, and MCLTC to continue to implement the most efficient and professionally economical method of providing the aforementioned services, and that a close working relationship on a daily basis among the staffs of the three entities has been beneficial to all parties.

The division of responsibilities for staff and administrative services is established annually based upon the OWP. Major administrative matters and projects directly affecting the incorporated area are the responsibilities of the Town Public Works and Planning Departments, whereas major administrative matters and projects directly affecting the unincorporated area are the responsibilities of the County Public Works and Planning Departments.

County staff handles routine administrative and secretarial matters, and County staff has filled the positions of executive director, Commission secretary, and Commission counsel in recent years. The MCLTC secretary is appointed by the executive director to maintain records, including meeting minutes and project files, and to assist staff in preparation and dissemination of public notices, agendas, agenda packets, and other official business. Technical (engineering, legal, and planning) staffing services for the MCLTC are provided by the County and Town staff as needed. Figure I-1 shows the MCLTC organizational chart.

Figure I-1
Organizational Chart



Source: Mono LTC

Audit Methodology

To gather information for this performance audit, Michael Baker conducted the following activities:

- Document Review: Conducted an extensive review of documents including various MCLTC files and internal reports, committee agendas, and public documents.

- Interviews: Conducted virtual interviews with MCLTC co-directors, transportation planning staff, and administrative personnel.

- Analysis: Evaluated the responses from the interviews as well as the documents reviewed about the MCLTC's responsibilities, functions, and performance pertaining to TDA guidelines and regulations.

All of the activities described above were intended to provide the information necessary to assess the MCLTC's efficiency and effectiveness in two key areas:

- Compliance with state TDA requirements

- Organizational management and efficiency

The remainder of this report is divided into four sections. In Section II, Michael Baker reviews the compliance requirements of the TDA administrative process. Section III describes the MCLTC's responses to the recommendations in the previous performance audit. In Section IV, Michael Baker provides a detailed review of the MCLTC's functions, while Section V summarizes our findings and recommendations.

Section II

Compliance Requirements

Fourteen key compliance requirements are suggested in the *Performance Audit Guidebook for Transit Operators and Regional Transportation Planning Entities* to assess the MCLTC's conformance with the TDA. Our findings concerning the Commission's compliance with state legislative requirements are summarized in Table II-1.

Table II-1
MCLTC Compliance Requirements Matrix

Compliance Requirements	Reference	Compliance Efforts
All transportation operators and city or county governments which have responsibility for serving a given area, in total, claim no more than those Local Transportation Fund (LTF) monies apportioned to that area.	Public Utilities Code, Section 99231	The MCLTC accounts for its claimants' areas of apportionment and has not allowed those claimants to claim more than what is apportioned for their area. Apportionments are made by the MCLTC for the incorporated area of Mammoth Lakes and for the County's unincorporated area. ESTA makes claims for regional and intercity transit services on behalf of the Town of Mammoth Lakes and the County. The Mono County Department of Social Services and Yosemite Area Regional Transportation System (YARTS) also claim a flat rate of LTF funding annually. Remaining available LTF moneys are split 58 percent for the Town of Mammoth Lakes and 42 percent for Mono County. From a review of LTF claims and adopting resolutions during this triennial period, the claimants do not claim more than their apportionments. Revised claims are submitted based on updated estimates from the MCLTC. The Commission makes this finding in each adopted resolution approving each LTF claim.

Table II-1 MCLTC Compliance Requirements Matrix		
Compliance Requirements	**Reference**	**Compliance Efforts**
		Conclusion: Complied.
The RTPA has adopted rules and regulations delineating procedures for the submission of claims for facilities provided for the exclusive use of pedestrians and bicycles.	Public Utilities Code, Sections 99233.3 and 99234	Based on prior actions of the MCLTC and in accordance with Section 92233.3 of the TDA statute, 2 percent of LTF off the top is set aside for bike path construction. The apportionment and allocation are based on a three-year cycle that alternates between the Town of Mammoth Lakes and the County. The latest version (2022) of the LTC handbook includes a section on non-motorized review. As stated, project managers for Town, County, and state projects shall regularly consult with local citizens, commissions/committees and mobility user groups such as the cycling community, Regional Planning Advisory Committees, and other groups during project design and implementation. Similarly, these user groups and commissions/committees shall be consulted in the update of transportation plans, policies, and standards. Staff shall conduct a review of non-motorized features for all projects before the Commission including: •projects included in quarterly reviews; •project initiation documents, including project study reports; and •projects programmed in the RTIP. LTF funds designated for pedestrian and bicycle projects are held in a trust for usage.

Table II-1 MCLTC Compliance Requirements Matrix		
Compliance Requirements	**Reference**	**Compliance Efforts**
		Conclusion: Complied.
The RTPA has established a social services transportation advisory council. The RTPA must ensure that there is a citizen participation process which includes at least an annual public hearing.	Public Utilities Code, Sections 99238 and 99238.5	The MCLTC appoints the Mono County SSTAC to advise the Commission on transit needs, major transit issues, and coordination of specialized transportation services, particularly during the unmet needs hearing process. Members of the SSTAC are appointed by the Commission in compliance with the membership composition requirements of the TDA (Section 99238). Consistent with the state legislature's intent to avoid duplicative transit advisory councils, the Mono County SSTAC serves as the sole advisory council for regional transit matters within Mono County. **Conclusion: Complied.**
The RTPA has annually identified, analyzed, and recommended potential productivity improvements which could lower the operating costs of those operators which operate at least 50 percent of their vehicle service miles within the RTPA's jurisdiction. Recommendations include, but are not limited to, those made in the performance audit. • A committee for the purpose providing advice on productivity improvements may be formed.	Public Utilities Code, Section 99244	Absent a separate productivity improvement committee, potential productivity improvements in current transit service are reviewed on an annual basis through the unmet transit needs hearing process and during informal discussions between ESTA and the MCLTC. Route statistics are also presented to the MCLTC Board by ESTA with discussions to identify and recommend areas of improvement. A standing agenda item for ESTA is available at MCLTC board meetings. In addition to the above actions, the MCLTC conducts the state-mandated TDA triennial performance audit as well as

Table II-1 MCLTC Compliance Requirements Matrix		
Compliance Requirements	**Reference**	**Compliance Efforts**
• The operator has made a reasonable effort to implement improvements recommended by the RTPA, as determined by the RTPA, or else the operator has not received an allocation which exceeds its prior year allocation.		assisting in the funding of ESTA's Short Range Transit Plan, which provides productivity improvements. The MCLTC requests that ESTA respond to the recommendations made in the previous performance audits. In the TDA claims, MCLTC staff check whether the claimant made a reasonable effort to implement recommendations by the MCLTC. This check is an annual assessment of the actions taken by the claimants to improve productivity and is used by the Commission as a condition of approving the claim. **Conclusion: Complied.**
The RTPA has ensured that all claimants to whom it allocates Transportation Development Act (TDA) funds submits to it and to the state controller an annual certified fiscal and compliance audit within 180 days after the end of the fiscal year (December 27). The RTPA may grant an extension of up to 90 days as it deems necessary (March 26).	Public Utilities Code, Section 99245	Submittal dates for the ESTA annual financial audit: FY 2022: January 30, 2023 FY 2023: January 19, 2024 FY 2024: December 20, 2024 Submittal dates for the YARTS annual financial audit*:* FY 2022: March 7, 2023 FY 2023: March 29, 2024 FY 2024: March 28, 2025 **Conclusion: Complied.**
The RTPA has designated an independent entity to conduct a performance audit of operators and itself (for the current and previous triennium). For operators, the audit was made and calculated the required	Public Utilities Code, Sections 99246 and 99248	For the current three-year period that ended June 30, 2024, the MCLTC has retained Michael Baker International to conduct the performance audit of the Commission. The firm was also retained to conduct the previous audit of the MCLTC for the three

Table II-1 MCLTC Compliance Requirements Matrix		
Compliance Requirements	**Reference**	**Compliance Efforts**
performance indicators, and the audit report was transmitted to the entity that allocates the operator's TDA monies and to the RTPA within 12 months after the end of the triennium. If an operator's audit was not transmitted by the start of the second fiscal year following the last fiscal year of the triennium, TDA funds were not allocated to that operator for that or subsequent fiscal years until the audit was transmitted.		fiscal years that ended June 30, 2021. The TDA performance audits of ESTA and YARTS were completed by independent firms and included required performance indicators. **Conclusion: Complied.**
The RTPA has submitted a copy of its performance audit to the Director of the California Department of Transportation. In addition, the RTPA has certified in writing to the Director, that the performance audits of the operators located in the area under its jurisdiction have been completed.	Public Utilities Code, Section 99246(c)	Upon completion of the FY 2016-2018 and FY 2019-2021 performance audits, the MCLTC submitted a transmittal letter dated April 10, 2023, and copies of the audits to Caltrans. Caltrans confirmed receipt of the audits on May 11, 2023. **Conclusion: Complied.**
The performance audit of the operator providing public transportation service shall include a verification of the operator's operating cost per passenger, operating cost per vehicle service hour, passengers per vehicle service mile, and vehicle service hours per employee, as defined in Section 99247. The performance audit shall include, but not be limited to, consideration of the needs and types of passengers being served and the	Public Utilities Code, Section 99246(d)	The performance audit of the operators, ESTA and YARTS, includes all required performance elements. **Conclusion: Complied.**

Table II-1 MCLTC Compliance Requirements Matrix		
Compliance Requirements	**Reference**	**Compliance Efforts**
employment of part-time drivers and the contracting with common carriers of persons operating under a franchise or license to provide services during peak hours, as defined in subdivision (a) of Section 99260.2		
The RTPA has established rules and regulations regarding revenue ratios for transportation operators providing services in urbanized and new urbanized areas.	Public Utilities Code, Section 99270.1 and 99270.2	This compliance requirement is not applicable, as neither the MCLTC nor its claimants operate in an urbanized area. **Conclusion: Not Applicable.**
The RTPA has adopted criteria, rules, and regulations for the evaluation of claims under Article 4.5 of the TDA and the determination of the cost-effectiveness of the proposed community transit services.	Public Utilities Code, Section 99275.5	Article 4.5 funds are allocated during the TDA claims process. In its adopting resolution, the MCLTC allocates less than 5 percent of LTF for administration to ESTA serving as the Mono County Consolidated Transportation Service Agency **Conclusion: Complied.**
State transit assistance funds received by the RTPA are allocated only for transportation planning and mass transportation purposes. (Note: Since the June 9, 1990, passage of Proposition 116, state transit assistance funds may no longer be used for street and road purposes, as had been permitted in	Public Utilities Code, Sections 99310.5 and 99313.3 and Proposition 116	The MCLTC allocates State Transit Assistance (STA) funds to ESTA for transit operations and/or capital expenditure assistance. **Conclusion: Complied.**

Table II-1 MCLTC Compliance Requirements Matrix		
Compliance Requirements	**Reference**	**Compliance Efforts**
certain cases under PUC Section 99313.3.)		
The amount received pursuant to Public Utilities Code, Section 99314.3; by each RTPA for state transit assistance is allocated to the operators in the area of its jurisdiction as allocated by the State Controller's Office.	Public Utilities Code, Section 99314.3	The MCLTC allocates operator revenue-based STA funds to ESTA in accordance with the amounts published by the State Controller's Office. **Conclusion: Complied.**

If TDA funds are allocated to purposes not directly related to public or specialized transportation services, or facilities for exclusive use of pedestrians and bicycles, the transit planning agency has annually:
 	
• Consulted with the Social Services Transportation Advisory Council (SSTAC) established pursuant to Public Utilities Code, Section 99238;
• Identified transit needs, including:
  ○ Groups that are transit-dependent or transit disadvantaged,
  ○ Adequacy of existing transit services to meet the needs of groups identified, and
  ○ Analysis of potential alternatives to provide transportation services;
• Adopted or re-affirmed definitions of "unmet
	Public Utilities Code, Section 99401.5	The MCLTC conducts an annual unmet transit needs process to solicit comment and feedback on potential transit needs. Although no TDA funds are allocated to streets and roads, the MCLTC continues to conduct a formal unmet needs process as a venue to work with the community and identify transit needs. The Commission works through the SSTAC, and cooperatively with ESTA, for this process. Meetings with the SSTAC are held annually in the spring to identify and discuss unmet transit needs. The Commission follows the steps outlined in the TDA statute, including the compilation of transit needs, proper notification, and the conduct of public hearings. The findings are presented at public hearings. The MCLTC adopts resolutions of the findings of unmet needs based on the findings made by staff. Following adoption, the unmet needs documentation is submitted to Caltrans for concurrence and compliance with the law. Caltrans's response has stated the MCLTC's

Table II-1 MCLTC Compliance Requirements Matrix		
Compliance Requirements	**Reference**	**Compliance Efforts**
transit needs" and "reasonable to meet;" • Identified the unmet transit needs and those needs that are reasonable to meet; • Adopted a finding that there are no unmet transit needs that are reasonable to meet; or that there are unmet transit needs including needs that are reasonable to meet. If a finding is adopted that there are unmet transit needs, these needs must have been funded before an allocation was made for streets and roads.		documentation to be complete and in full compliance. **Conclusion: Complied.**
The RTPA has caused an audit of its accounts and records to be performed for each fiscal year by the county auditor, or a certified public accountant. The RTPA must transmit the resulting audit report to the State Controller within 12 months of the end of each fiscal year and must be performed in accordance with the Basic Audit Program and Report Guidelines for California Special Districts prescribed by the State Controller. The audit shall include a determination of compliance with the transportation development act and accompanying rules and regulations. Financial statements may not commingle the state transit assistance fund, the local	California Administrative Code, Section 6662	The accounting firm of Fechter & Company conducted the financial audit of the MCLTC for FYs 2021, 2022, 2023, and 2024. The Audited Financial Statements and Compliance Reports were submitted to the State Controller within 12 months of the end of each fiscal year. Dates of completion were: FY 2021: November 29, 2021 FY 2022: December 19, 2022 **Revised January 3, 2023* FY 2023: December 18, 2023 FY 2024: December 4, 2024 **Conclusion: Complied.**

Table II-1 MCLTC Compliance Requirements Matrix		
Compliance Requirements	**Reference**	**Compliance Efforts**
transportation fund, or other revenues or funds of any city, county or other agency. The RTPA must maintain fiscal and accounting records and supporting papers for at least four years following the fiscal year close.		

Findings from MCLTC Compliance Requirements Matrix

The MCLTC satisfactorily complied with applicable state legislative mandates for RTPAs. One requirement was not applicable to MCLTC operations (determination of farebox recovery ratios for urbanized areas). To its credit, the MCLTC conducts the annual unmet transit needs process to solicit comment and feedback on potential transit needs, although the TDA only requires an unmet transit needs process when TDA funds could be used for roadway projects. Although TDA funds have not been allocated to streets and roads, but only to non-motorized transportation projects and public transportation service, the MCLTC continues to conduct a formal unmet needs process as a venue to work with the community and identify transit needs. The Commission works through the SSTAC, and cooperatively with ESTA, during this process. The definitions of an "unmet transit need" and "reasonable to meet," adopted in June 1998, are reaffirmed in the resolution that finds whether any unmet need identified through the public meetings meets the definitions.

LTF is allocated for bike/pedestrian facility improvements in Mono County and has been included in the Regional Transportation Plan (RTP). RTP policies call for the provision of bike lanes as a component of rehabilitation projects on streets and highways. The Town of Mammoth Lakes adopted policies in the 2007 General Plan to reduce vehicle trips and promote healthy communities by promoting feet first, transit second, and automobile last. This policy is being implemented through project development review and Town-sponsored projects. In addition, the Town's recent zoning update included development standards promoting pedestrian, biking, and alternative modes of transportation.

Section III

Prior Triennial Performance Audit Recommendations

This chapter describes the MCLTC's response to the recommendations included in the prior triennial performance audit ending FY 2021. Each prior recommendation is described, followed by a discussion of the agency's efforts to implement the recommendation. Conclusions concerning the extent to which the recommendations have been adopted by the agency are then presented.

Prior Recommendation 1

Develop a centralized document archive for the Commission.

Background

The MCLTC has relied on a hybrid document filing system based on a mix of hard copy paper and digital documents. Mono LTC staff reported that not all paper files have been scanned, while LTC digital files are contained in separate file structures. Given the changes and turnover of staff assigned to the MCLTC, a centralized file archive would provide the documentation for staff to draw upon to perform their roles and duties and maintain institutional knowledge. The Mono LTC's webpage already has a number of supporting documents posted on the site accessible through a resource menu. The prior audit suggested that a functional document archive could be modeled on that resource menu or based on the work elements contained in the annual OWP.

Actions taken by the MCLTC

Pursuant to the County of Mono's and the Town of Mammoth Lakes' 2022-2024 Information Technology (IT) Strategic Plan, LTC staff have been organizing paper files in preparation for a large-scale scanning and archiving project at the County. The IT Strategic Plan is composed of four major strategic initiatives. The second strategic initiative, Security and Infrastructure, places an emphasis on shifting the on-premises storage of user and department files to OneDrive and SharePoint Online. The project is led by the County's IT department and a meeting with the consultant was scheduled for LTC staff in early November 2024. Once the paper files are scanned, they will be digitally tagged and archived. Existing digital files are regularly being reorganized to become more efficient and centralized.

Conclusion

This recommendation is in the process of implementation.

Prior Recommendation 2

Expound upon the TDA reserve balance policy.

Background

During the COVID-19 pandemic, MCLTC staff recommended, and the Commission approved, a 20 percent reserve in LTF set-aside fund. According to the *LTC Handbook/ Bylaws*, "deferred LTF revenue should be managed to generally maintain no less than 5 percent or more than 15 percent of annual allocations unless funds are set aside for a specific purpose such as agrant match or severe economic downturns." Unused reserve at the end of the year is generally added to the carryover balance.

There are different reasons for TDA funds to be held in reserve, whether it is set aside by a claimant for a future project, to advance funding if a need is substantiated, or is at the discretion of the Board. To better memorialize the purpose and use of the reserve fund, the MCLTC should expand its discussion about the reserve in the Procedures chapter of the *LTC Handbook/Bylaws* under TDA guidelines. The discussion should include the purpose of the reserve, such as holding future payment to a claimant and maintaining a cushion for economic downturns, as well as differentiating between reserves for a particular purpose and reserves that are at the discretion of the Commission. The amounts that are discretionary should include general guidelines for their use, such as for distribution to transit operators when actual TDA revenue is below projected, or under specific circumstances for other uses such as for bicycle and pedestrian projects. The reserve target of 5 percent of annual LTF revenue should be maintained at a minimum unless fiscal conditions warrant a reduced level. Under these conditions, the reserve target could be waived. The reserve balance is subject to the apportionments among eligible jurisdictions and claims such as for public transportation and non-motorized projects and conforms to the terms and conditions laid out by MCLTC. As a general rule, a jurisdiction cannot claim more than its apportionment in its respective area.

Actions taken by the MCLTC

The Commission updated the *LTC Handbook/Bylaws* in May 2022 to read: "Deferred LTF revenue should be managed to generally maintain no less than 5 percent or more than 15 percent of annual allocations unless funds are set aside for a specific purpose such as a grant match." If the reserve exceeds the maximum of 15 percent when the LTC allocates funds in June of each year, then no funds are allocated to the reserve. From past years, the reserve has increased due to unspent allocations to a total of $647,960, which is being requested by ESTA for vehicle replacement. This allocation was authorized at the October 28, 2024 Commission meeting. Once the reserve is reduced, adjustments will be made through the annual allocation process to maintain the reserve within the policy limits.

Conclusion

This recommendation has been implemented.

Prior Recommendation 3

Maintain on file evidence of submission of TDA fiscal and compliance audits, and TDA performance audits.

Background

A cover letter typically accompanies the electronic submission of the transportation planning agency's TDA triennial performance audit to Caltrans, while email submissions for claimant fiscal audits are made to the State Controller Office. Both types of audits are transmitted via email, which provides evidence of date of submittal. These emails, including performance audit cover letter, should be filed in LTC archives. The letter certifies completion of performance audits for both the MCLTC and the transit operator(s). The MCLTC was able to verify its submission of the fiscal audits. Although the MCLTC was able to verify submission of the claimants' fiscal audits by providing screenshots of the uploaded documentation, the MCLTC should maintain and file the sent email and subsequent communication with the State.

Actions taken by the MCLTC

Cover letters and emails are filed as verification of MCLTC's TDA compliance pertaining to the submission of performance audits to the State Controller's Office and Caltrans, respectively. Claimants' fiscal and compliance audit confirmations to the State Controller's Office are also filed. As was reported in Section II of this audit, upon completion of the FY 2016-2018 and FY 2019-2021 performance audits, the MCLTC submitted a transmittal letter dated April 10, 2023, and copies of the audits to Caltrans. Caltrans confirmed receipt of the audits on May 11, 2023. As was communicated to the MCLTC during the audit period, Caltrans stated that transit operators' performance audits or related cover letters were no longer required to be submitted (as per an email dated December 19, 2022).

Conclusion

This recommendation has been implemented. However, to clarify, as per an email dated December 20, 2024, to the performance auditor from the Transit Programs Oversight Branch Chief at Caltrans, triennial performance audits are due within one year of the audit period ending and should be submitted to the following email address: (TDA@dot.ca.gov)

Prior Recommendation 4

Provide estimation of MCLTC employee time allocation for Overall Work Program elements.

Background

As the Overall Work Program (OWP) guides the MCLTC's annual work elements and budget, it is important that the OWP continue to provide transparency and accountability in the agency's activities. As expenditures for each OWP task element and project are currently segregated by percentage breakdowns in the OWP document, it is suggested that the MCLTC attach an equivalent allocation of staff time (such as in personnel hours/days/months, full-time equivalents, etc.) that expresses staff work efforts on each task. This recommended effort would project staffing times based on task budgeting. It was brought to the attention of this auditor by MCLTC staff that each department tracks this in their own respective systems. When quarterly requests for reimbursement are submitted to Caltrans, the backup documentation that is included reflects work element staff time detail (personnel hours/days/months). While this is good practice, it is suggested that staff time be included under the "Estimated Benchmarks" section of each work element. This added feature to the OWP provides an indication of projected human resource commitment to each project and associated expense, and level of agency effort needed to complete the task.

Actions taken by the MCLTC

The OWP format is established by Caltrans. In the 2024-2025 OWP, LTC staff time was listed as an "Expected Product" and Caltrans requested that it be removed. The funding allocation for each work element is an indirect translation of allocated staff time and perhaps a more transparent measure of resources directed to the projects, as that dollar figure may include expenditures other than staff time as well. If this recommendation remains in place, staff will discuss the format with Caltrans for the 2025-2026 OWP.

Conclusion

This recommendation is in the process of implementation.

Section IV

Detailed Review of LTC Functions

In this section, a detailed assessment is provided of the MCLTC's functions and performance as a local transportation commission during this audit period. As adapted from Caltrans's *Performance Audit Guidebook for Transit Operators and Regional Transportation Planning Entities*, the MCLTC's activities can be divided into the following activities:

- Administration, Management, and Coordination
- Transportation Planning and Programming
- TDA Claimant Relationships and Oversight
- Marketing and Transportation Alternatives
- Grant Applications and Management

Administration, Management, and Coordination

The MCLTC is administered and managed by County of Mono and Town of Mammoth Lakes employees tasked with specific duties and responsibilities. These duties and responsibilities are provided via a MOU. The MOU provides for planning services, staff, and administrative support for the MCLTC in order to fulfill TDA requirements, accomplish the mandated functions of the MCLTC, and carry out the annual OWP.

The MOU notes that it is in the best interest of the County, Town, and MCLTC to continue to implement the most efficient and professionally economical method of providing the aforementioned services, and that a close working relationship on a daily basis among the staffs of the three entities has been beneficial to all parties. Mono County provides staffing for the LTC including secretary, legal counsel, and other planning related services. The division of responsibilities for staff and administrative services is established annually based upon the OWP and other Commission priorities.

MCLTC policies and procedures are well documented in the Mono County *LTC Handbook/Bylaws,* which was updated in May 2022. The handbook provides a detailed overview of the MCLTC background and purpose, organization structure, and administrative structure and duties, as well as its procedures for TDA funding allocation and development of the Regional Transportation Plan (RTP), Regional Transportation Improvement Program (RTIP), and OWP. The document also contains supporting appendices such as the staffing MOU and TDA reporting dates.

The Commission appoints the Town of Mammoth Lakes public works director or their designee and the Mono County Community Development director or their designee as co-executive directors, who are responsible for the day-to-day operation and administration of the MCLTC. Major projects and administrative matters affecting the Town of Mammoth Lakes are the responsibilities of the Town Public Works and Planning Departments. Major administrative matters and projects directly affecting the unincorporated area are the responsibilities of the County Public Works and Community Development Departments.

The Commission meets the second Monday of the month at 9:00 a.m. in Mammoth Lakes in the Minaret Mall or the Mono Lake Room in the County Civic Center with a teleconference location in Bridgeport at the Mono County Chief Administrative Office Conferences Room. Members of the public may participate in person and via the Zoom teleconferencing platform. There have been nominal changes in the composition of the Commission. Staff reported some turnover in the Town of Mammoth Lakes member. The Town manager serves as an alternate. Despite some scheduling conflicts, two commissioners have regular attendance.

Transportation Planning and Programming

The Commission embarked on an update to the Mono County RTP during the audit period. The 2024 Mono County RTP, adopted in December 2024 after the audit period, succeeded the 2019 Mono County RTP. This was a collaborative effort between the Mono County LTC, Mono County Community Development Department, Mono County Public Works Department, Town of Mammoth Lakes Community Development Department, and Town of Mammoth Lakes Public Works Department. Each jurisdiction is responsible for delivering their plans, which are rolled up into the RTP. The time horizon for the RTP is a 20-year period and the plan is updated every four years. The plan is intended to achieve a coordinated and balanced regional transportation system of all travel modes.

The purpose of the RTP is to establish regional transportation goals, identify current and future needs, address deficiencies, and propose solutions. The plan aims to correlate transportation development with land use, ensure compliance with air quality standards, and outline a financially constrained funding strategy. The 2024 RTP update is composed of an executive summary, nine chapters, and nine appendices. The chapters encompass the planning process and coordination; existing transportation network; needs assessment; regional policy element; community policy element; action element; financial element; and glossary and references.

The key goals of the 2024 RTP update include:

- ***Enhancing Mobility:*** Improving the efficiency and connectivity of the transportation network to facilitate the movement of people and goods.

- ***Promoting Safety**:* Ensuring the safety of all transportation system users through infrastructure improvements and safety programs.
- ***Supporting Sustainability**:* Encouraging environmentally friendly transportation options and reducing greenhouse gas emissions.
- ***Fostering Economic Development**:* Supporting economic growth by improving access to key destinations and enhancing the transportation infrastructure.
- ***Improving Accessibility**:* Ensuring that transportation options are accessible to all community members, including those with disabilities.
- ***Maintaining Infrastructure**:* Prioritizing the maintenance and preservation of existing transport infrastructure.

Some of the projects prioritized in the 2024 RTP included "Main Street" projects along state right-of-way in the communities of Bridgeport, Lee Vining, and Walker. The Bridgeport and Walker projects are based on the 2013 Complete Streets Plan whereas the Walker project is more safety oriented. The community policy element was updated for the communities of Bridgeport and Antelope Valley (Topaz/Walker). The MCLTC also collaborated with Caltrans in updating wildlife crossings data.

New RTP guidelines were issued in the spring of 2024. State planning law and the federal Infrastructure Investment and Jobs Act, also known as the Bipartisan Infrastructure Law, require extensive coordination with applicable local, state, and federal plans and programs during the development of the RTP. Development of the 2024 Mono County RTP was coordinated with these governmental plans/programs.

Public participation was key in the development of the RTP process. The Mono LTC engaged the local Regional Planning Advisory Committees (RPACs), disseminated newsletters, conducted tribal outreach, and coordinated outreach through its regional partners such as Caltrans, ESTA, YARTS, the Bureau of Land Management, and the US Forest Service. The outreach process also involved presenting the draft RTP before the Mono County Board of Supervisors and at LTC meetings. The Mono County LTC also published a Notice of Availability in local newspapers such as the *Mammoth Times* and *The Sheet*.

Mono County serves a diverse population that the Mono LTC is legally and ethically bound to represent. Each population has different needs, priorities, and abilities to access and influence the transportation planning process. Input from persons with disabilities was provided through the unmet transit needs hearing process and through consultation with social services providers that serve the disabled population in the County.

The MCLTC has been involved in the update of the Mono County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP). The MJHMP is a comprehensive strategy designed to reduce or eliminate risks from various hazards affecting Mono County and the Town of Mammoth Lakes. The plan aims to ensure that Mono County and the Town of Mammoth Lakes are better prepared for future hazards by implementing effective mitigation

strategies. The update was kicked off in August 2024 with initial meetings and consultations; the submission of the final draft to the California Governor's Office of Emergency Services (CalOES) and the Federal Emergency Management Agency (FEMA) is scheduled for the summer of 2025.

The MCLTC submits the RTIP list of projects during the State Transportation Improvement Program cycle, which occurs every two years. The Commission submitted the 2022 RTIP in November 2021. This replaced the 2020 RTIP submitted in December 2019. The RTIP is developed in partnership with Caltrans, District 9, Inyo County, Town of Mammoth Lakes, and Mono County. The objective of the RTIP is to focus on the backlog of local projects and continue to move forward with regional MOU projects.

Staff used input from the local RPACs, Commission, Caltrans District 9, and Town/County agencies in developing the 2022 RTIP. The Commission's 2022 core priorities were as follows:

- Adopt a successor MOU and continue to move forward with commitments on the 395/14 corridor;
- Provide funds for local County or Town of Mammoth Lakes projects before the next funding period (2024 RTIP);
- Leverage Senate Bill (SB) 1 funding to the greatest extent possible for local street and road monitoring, preventative maintenance and repair efforts, and
- Do not program negative share balances unless absolutely necessary.

Under the 2022 RTIP, Mono County proposed one new project, the Benton Crossing Road Rehab Phase 1, and amended one current project, Eastside Lane Rehab Phase 2 PPNO 2676. The MCLTC has historically placed an emphasis on completing four-lane projects on the SR 14 / US 395 through the region to increase safety and drivability between Southern California population centers and the Eastern Sierra. Since 1998, the Mono County LTC has entered into various MOU partnerships with Inyo County Local Transportation Commission, Kern Council of Governments, and San Bernardino Associated Governments to leverage Interregional Transportation Improvement Program funds. The MCLTC has partnered with Caltrans District 9 to accomplish this goal. However, for this funding cycle, the MCLTC was not able to program additional components on the Freeman Gulch segments 2 and 3 or the North Conway Truck Climbing Lane with MOU partners.

SB 1 funds now provide the Town and the County with the following options:

- Better utilization of limited staffing resources;
- Flexibility in completing preconstruction phases without the use of RTIP funds and using RTIP for construction purposes;

- More options for interim maintenance treatments that extend the life of existing transportation infrastructure through pavement management and other quantitative programs;
- Allows the County to better implement its five-year Road Capital Improvement Program (CIP), which is an important decision making tool for programming RTIP funds.

Also during the audit period, the 2024 RTIP was developed and submitted in December 2023. In this latest RTIP, the Town of Mammoth Lakes proposed three projects: the Minaret Road Multi-Use Path (MUP), the South Main Street reprogramming, and the Meridian and Minaret roundabout. Mono County proposed one project, the North Shore Drive rehabilitation project, which includes repayment of Highway Improvement Program funds loaned to the Sacramento Area Council of Governments. In addition, planning, programming, and monitoring funds are programmed for project development in the coming years.

One project has been completed since the adoption of the 2024 RTIP and four projects are in preconstruction phases. These projects are Eastside Lane Phase 2 Rehabilitation, Benton Crossing Road Rehabilitation Phase 1, Main Street MUP, Minaret Road MUP, and Laurel Mountain Road rehabilitation and sidewalks.

The MCLTC also develops an annual OWP, which includes a budget and tasks outlining the transportation planning activities for the coming year. The OWP is prepared in accordance with annual guidance provided by Caltrans and serves several functions including as a comprehensive listing of transportation planning activities in Mono County; a convenient regional transportation planning reference document for MCLTC partners and members of the public; the MCLTC's proposal to program and use Rural Planning Assistance (RPA) funds; and the basis of a contract with the state for use and disbursement of RPA funds.

A draft of the OWP is generally submitted to Caltrans for its review and comment in March of each year, with final OWP adoption by the MCLTC the following June. The MCLTC's planning activities are divided into seven broad work elements and the OWPs contain a detailed description of each work element, including work tasks, work products, estimated benchmarks, and estimated costs. The seven work elements are:

- Work Element 100: Agency Administration and Management
- Work Element 200: Regional Transportation Series
- Work Element 300: Vehicle Miles Traveled and Implementation
- Work Element 400: Grants
- Work Element 700: Regional Transportation Improvement Program (RTIP) and Project Development Series
- Work Element 800: Regional Transportation Planning Series
- Work Element 900: Asset Management and Traffic Issues

A detailed summary table containing estimated costs and funding sources for all work elements is contained in the OWP. Some elements are subject to change once complete details of tasks, future projects, and funding requests are identified. In the FY 2023-24 OWP, Work Element 300 was left unused, indicating that tasks under this element were implemented.

TDA Claimant Relationships and Oversight

This functional area addresses the MCLTC's interaction with TDA claimants and its administration of the provisions of the TDA. The subfunctions described include costs to administer the program, TDA claims processing, and transit performance monitoring. As all LTF revenues have been used for public transit purposes, state law does not require the MCLTC to undertake a formal unmet transit needs process. However, the Commission is commended for continuing this practice and working with ESTA to solicit unmet transit needs. Two public hearings are held by the Commission each year in compliance with the statute, which requires at least one public hearing in the citizen participation process.

MCLTC Administration and Planning

The uses of TDA revenues apportioned to Mono County flow through a priority process prescribed in state law. The MCLTC claims LTF revenues for TDA administration and planning. During the audit years of 2022 through 2024, the Commission claimed the following total amounts relative to total apportionments:

Table IV-1
LTF Allocation for MCLTC
Administration and Planning

Fiscal Year	Total LTF	MCLTC Share	Percentage of Total LTF
2022	$821,937	$30,000	3.6%
2023	$839,837	$30,000	3.6%
2024	$875,191	$30,000	3.4%

Source: MCLTC LTF Resolutions

The MCLTC claims a fixed amount of LTF funding for TDA administration, auditing, and planning/programming. A total of $30,000 is claimed annually, at $10,000 for each of these categories. This ranged from 3.4 percent to 3.6 percent of total LTF funding during the audit period. The total amounts used by the MCLTC are reasonable for administration of the fund. The MCLTC also generally sets aside 15 percent of total LTF funding annually as reserve revenue. The MCLTC handbook provides more information on the deferred LTF revenue, stating that "deferred LTF revenue should be managed to generally maintain no less than 5 percent or more than 15 percent of annual allocations unless funds are set aside for a specific purpose such as a grant match." If the reserve exceeds the maximum

of 15 percent when the LTC allocates funds in June of each year, then no funds are allocated to the reserve. The reserve balance is subject to the apportionments among eligible jurisdictions and claims such as for public transportation and non-motorized projects and conforms to the terms and conditions laid out by MCLTC. As a general rule, a jurisdiction cannot claim more than its apportionment in its respective area.

The remaining LTF funds following reserve set-aside and off the top allocations for MCLTC are allocated to eligible agencies and local jurisdictions. Two percent of TDA funds are set aside for qualifying bicycle and pedestrian projects using the criteria described in the TDA claims instructions.

TDA Claim Processing

The MCLTC has three claimants for TDA funding. ESTA makes claims on behalf of the Town of Mammoth Lakes and the County of Mono for transit services provided by ESTA in the Town and the County. These are claimed in compliance with TDA Article 4 to ensure consistency with ESTA claims with Inyo County and the City of Bishop. ESTA also includes in its budget a claim amount specifically for consolidated transportation services agency administration. The Mono County Department of Social Services Senior Program claims a fixed amount of $30,000 annually for medical escort service for seniors and other transit-dependent adults. YARTS also claims a fixed amount each year for operating costs related to services within the County, which has been $40,000 annually. The Town of Mammoth Lakes uses qualifying bicycle and pedestrian project funds, and the Town will submit invoices related to projects to be reimbursed from LTF.

After LTF funding is dispersed to the reserves, MCLTC, and claimants, the remaining funds are split between Mono County and the Town of Mammoth Lakes. This allocation is split based on population percentages tied to US Census results. For the audit period, this split is 58 percent to Town of Mammoth Lakes and 42 percent to Mono County.

On an annual basis during this audit period, the MCLTC was responsible for managing both the apportionment of LTF revenues and State Transit Assistance (STA) funds. Below is the total TDA funding received during the audit period:

Table IV-2
LTF & STA Allocation

Fiscal Year	Total LTF	Total STA
2022	$821,937	$229,132
2023	$839,837	$305,881
2024	$875,191	$391,454

Source: MCLTC LTA & STA Resolutions

STA revenues are allocated to ESTA annually. A small portion of these revenues are capital restricted with the majority being allocated for operating expenses.

The MCLTC's role in the process is to confirm that the claimant-provided information in the claim forms is correct. The MCLTC uses a locally derived claims checklist to ensure that proper information is submitted by the transit systems with their TDA claims. The checklist shows 14 different items that must be presented as a condition of the operator's eligibility for the funds, including current budgets, operations projections, and changes in capital or operating plans. The checklist provides uniformity to the claims process and ensures that adequate information is provided to substantiate the claim for TDA revenues.

Overall, the TDA procedures contained in the *LTC Handbook/Bylaws* are quite basic since the claimants are limited to ESTA, Town of Mammoth, YARTS, and Mono County Social Services. Furthermore, the annual resolutions allocating LTF are methodical and detailed. However, it would be useful to detail in a succinct manner how the TDA is apportioned in Mono County as well as recent changes in the TDA statute. For example, the procedures could summarize the recent changes in TDA legislation under SB 508, Assembly Bill (AB) 1113, AB 90 and AB 149. In addition, it is suggested that the handbook provide a brief outline of the TDA statute articles as shown in the annual allocation resolutions. Claims often reference the article of the statute under which they are filed. These addendums would provide further guidance and clarity in the administration of TDA.

Unmet Transit Needs

The MCLTC appoints the Mono County SSTAC to advise the Commission on transit needs, major transit issues, and coordination of specialized transportation services, particularly during the unmet needs hearing process. Members of the SSTAC are appointed by the Commission in compliance with the membership composition requirements of the TDA (PUC Section 99238). Consistent with the California legislature's intent to avoid duplicative transit advisory councils, the Mono County SSTAC serves as the sole advisory council for regional transit matters within Mono County.

The SSTAC appointees are recruited from a broad representation of social services and transit providers representing the elderly, disabled, and persons of limited means. In appointing members, the Mono LTC strives to attain geographic and minority representation among council members. Some members include representation from such organizations as Disabled Sports Eastern Sierra, First 5, Inyo-Mono Association for the Handicapped, and Mono County Social Services. The membership term is three years and terms are staggered so that roughly one-third of the memberships are up for renewal or reappointment each year.

Unmet transit needs are addressed annually with meetings typically being held anywhere between March and June. An overview meeting is typically held in March/April, followed

by an open public hearing with the SSTAC in April/May, followed by a resolution/adoption meeting in May/June. Additional meetings may be held to meet with the SSTAC to discuss roles and appointments as needed. The ESTA executive director is also involved in the unmet needs of Mono County and will attend meetings and provide feedback to help bridge the gap in determining if meeting certain unmet needs is feasible.

The unmet transit needs definition adopted by the MCLTC pursuant to Resolution 98-01 adopted on June 1, 1998, reads as follows:

The Mono County Local Transportation Commission does hereby define "unmet transit needs" as a need of Mono County elderly, disabled, low income, youth, and other transit dependent groups for transit service that is currently not available and, if provided for, would enable the transit dependent person to obtain the basic necessities of life primarily within Mono County. "Necessities of life" are defined as trips necessary for medical and dental services, essential personal business, employment, social service appointment, shopping for food or clothing, and social and recreational purposes.

The reasonable to meet definition that is defined by the MCLTC reads as:

The Mono County Transportation Commission does hereby define "reasonable to meet" as transit needs for the necessities of life which pertain to all public and/or specialized transportation services that:

a. *Can be proven operationally feasible;*
b. *Can demonstrate community acceptance;*
c. *Would be available to the general public;*
d. *Can be proven to be economical; and*
e. *Can demonstrate cost effectiveness by meeting current fare box revenue requirements of the Mono LTC within two years.*

After these unmet needs are collected from the SSTAC and members of the public, a summary and analysis of the unmet needs is conducted. Each request is qualified as "Qualifying Unmet Needs," "Qualifying Unmet Needs Not Considered to be Reasonable to Meet" or "Not Considered To Be An Unmet Need." Each request includes a brief summary, an explanation of the unmet need it serves, an explanation on its reasonability to meet, and an explanation of costs/action/solutions associated with addressing the unmet need. This analysis is presented to members of the Mono LTC, and a vote is held.

According to the Summary and Analysis of Public Transit Requests for FY 2021-22, there were five qualifying unmet needs and four requests that were not considered to be unmet needs. Out of the five qualifying unmet needs, two were identified as being reasonable to meet, as follows:

- *Long Valley – Extend/add a mid-town Bishop stop to expresses and 395 routes two days a week.*
- *Provide Spanish language services for Eastern Sierra Transit services.*

According to the Summary and Analysis of Public Transit Requests for FY 2022-23, there was one qualifying unmet need, two qualifying unmet needs not considered to be reasonable to meet, and six requests that were not considered to be unmet needs. The one qualifying unmet need was identified as being reasonable to meet, as follows:

- *Continue to provide service to Aspen Village.* (Two individuals made this request separately).

According to the Summary and Analysis of Public Transit Requests for FY 2023-24, there were two qualifying unmet needs and 11 requests that were not considered to be unmet needs. The two qualifying unmet needs were identified as being reasonable to meet, as follows:

- *Add a weekend Reno Airport run; would be helpful.*
- *Better stop alternative than Stop #2 on Old Mammoth Road, especially for those walking from upper Old Mammoth Road.*

Historically, the MCLTC has utilized pilot programs to address unmet needs. The primary challenge of adding new services to address unmet needs is being held to achieve the minimum 10 percent farebox recovery. Pilot programs that prove to be sustainable are continued, such as demand response and lifeline services.

Marketing and Transportation Alternatives

Marketing of public transportation is largely the responsibility of the claimants, as the MCLTC's function is less tied to marketing than the individual operating claimants. The MCLTC does use public outreach, such as holding booths at community events; however, this is on an as-needed basis for feedback on specific projects rather than on a general basis. Marketing for the Town of Mammoth Lakes is largely tied to its tourism rather than the activities specific to the Mono LTC. Mono LTC projects may be highlighted by the Town of Mammoth's marketing efforts; however, direct marketing for the LTC is not a primary focus.

The Commission advertises public meetings to encourage citizen participation; however, because the County's population is widely dispersed, citizen participation is limited. The MCLTC relied on Mono County's Regional Planning Advisory Committees and other community planning groups, along with Planning Commission meetings and the Town of Mammoth Lakes Planning and Economic Development Commission, for outreach to local residents on transportation system needs and issues. In addition to regularly scheduled

citizen advisory committee meetings, the Mono LTC holds public information meetings and workshops to address specific transportation issues, projects, and planning processes.

The Mono LTC has also partnered with Caltrans District 9 to develop methods of outreach for local residents. Caltrans drafted a Public Participation Plan, and similar policies have been included in the most recent RTP. Outreach efforts focus on providing local residents with easier access to information concerning transportation projects in the region in order to increase community participation in the planning process. These efforts have included websites established by both Caltrans and the Mono LTC, in addition to the public information meetings. The Mono LTC also collaborates with the local tribal communities, with outreach conducted periodically with the Bridgeport Indian Colony and Benton Paiute Reservation.

With limited agency resources to conduct marketing and promotion, the primary portal to MCLTC activities and programs is its internet home page and associated links (https://monocounty.ca.gov/ltc). The website features supporting documentation such as the *LTC Handbook/Bylaws*, RTIP, OWP, and RTP. The website also has links to ESTA and YARTS, as well as information on upcoming meetings and past meeting agendas/minutes. Contact information is available online and the website includes an email subscription feature where the public can subscribe to LTC updates.

Pursuant to the federal Civil Rights Act of 1964, a Title VI and Public Participation Plan has been developed and adopted by the Commission. Title VI of the Civil Rights Act of 1964 requires that no person in the United States, on the grounds of race, color, or national origin, be excluded from, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. The current Title VI Compliance Plan was adopted on October 19, 2020. Program compliance includes Title VI notices and complaint forms published in English and Spanish. However, an update has yet to be adopted after more than three years. It is recommended as part of Title VI compliance and best practice that the Title VI Plan be updated and posted on the Commission's website.

Grant Applications and Management

The MCLTC serves as the clearinghouse for federal grant applications that are reviewed to determine whether there is any duplication of effort among agencies and that there is no conflict with local plans and policies. The Commission's role for Mono County is to review and be an integral part of state and federal funding assistance that promotes interjurisdictional coordination among its partner agencies such as Caltrans, ESTA, YARTS, and the local tribal entities.

Although ESTA applies for rural federal funding for operations and capital, the funding application requires certification from the MCLTC as the transportation planning agency

for the programming of funds for the project. A Certifications and Assurances form of the regional agency is executed and filed by the MCLTC. The Commission also has a cooperative grant agreement with the federal Bureau of Land Management to maintain certain roads in Mono County.

The MCLTC generally distributes funds from the TDA, Regional Surface Transportation Program, the State Transportation Improvement Program, and Department of Motor Vehicle fees toward transportation projects. Since ESTA is a subrecipient of Federal Transit Administration grant funding through Caltrans for operations and capital, the MCLTC does not generally monitor such grant awards. ESTA has been effective in identifying grant opportunities and has worked more collaboratively with MCLTC in reporting transit grants and milestones.

MCLTC worked with ESTA in securing SB 125 funding toward zero-emission vehicle procurement. ESTA is considering the implementation of hydrogen fuel cell technology. SB 125 creates approximately $5.1 billion statewide, of new one-time source funding to help address transit providers' operating and capital needs. The funding is distributed through two programs, the Transit and Intercity Rail Capital Program and the Zero Emission Transit Capital Program, over a two-year and four-year period, respectively.

Grant administration has been designated as an element in the OWP. Work Element 400 in the FY 2021-22 OWP pertained to the Sustainable Communities Grants received in 2020 that have been applied to develop an Active Transportation Plan for the June Lake Loop, which identified priority areas for pedestrians and cyclists to walk and bike along or across SR 158, and an update of the ESTA Short Range Transit Plan. In subsequent OWPs, Work Element 400 was designated to support a FEMA/CalOES Hazard Mitigation Planning Grant.

Section V

Findings and Recommendations

The following material summarizes the findings obtained from the triennial audit covering FYs 2022 through 2024. A set of recommendations is then provided.

Findings

1. The Commission satisfactorily complied with applicable state legislative mandates for RTPAs. One requirement was not applicable to Mono LTC operations (determination of farebox recovery ratios for urbanized areas). In relation to other compliance requirements, to its credit, the Mono LTC conducts the annual unmet transit needs process to solicit comment and feedback on potential transit needs, although the TDA only requires an unmet transit needs process when TDA funds could be used for roadway projects.

2. The MCLTC has implemented or is in the process of implementing the prior four audit recommendations. The prior recommendations pertained to the development of a centralized document archive; expounding upon the TDA reserve balance policy; maintaining on file evidence of submission of TDA fiscal and performance audits; and providing an estimate of MCLTC employee time allocation for OWP elements.

3. MCLTC policies and procedures are well documented in Mono County *LTC Handbook/Bylaws,* which was updated in May 2022. The handbook provides a detailed overview of the MCLTC background and purpose, organization structure, and administrative structure and duties, as well as its procedures for TDA funding allocation and development of the RTP, RTIP, and OWP. The document also contains supporting appendices such as the staffing MOU and TDA reporting dates.

4. The MCLTC develops an OWP annually, which includes a budget and tasks outlining the transportation planning activities for the coming year. The OWP is prepared in accordance with annual guidance provided by Caltrans and serves several functions including as a comprehensive listing of transportation planning activities in Mono County; a convenient regional transportation planning reference document for MCLTC partners and members of the public; the MCLTC's proposal to program and use RPA funds; and the basis of a contract with the state for use and disbursement of RPA funds.

5. The Commission embarked on an update to the Mono County RTP during the audit period. The 2024 Mono County RTP, adopted in December 2024 after the current audit period, succeeded the 2019 Mono County RTP. This is a collaborative effort

between the Mono County LTC, Mono County Community Development Department, Mono County Public Works Department, Town of Mammoth Lakes Community Development Department, and Town of Mammoth Lakes Public Works Department. Each jurisdiction is responsible for delivering their plans, which are rolled up into the RTP. The time horizon for the RTP is a 20-year period and the plan is updated every four years. The plan is intended to achieve a coordinated and balanced regional transportation system of all travel modes.

6. Mono County and the Town of Mammoth Lakes have provided staff services of the MCLTC via an MOU. The MOU provides for planning services, staff, and administrative support for the MCLTC to fulfill the requirements of the California TDA, accomplish the mandated functions of the MCLTC, and carry out the annual OWP.

7. On an annual basis, the MCLTC was responsible for managing the apportionment of between $821,000 and $876,000 in LTF revenues and between $229,132 and $391,454 in STA funds. The MCLTC claims a fixed amount of $30,000 annually for TDA administration and planning and generally sets aside no less than 5 percent or more than 15 percent of annual allocations in reserve unless funds are set aside for a specific purpose such as a grant match. As of FY 2024, the LTF reserve balance was over $1 million.

Triennial Audit Recommendations

1. Expound upon the TDA Fund Procedures in the *LTC Handbook/Bylaws*.

The *LTC Handbook/Bylaws* was updated in May 2022 to provide clarification and guidance on the LTF reserve policy. Overall, the TDA procedures contained in the handbook are quite basic since the claimants are limited to Eastern Sierra Transit Authority, Town of Mammoth, Yosemite Area Regional Transportation System, and Mono County Social Services. Furthermore, the annual resolutions allocating LTF are methodical and detailed. However, it would be useful to detail in a succinct manner how the TDA is apportioned in Mono County as well as to incorporate any relevant legislative changes in the TDA statute. For example, the procedures could summarize how the changes in the TDA statute under Senate Bill 508, Assembly Bill (AB) 1113, AB 90, and AB 149 are applicable to Mono County. In addition, it is suggested that the handbook provide a brief outline of the TDA statute articles as shown in the annual allocation resolutions. Claims often reference the article of the statute under which they are filed. These addendums would provide further guidance and clarity in the administration of TDA.

2. Update the Title VI Plan.

Pursuant to the federal Civil Rights Act of 1964, the Commission develops and adopts a Title VI and Public Participation Plan. Title VI of the Civil Rights Act of 1964 requires that no person in the United States, on the grounds of race, color, or national origin, be excluded from, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. Title VI plans are generally updated every three years. The current Title VI Compliance Plan was adopted on October 19, 2020. Program compliance includes Title VI notices and complaint forms published in English and Spanish. However, an update has yet to be adopted after more than three years. It is recommended as part of Title VI compliance and best practice that the Title VI Plan be updated and posted on the Commission's website.

April 14, 2025

STAFF REPORT

Subject: Low Carbon Transit Operations Program FY 2024-25 Funds
Initiated by: Phil Moores, Executive Director

BACKGROUND:

The Low Carbon Transit Operations Program (LCTOP) is one of several programs that are part of the Transit, Affordable Housing, and Sustainable Communities Program established by the California Legislature in 2014 by Senate Bill 862. The LCTOP was created to provide operating and capital assistance for transit agencies to reduce greenhouse gas emission and improve mobility, with a priority on serving disadvantaged communities. Approved projects in LCTOP will support new or expanded bus or rail services, expand intermodal transit facilities, and may include equipment acquisition, fueling, maintenance and other costs to operate those services or facilities, with each project reducing greenhouse gas emissions. For agencies whose service area includes disadvantaged communities, at least 50 percent of the total moneys received shall be expended on projects that will benefit disadvantaged communities. Disadvantaged community in this program is focused on air quality, not income. Mono County does not have any disadvantaged communities as defined in the LCTOP program.

This program is administered by Caltrans in coordination with Air Resource Board (ARB) and the State Controller's Office (SCO). The California Department of Transportation (Caltrans) is responsible to ensure that the statutory requirements of the program are met in terms of project eligibility, greenhouse gas reduction, disadvantaged community benefit, and other requirements of the law.

ANALYSIS/DISCUSSION:

Funding to the LCTOP is slightly less than prior FY 23-24 where ESTA received $136,035. $132,121 is available in FY 24-25.

Eastern Sierra Transit is requesting FY 2024-25 LCTOP funds from both the Inyo and Mono County LTCs to fund two projects: The purchase of an additional electric paratransit vehicle and supporting infrastructure to be used in Bishop Dial-a-Ride service. This is year 4 of 4 for that the Inyo County LCTOP funds that have been reserved for this vehicle. For Mono County this will be the second year that the LCTOP funds will be reserved to purchase an electric Trolley to be used in the Town of Mammoth.

Both vehicles will be fully ADA accessible. Each project will utilize four years of LCTOP roll over funding, vouchers and incentives funds. The Inyo County vehicle is

anticipated to be purchased in 2026. The Mono County electric trolly is anticipated to be purchased in 2028.

FINANCIAL CONSIDERATIONS:

The (LCTOP) provides formula funding for approved operating and capital assistance for transit agencies to reduce greenhouse gas emissions and improve mobility. The allocation of funding from the State Controller's office for the Eastern Sierra Region totals $132,121. The Section 99314 funds allocated to Eastern Sierra Transit are based primarily on ridership and fares received during the previous fiscal year.

Mono County (99313)	$ 33,242
Eastern Sierra Transit Authority (99314)	$ 50,142
Inyo County (99313)	$ 48,737
Total	$132,121

PROJECT COSTS:

The proposed costs for the projects are below.

Mono County Electric Trolley	$ 83,384
Inyo County Dial-a-Ride Electric Vehicle	$ 48,737
Total	$132,121

RECOMMENDATION

It is recommended that the Mono LTC approve and write a letter of support (Attachment 1) allocating $83,384 of FY 2024-25 Low Carbon Transit Operations Program (LCTOP) funds for the purchase of an electric vehicle and infrastructure, and to authorize the Eastern Sierra Transit Authority's Executive Director to complete and execute all documents for the Low Carbon Transit Operations Program submittal, allocation requests, and required reporting.

Attachments:

1. Letter of support

Mono County
Local Transportation Commission

PO Box 347
Mammoth Lakes, CA 93546
760.924.1800 phone, 924.1801 fax
commdev@mono.ca.gov

PO Box 8
Bridgeport, CA 93517
760.932.5420 phone, 932.5431 fax
www.monocounty.ca.gov

April 14, 2025

LCTOP Program Manager,

This letter is to confirm that Mono County LTC on April 14, 2025, voted to allocate all FY24-25 LCTOP funds in the amount of $83,384 to Eastern Sierra Transit's purchase of an electric vehicle and infrastructure, and to authorize the Eastern Sierra Transit Authority's Executive Director to complete and execute all documents for the Low Carbon Transit Operations Program submittal, allocation requests, and required reporting.

Please let me know if you have any questions. I can be reached at 760.924.1814 or via email at wsugimura@mono.ca.gov.

Sincerely,

Wendy Sugimura
Co-Executive Director Mono County LTC

Mono County
Local Transportation Commission

PO Box 347
Mammoth Lakes, CA 93546
760.924.1800 phone, 924.1801 fax
commdev@mono.ca.gov

PO Box 8
Bridgeport, CA 93517
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Staff Report

TO: Mono County Local Transportation Commission

DATE: April 14, 2025

FROM: Olya Egorov, Planning Analyst and LTC Staff

SUBJECT: Caltrans Comments on the FY 2025-2026 Overall Work Program (OWP) Draft

RECOMMENDATIONS
Review Caltrans comments on the FY 2025-2026 Overall Work Program (OWP) Draft, provide any further comments, and provide direction to staff.

DISCUSSION
On March 10, 2025, the Mono County Local Transportation Commission (LTC) reviewed the FY 2025-2026 OWP Draft and provided feedback. Following the meeting, LTC staff incorporated comments and prepared a preliminary budget that were included in the submission to Caltrans (available online at https://www.monocounty.ca.gov/sites/default/files/fileattachments/local_transportation_commission_ltc/page/4312/4b-1_25-26_owp_draft_for_feb_ltc_02-10-25.pdf).

On April 2, 2025, the Mono County LTC received a Comment Letter from Caltrans (Attachment 1). LTC staff reviewed the comments and responded in the FY 2025-2026 OWP Matrix from Caltrans (Attachment 2). No changes were made to the preliminary budget.

The edits proposed in the matrix will be incorporated into the next version of the OWP along with any other comments from Commissioners, stakeholders, and members of the public. The Commission will consider adoption of the FY 25-26 OWP at the May 12 meeting. The adopted version is due to Caltrans by June 30, 2025.

Please contact Olya Egorov (oegorov@mono.ca.gov or 760-924-1802) with any questions.

ATTACHMENTS
1. FY 2025-2026 OWP Comment Letter from Caltrans
2. FY 2025-2026 OWP Matrix from Caltrans

California Department of Transportation

DISTRICT 9
500 SOUTH MAIN STREET | BISHOP, CA 93514
(760) 874-8330 | FAX (760) 872-0678 TTY 711
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April 2, 2025

Wendy Sugimura
Co-Executive Director
Mono County Local Transportation Commission
PO Box 347
Mammoth Lakes, CA 93546

Dear Wendy Sugimura:

Thank you for the opportunity to review the Mono County Local Transportation Commission's (LTC) Draft Overall Work Program (OWP) for Fiscal Year (FY) 2025-26. The California Department of Transportation (Caltrans) has the following comments:

General Comments

- Caltrans commends the Mono County Local Transportation Commission (MCLTC) for detailing the agency's multimodal transportation planning activities and coordination efforts in the region.
- MCLTC is commended for highlighting its FY 2024-25 OWP accomplishments.
- MCTC is also commended for including the section on Planning Emphasis Areas.
- No carryover is estimated in the BRS and Work Elements. Please ensure that you estimate carryover funds. To avoid losing funds, it is important for agencies to program, monitor, and spend the oldest carryover funds first.

Work Element Specific Comments

- **Page 5, First Paragraph – Please separate '2024' and 'Regional.'**
- **Page 6, Third Bullet** – Please spell out what the acronym 'CIP' stands for here, rather than in the 4th bullet, since this is the first time the acronym is used. Please check your acronyms.
- **Page 14 –** For Q3, please drop it down one line for consistency.
- **Page 33, Bullets 3 and 4 –** 2A and 2C.2 do not appear to tie into the stated purpose above and do not have any deliverables.
- **Pages 35, 43, and 44 –** Is it your intent to not have any funding for this?

WE 200.2 Regional Transportation Planning Monitoring

- MCLTC is commended for conducting analysis, drafting informational documents, and analyzing legislation in support of its planning activities.
- (Page 22) Please note that RPA funds are ineligible for Tasks involving advocacy or lobbying efforts. These activities should be separated from general analysis and other eligible activities and identify another funding source. Please revise as needed.

WE 900.2 Regional Data Collection

- (Page 38) The previous work section of WE 900.2 appears to be the same as the prior year OWP. If progress has been made on this work element, please update the Previous Work Section to reflect activities completed in FY 24-25.
- (Page 39) In Tasks Elements, please revise and identify tasks to be completed by a consultant in support of the Expected Product, "management of existing data collection services.

WE 900.5 Air Quality Monitoring and Planning – Town of Mammoth lakes

- (Page 44) The Funding table seems to be incomplete, as it does not identify funds. Please update as needed.

Caltrans Local Development Review Branch

- Please consider using the Caltrans TDM Toolbox for suggestions on implementing active transportation strategies. Referencing these tools can support the RTPA's efforts in the overall work program.

Reminders

Final OWP package is due to Caltrans by June 16th, 2025. The following items must be included in the final OWP package:

- The comment matrix with the agency comments/response section was completed, acknowledging Caltrans comments on the draft OWP. The response needs to demonstrate where Caltrans's comments were addressed within the Final OWP.
- Electronically signed Overall Work Program Agreement (OWPA)
- Budget Revenue Summary (BRS)
- Board Resolution approving the OWP
- Electronically signed Certifications and Assurances
- Final OWP and Appendices

If you have any questions or concerns, please contact Rick Franz at rick.franz@dot.ca.gov, or 760-874-8322.

Sincerely,

Catherine E. Carr

Catherine Carr
Acting Planning Branch Supervisor
Division of Planning and Environmental
Caltrans, District 9

C: Jill Tognazzini, Acting Planning and Modal Programs Manager, Caltrans, District 9.
Camilo Juarez, HQ Regional Planning Liaison, Caltrans.
Neil Dixon, HQ Regional Planning Liaison, Caltrans.

FY 25-26 Draft OWP Comment Matrix – Mono County Local Transportation Commission (LTC)

Comment	From	Addressed?	MPO Notes	Caltrans Review
General Comments:				
• Caltrans commends Mono County Local Transportation Commission (MCLTC) for providing detailing the agency's multimodal transportation planning activities and coordination efforts in the region. • MCLTC is commended for highlighting its FY 2024-25OWP accomplishments. MCTC is also commended for including the section on Planning Emphasis Areas. • No carryover is estimated in the BRS and Work Elements. Please make sure to estimate carryover funds. To avoid losing funds, it is important for agencies to program, monitor, and spend the oldest carryover funds first.	HQ, D9		• The Mono County LTC appreciates the commendations. • The carryover amount is not determined until FY 24-25 closure in late August. A formal amendment will be completed in FY 25-26 to include and program the carryover amount once it is known.	

FY 25-26 Draft OWP Comment Matrix – Mono County Local Transportation Commission (LTC)

Comment	From	Addressed?	MPO Notes	Caltrans Review
Specific Work Elements Comments:				
Page 2 Second Paragraph- it says Los Angeles Department of Water and Power (LADWP) owns public lands. LADWP is a private entity.	D9		LADWP is a department of the City of Los Angeles and therefore a government entity, which the Mono County LTC considers to be public land. Mono County and the LTC do not have jurisdictional authority over LADWP uses related to its utility function of providing water and power.	
Page 5 First Paragraph – Please separate 2024 and Regional.	D9		This edit has been made.	
Page 6 Third Bullet – please spell out what the acronym CIP stands for here rather than in the 4th bullet since this is the first time the acronym is used. Please check your acronyms.	D9		This edit has been made.	
Page 14 – For Q3, please Drop it down 1 line for consistency.	D9		This edit has been made.	
Page 33, Bullets 3 and 4 – 2A and 2C.2 do not appear to tie into the stated Purpose above and do not have any deliverables.	D9		These policies have been removed.	
Pages 35, 43, and 44 – Is it your intent to not have any funding for this?	D9		Correct, however the work elements should remain in the OWP. Funds may be shifted to these activities if other budget sources fall through, other projects cost	

FY 25-26 Draft OWP Comment Matrix – Mono County Local Transportation Commission (LTC)

Comment	From	Addressed?	MPO Notes	Caltrans Review
			less than estimated, or unforeseen priorities arise.	
WE 200.2 Regional Transportation Planning Monitoring • MCLTC is commended for conducting analysis, drafting informational documents and analyzing legislation in support of its planning activities.. • (Page 22) Please note that RPA funds are ineligible for Tasks involving advocacy or lobbying efforts. These activities should be separated from general analysis and other eligible activities, and identify another funding source. Please revise as needed.	HQ		• The Mono County LTC appreciates the commendation. • The language has been modified to read, "…transportation legislation, which includes feedback on rural issues and needs."	
WE 900.2 Regional Data Collection • (Page 38) The previous work section of WE 900.2 appears to be the same as the prior year OWP. If progress has been made on this work element, please update Previous Work Section to reflect activities completed in FY 24-25. • (Page 39) In Tasks Elements, please revise and identify tasks to be completed by consultant	HQ, D9		• The Previous Work Section in WE 900.2 has been updated. • The task elements have been revised to indicate which tasks will be completed by consultants.	

FY 25-26 Draft OWP Comment Matrix – Mono County Local Transportation Commission (LTC)

Comment	From	Addressed?	MPO Notes	Caltrans Review
in support of the Expected Product, "management of existing data collection services.				
WE 900.5 Air Quality Monitoring and Planning – Town of Mammoth lakes (Page 44) The Funding table seems to be incomplete, as it does not identify funds. Please update as needed.	HQ, D9		Funds allocated to this work element are minimal (historically $500). If other work element come in under budget, funding may be shifted to this work element at a later date.	
Caltrans Local Development Review Branch Please consider using the Caltrans TDM Toolbox for suggestions on implementing active transportation strategies. Referencing these tools can support the RTPA's efforts in the overall work program.	LDR		Thank you for the reference. The LTC will review the toolbox and consider the relevant strategies.	

Mono County
Local Transportation Commission

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LTC Staff Report

TO: Mono County Local Transportation Commission

DATE: April 14, 2025

FROM: Erin Bauer

SUBJECT: California Rural Counties Task Force: *Rural Induced Demand Study*, February 2025

RECOMMENDATIONS: Receive information, provide staff with any desired direction.

FISCAL IMPLICATIONS: N/A

ENVIRONMENTAL COMPLIANCE: N/A

RTP / RTIP CONSISTENCY: N/A

DISCUSSION: In February, the California Rural Counties Task Force (RCTF) published a Rural Induced Demand Study. Rural transportation agencies and counties have been pointing out for a long time that state funding criteria don't accommodate rural settings, and this study provides more substantive data and analysis in support of that position. Highlights and conclusions of the RCTF study will be presented.

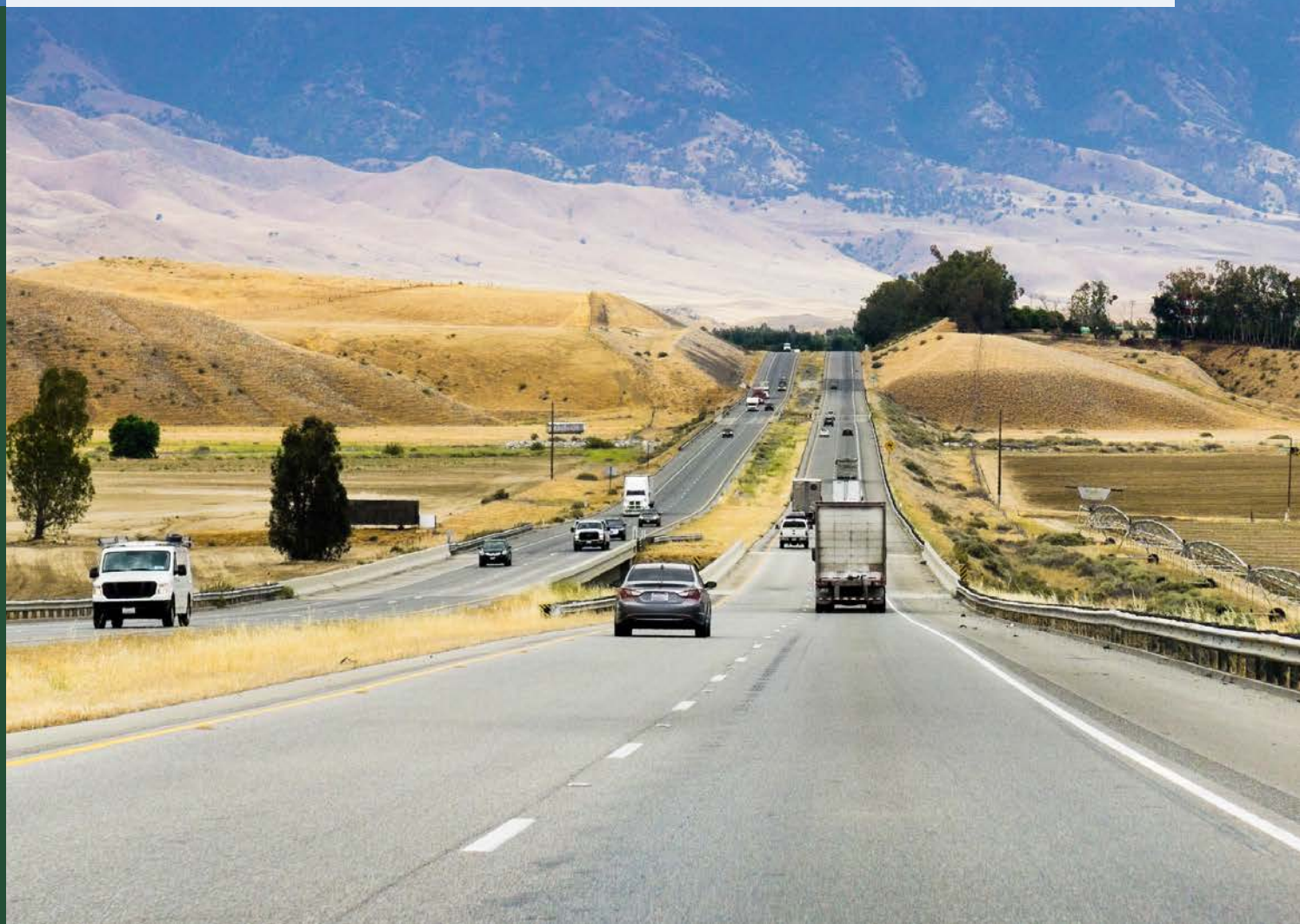
Attachments:

- California Rural Counties Task Force. *Rural Induced Demand Study*. February 2025

CALIFORNIA RURAL
COUNTIES TASK FORCE

RURAL INDUCED DEMAND STUDY

FEBRUARY 2025



ACKNOWLEDGMENTS

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Dr. Anurag Pande
Professor California Polytechnic State University, San Luis Obispo

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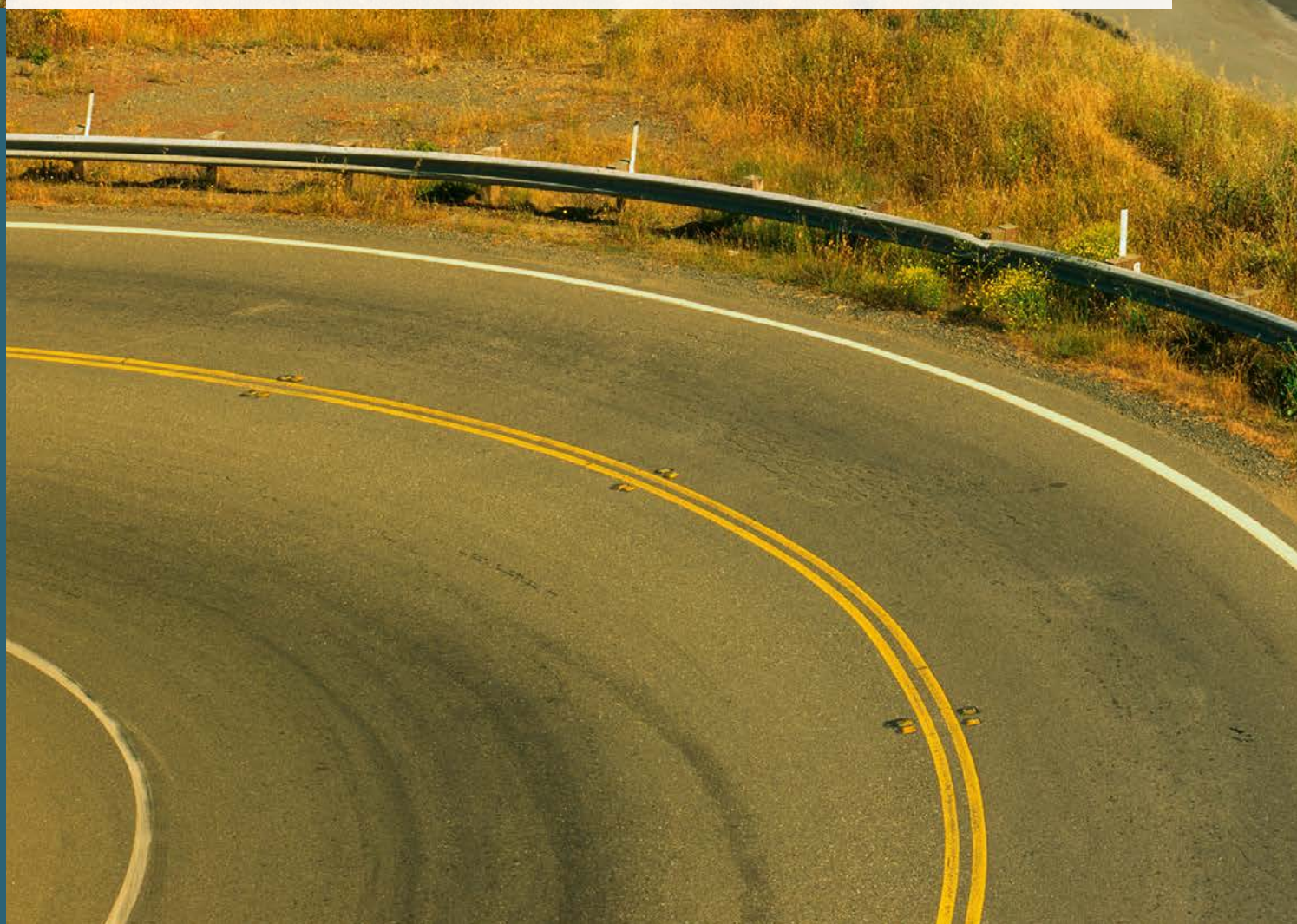
LIST OF ACRONYMS

APS	Alternative Planning Strategy
AADT	Annual Average Daily Traffic
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CALSTA	California State Transportation Agency
CTC	California Transportation Commission
CSIS	Caltrans System Investment Strategy
CBD	Central Business District
CMS	Changeable Message Sign
CAPTI	Climate Action Plan for Transportation Infrastructure
CCTV	Closed-Circuit Television
CMCP	Comprehensive Multimodal Corridor Plan
CMF	Crash Modification Factor
EIR	Environmental Impact Report
EO	Executive Order
FHWA	Federal Highway Administration
GHG	Greenhouse Gas
HOT	High Occupancy Toll
HOV	High Occupancy Vehicle
HPMS	Highway Performance Monitoring System
HH	Household
IIJA	Infrastructure Investment and Jobs Act
INFRA	Infrastructure for Rebuilding America
LLPC	Local Partnership Competitive Funds
MSA	Metropolitan Statistical Area
MPO	Metropolitan Transportation Planning Organization
MPDG	Multimodal Project Discretionary Grant
NCST	National Center for Sustainable Transportation
NPTS	Nationwide Personal Transportation Survey
NAS	Naval Air Station
OPR	Office of Planning and Research
HPMS	Performance Monitoring System
PROTECT	Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation Program
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RCTF	Rural Counties Task Force
SB	Senate Bill
SCCP	Solutions for Congested Corridors
SHS	State Highway System
SR	State Route
SCS	Sustainable Community Strategy
TCEP	Trade Corridor Enhancement Program
TAF	Transportation Analysis Framework
TAC	Transportation Analysis under CEQA
TDM	Travel Demand Model
TIGER	Transportation Investment Generating Economic Recovery
TMS	Transportation Management System
TNC	Transportation Network Company
VMT	Vehicle Miles Traveled

EXECUTIVE SUMMARY



EXECUTIVE SUMMARY

In response to California Senate Bill (SB) 743 (Steinberg, 2013)[1] and the guidance issued by the Office of Planning and Research (OPR), California Department of Transportation (Caltrans) has determined that Vehicle Miles Traveled (VMT) is the most appropriate metric for determining transportation impacts for capacity-increasing transportation projects on the State Highway System (SHS). When evaluating transportation impacts on the SHS, the Caltrans' Transportation Analysis Framework (TAF) guidelines require evaluating the "Induced Travel," or the overall change in VMT attributable to the individual transportation project. Guidelines, such as the Caltrans' TAF and the Climate Action Plan for Transportation Infrastructure (CAPTI) by the California State Transportation Agency (CALSTA), emphasize reducing VMT by supporting projects that do not significantly induce additional demand. However, the guidelines and the tools recommended to estimate the induced VMT may not appropriately address rural contexts and could potentially limit the competitiveness of rural projects for state funding programs.

The Rural Induced Demand Study was commissioned by the California Rural Counties Task Force (RCTF) in response to concerns regarding the State guidance on the implementation of SB 743, in particular, the emphasis on induced demand as a likely outcome of road improvement projects. The RCTF was formed in 1988 in partnership with California Transportation Commission (CTC) to serve as an advisory body to the CTC and to ensure rural agencies remain engaged and have a unified voice when addressing state and federal transportation funding and policy decisions. There are 26 rural county Regional Transportation Planning Agencies (RTPAs) represented on the RCTF.

The Rural Induced Demand Study aims to determine the extent to which induced demand occurs in rural areas. The study also makes recommendations for whether and how this phenomenon should be reflected in environmental analyses of road projects in rural areas or factor into funding decisions at the State or regional level.

IS THE CURRENT VMT GUIDANCE SUITABLE FOR RURAL AREAS?

The SHS includes roads in a wide variety of contexts (i.e., rural, suburban, and urban area types). Existing state guidance and some tools recommended by Caltrans for use in estimating induced VMT have their basis in research performed in congested urbanized areas. As a result, they may not appropriately address rural contexts and could consequently limit the competitiveness of rural projects for state funding programs by overstating their potential California Environmental Quality Act (CEQA) impacts and/or climate implications. The lack of research on induced travel demand specific to rural areas creates a challenge for policymaking, as the underlying studies on induced demand often fail to consider the location and context of rural highway corridors relative to the causal factors for inducing VMT.

1 California Senate Bill (SB) 743 (Steinberg, 2013), which was codified in California Public Resources Code section 21099, required changes to the California Environmental Quality Act (CEQA) Guidelines (Cal. Code Regs., Title 14, Div. 6, Ch. 3, § 15000 et seq.) regarding the analysis of transportation impacts.

When examining transportation projects in rural areas, it is important to consider the following characteristics that can elicit different travel demand responses relative to more urbanized areas.

- Many rural highway corridors lack significant levels of congestion; i.e., the latent demand from which induced travel arises does not exist for these corridors.
- The focus of rural transportation improvements (i.e., purpose and need) is often on safety, reliability, goods movement, or evacuation — not congestion relief.
- Rural congestion is often related to seasonal or holiday traffic.
- Improvements at individual sites usually do not significantly reduce travel times for rural trips, which tend to be relatively uncongested and greater in distance.
- Rural motorists face limited choices in destinations and routes, so destination and route choices are less likely to change whether improvements are made or not.
- The demand for land development is typically much lower in rural areas than in urban areas.
- Rural areas are typically not well served by public transit.
- Mode shift away from transit to new road facilities is not anticipated as transit ridership in rural areas is heavily influenced by factors like car ownership and personal preference, and not congestion.

THE RURAL INDUCED DEMAND STUDY

The purpose of this study is:

1. To review the extent to which induced VMT or induced travel demand, as a consequence of added roadway capacity, is observed in rural areas; and,
2. To formulate recommendations for whether and how induced VMT should be considered for transportation projects in rural areas in environmental impact analyses and/or factored into transportation funding decisions at the State or regional levels.

This report reviews academic research on induced demand; reviews state guidance that includes considerations of induced demand; identifies and evaluates case studies of past projects' actual effects; and, provides technical recommendations on estimating induced VMT for highway improvement projects in rural areas.

Although the focus of this study is on rural areas, its applicability spans rural, suburban, and urban settings. As such, many of the study findings and recommendations are indifferent to area type. However, the factors that drive induced demand are typically more common in urbanized areas.

LITERATURE REVIEW REVEALS BETTER METHODS TO ESTIMATE INDUCED DEMAND

An extensive literature review was performed as part of this study. The findings of the literature review suggest that over-reliance on systematic review studies appear to have marginalized crucial contextual information from the precedent studies. This leads to distortions in the conclusions – in this case, causal factors associated with induced travel demand. Examples of how distortions can inadvertently occur include:

- Referencing a demand elasticity without including caveats, qualifications, and context that appear in the original work.
- Not fully recognizing or citing relevant additional causal factors and findings from the original research beyond the road capacity elasticity for induced travel demand referenced in the review studies.

- Marginalizing findings specifically relevant to rural areas from the original research.

This literature review highlights numerous relevant findings that haven't been incorporated into current guidance, which are essential for policymaking.

- **Lane miles are an imperfect proxy for travel time savings** – The primary factor that drives induced travel demand is a reduction in travel time. In the absence of congestion, additional capacity does not significantly reduce travel time. Lane miles and capacity have been used in induced travel demand studies as a proxy for travel time savings as it is much easier to obtain than historical data on congested and free-flow travel times.
- **Estimates of induced travel demand declined over time** – There appears to be a declining trend in the estimated elasticities for induced travel demand over time. Two reasons for this appear to be:
  - » **In the literature:** As other factors besides added capacity were increasingly controlled for, the residual effect of road capacity attributable to induced demand diminished.
  - » **In the field:** Induced travel demand as a consequence of road capacity appears to be declining as decades of increasing regulation on land development have limited the land development market's ability to respond to changes to the road system.
- **Only <u>significant</u> reductions in travel times change travel behavior** – Traveler interview surveys found that travel times would have to be reduced by at least 15 minutes to have any appreciable effect on destination and route choice. Based on computational experiences, travel time saving in this order of magnitude typically occurs for large capital improvement projects associated with highly congested corridors in primarily urban settings.

Interviews with drivers and developers challenge the assumed mechanisms behind induced demand. Contrary to the belief that drivers change behavior in response to traffic conditions, research suggests they are not highly responsive to small changes. Similarly, developers prioritize factors like cheap land and access to the roadway system, showing limited concern for congestion levels.

> "WHILE THE EXPANSION OF I-580 IS SEEN AS A BONUS TO DEVELOPERS IN THE AREA, **ALL INDICATE THAT THEIR PROJECTS WOULD STILL HAVE BEEN CONSTRUCTED IN THE ABSENCE OF THE FREEWAY IMPROVEMENT."**
>
> ***(HANSEN, GILLEN, AND DOBBINS, 1993)***

The literature review also suggests that change in the workforce could be a significant factor influencing travel behavior. The reviewed studies seldom control for labor force participation, leading to incorrect attributions of increased VMT to induced demand as a result of added road capacity.

- Most of the studies controlled for population and income, but very few controlled for the number of workers.
- There is a big difference in the VMT effect between household income increases associated with wage growth versus household income increases associated with an increase in the number of wage earners per household.

- Observed periods of rapid increase in VMT per capita correlate closely with the increase in dual-income households. This factor appears unaccounted for to a significant degree in the studies that have informed State policy, regulation, and guidance.

The literature review includes numerous examples of studies suggesting that it is improper to develop a tool based on the aggregate elasticity-based approach, such as the Induced Travel Calculator developed by the National Center for Sustainable Transportation (NCST), for project-level analysis. Examples of this include:

> "SIMPLE MODELS OF THE KIND PRESENTED HERE CANNOT SUPPLANT THE DETAILED ANALYSES NEEDED TO EVALUATE SPECIFIC PROJECTS. **IT SHOULD NOT BE ASSUMED THAT THE AGGREGATE ELASTICITIES OBTAINED IN OUR ANALYSIS APPLY EQUALLY TO EVERY URBAN REGION, LET ALONE TO ANY PARTICULAR PROJECT."**
>
> ***(HANSEN AND HUANG, 1997)***

Based on the comprehensive review of the literature and research on induced travel demand, the following conclusions can be made:

- A reliance on systemic review studies appears to have contributed to guidance that is to some extent contradicted by empirical evidence, including findings from the original research contained in the review study.
- The causal relationship between increases in road capacity and induced travel demand is more tenuous than suggested by State guidance.
- The theory and empirical observations collectively suggest that lane miles is a relatively poor proxy for induced travel demand, regardless of area type, when compared to a reduction in travel time.

INDUCED VMT SENSITIVITY ANALYSIS

While various regulatory bodies and competitive transportation grant programs acknowledge the importance of assessing induced VMT, there remains a gap in clear guidance for rural counties. The TAF indicates that the use of the NCST Calculator is not applicable to the rural regions outside of a Metropolitan Statistical Area (MSA) or Metropolitan Transportation Planning Organization (MPO) boundary; however, the use of the NCST Calculator is recommended in rural areas within MSA or MPO boundaries to estimate induced VMT. Although two sets of independent panels validated the methodology for the NCST Calculator, a validation of the tool itself was never performed. NCST considered three validation procedures for the Calculator. Ultimately, none of the three validation approaches were performed based on data quality concerns or the lack of data.[1]

To assess the Calculator's sensitivity to rural projects, a comparative exercise was performed analyzing the outcomes of past projects against the tool's predictions (i.e., direct comparisons of VMT before and after road capacity expansion).

1 Presentation by Jamey Volker, Postdoctoral Researcher, ITS-UC Davis, to the Caltrans SB 743 Implementation Working Group, on September 7, 2022.

The analysis revealed several discrepancies between historical observations and the NCST Calculator outputs, with the NCST Calculator consistently contributing to an overestimation in VMT regardless of whether the improvement was located in a non-MSA county or an MPO region.

Notably, the overestimation persisted irrespective of the forecast period, although the magnitude of these errors tended to decrease over time. Small capacity increases typically resulted in relatively small overestimates of induced VMT, wherein larger projects exhibited even greater discrepancies suggesting an oversensitive response by the NCST Calculator. Three of the fifteen study projects were selected for a more comprehensive examination of causal factors.

INDUCED DEMAND ANALYSIS RECOMMENDATIONS

Based on a comprehensive review of literature and research findings, the primary recommendations of this study are:

- Aggregate elasticity-based methods (like the NCST Calculator) should be used with caution for CEQA Project Level Analysis (Rural or Urban). The use of such methods for project-level analysis is not supported by the literature and generally lacks the requisite context and specificity required for CEQA project-level analysis.
- Capacity-increasing projects that do not exhibit the following requisite conditions for an induced effect should not be analyzed for induced effects or penalized by grant funding scoring criteria, Caltrans CSIS criteria, or funding decisions by the CTC or other State agencies.
  - » Presence of significant recurring congestion resulting in latent demand;
  - » Improvement has the potential to yield significant travel time savings (15 minutes or more per motorist); and,
  - » Increases access to existing or future marketable/developable land (i.e., land not constrained by topography or regulation).
- For programmatic regional analyses (i.e., programmatic Environmental Impact Report (EIR) and Sustainable Community Strategy (SCS) analyses), the application of the NCST Calculator should be predicated on whether the factors that cause induced demand resulting from capacity increases are present (per proposed screening presented in the report). If factors are present, hybrid approaches are proposed that appropriately temper the application of an NCST-type elasticity approach based on the potential for a short- and/or long-term induced demand response to new roadway capacity relative to the availability of a validated travel demand model or other more sophisticated modeling approaches (travel model with feedback to a land use allocation model).

> "THE ANALYSIS PRESENTED HERE USES AGGREGATE STATE-LEVEL TIME-SERIES DATA TO DETERMINE RELATIONSHIPS TO VMT. THE ANALYSIS IN THIS PAPER DOES NOT IMPLY THAT ANY SPECIFIC PROJECT WILL GENERATE ADDITIONAL TRAFFIC. **OBVIOUSLY SPECIFIC PROJECT LEVEL ANALYSIS IS NEEDED TO ASSESS IMPACTS OF SPECIFIC TRANSPORTATION PLANS."**
>
> ***(NOLAND 1998)***

RECOMMENDATIONS TO UPDATE STATE GUIDANCE DOCUMENTS

The study proposes a recommended approach for estimating induced VMT regardless of area type (rural or urban). These findings and recommendations strongly support the need to amend or revisit existing state guidance documents.

- The CAPTI should consider expanding the list of appropriate improvement projects to include rural area projects that are not deemed likely to induce VMT. This includes roadway capacity-increasing projects with societal co-benefits (e.g., greater accessibility to needed services and facilities, evacuation, etc.).
- Guidance in the California Regional Transportation Plan (RTP) Guidelines for validating and calibrating regional travel demand models (TDM) should be updated to be more sensitive to addressing induced VMT. The RTP Guidelines should include guidance regarding if and how the NCST Calculator should be used in conjunction with a travel demand model. The Guidelines should also provide guidance for performing dynamic validation of modeling processes that include a feedback mechanism between the travel demand model and a land use allocation model.
- Lastly, the OPR CEQA SB 743 Implementation Guidance and Caltrans TAF and TAC should also be amended to incorporate the findings and recommendations from this study.

RECOMMENDATIONS TO UPDATE NCST CALCULATOR

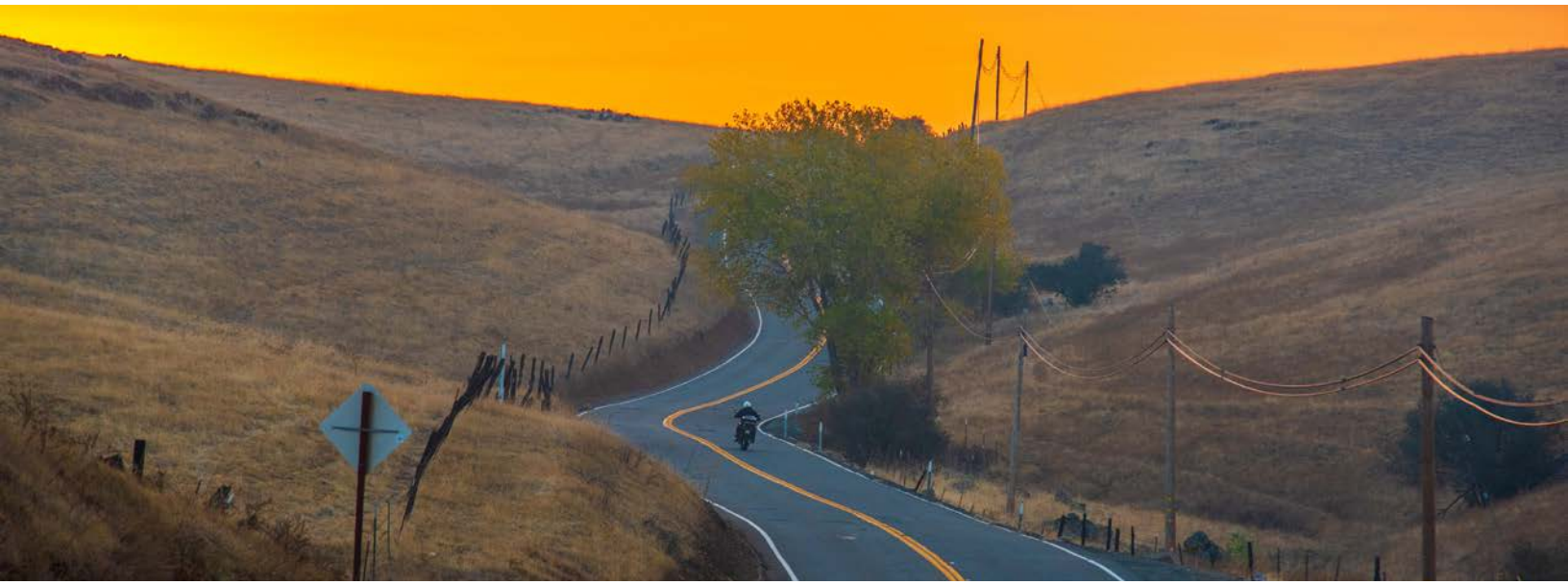
The following steps are recommended for improving the applicability of the NCST tool:

- **Flexible Interface:** Develop a more interactive user interface that allows the analyst to input which induced demand effects and elasticity values are appropriate for a given analysis context. This would allow the analyst to exclude components of induced demand deemed inappropriate for a given analysis (i.e., goods movement) or are already addressed through travel demand modeling.
- **Context-Specific Elasticities:** Develop a more nuanced approach that incorporates context-specific elasticity values. To improve accuracy, recognize regional variations and project-specific conditions.
- **Incorporate Travel Time Changes:** Enhance the tool to factor in changes in travel time/cost more explicitly. Consider using analytical tools (demand or simulation models) that can capture the impact of travel time reductions or increases due to the project.
- **Account for Latent Demand:** Improve the estimation of latent demand by including more detailed data on potential users who are not currently traveling due to existing congestion (Origin-Destination analysis—big data or demand models).
- **Validation and Calibration:** Regularly validate and calibrate the tool against real-world data and outcomes from completed projects. This will help ensure that the tool remains accurate and reliable over time.

By implementing these recommendations, the NCST Calculator can provide more contextually relevant estimates of induced VMT, although the sole use of an elasticity-based approach should be limited to a program-level evaluation whenever possible.

1 >
INTRODUCTION

1.0. INTRODUCTION



In response to Senate Bill (SB) 743 and the guidance issued by the Office of Planning and Research (OPR), Caltrans has determined that VMT is the most appropriate metric for determining transportation impacts for capacity-increasing transportation projects on the State Highway System (SHS). When evaluating transportation impacts on the SHS, Caltrans guidelines require evaluating the "Induced Travel," or the overall change in VMT attributable to the individual transportation project. Caltrans Transportation Analysis Framework guidelines and the CALSTA Climate Action Plan for Transportation Infrastructure (CAPTI), emphasize the reduction of VMT by supporting projects that do not significantly induce demand. However, the guidelines and certain analysis tools recommended to estimate the induced VMT may not appropriately address rural contexts and could potentially overestimate VMT and limit the competitiveness of rural projects for state funding programs. The Rural Induced Demand Study was commissioned by the Rural Counties Task Force (RCTF) in response to concerns regarding the State guidance on the implementation of SB 743, in particular, the emphasis on induced demand as a likely outcome of road improvement projects. The purpose of the study is to determine the extent to which induced demand occurs in rural areas and to formulate recommendations for whether and how this phenomenon should be included in the environmental analyses of road projects in rural areas or factor into funding decisions at the State or regional level.

This report reviews academic research on induced demand and state guidance, identifies and evaluates case studies of past projects' actual effects, and provides technical recommendations on estimating induced VMT for highway improvement projects in rural counties.

1.1. REPORT ORGANIZATION

The report includes the following sections:

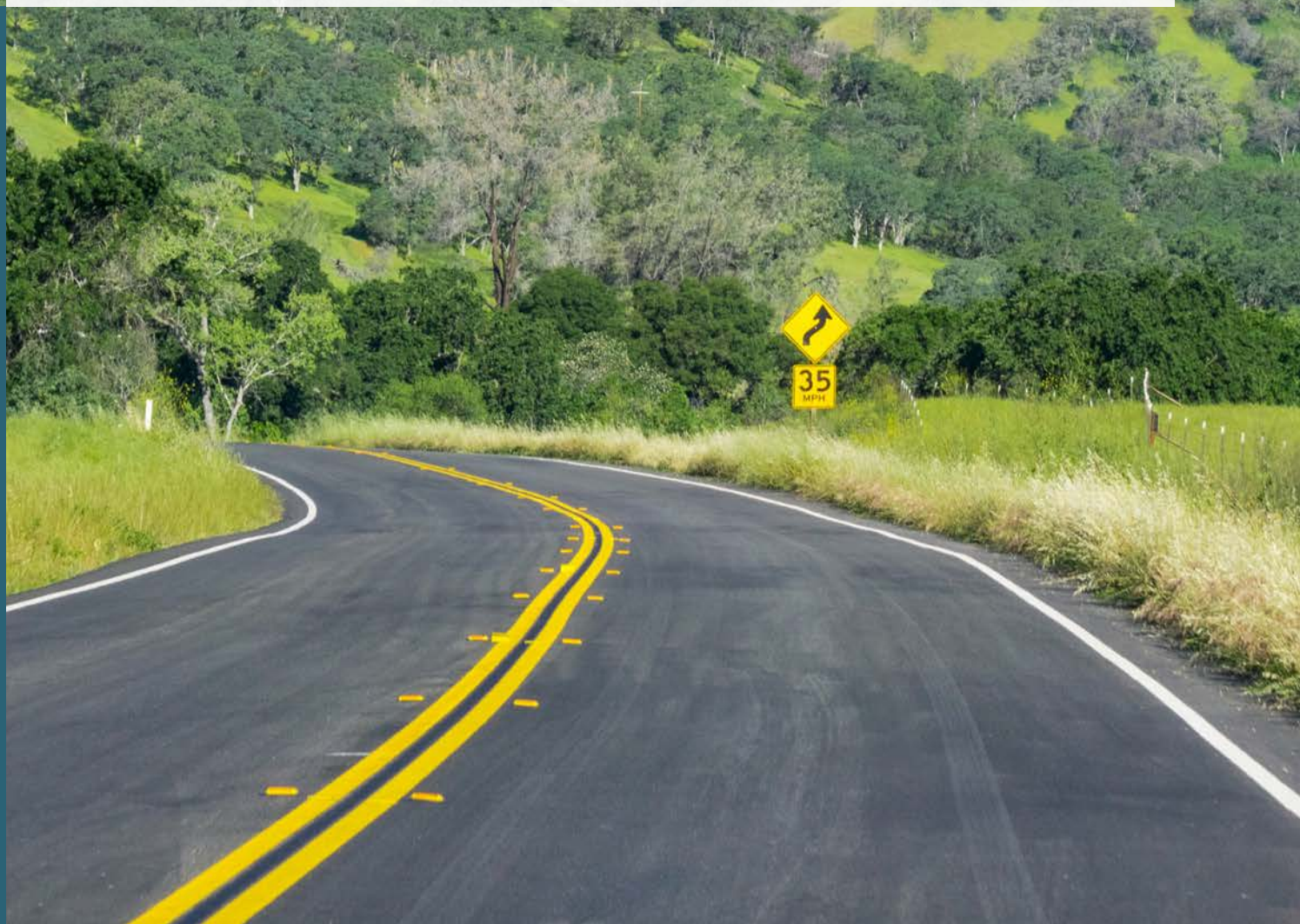
1. **Literature Review** presents a discussion on the current State policy regarding induced demand, as well as the results of a review of the academic literature on induced demand, focusing primarily on the aspects of various studies most relevant to rural areas.

2. **Review of the Guidance Documents** summarizes the results of our review of State guidance on implementing SB 743, focusing on the guidance most relevant to rural areas. The section also describes the potential influence that VMT measurement has on transportation funding opportunities.

3. **Induced VMT Sensitivity Analysis** conducts sensitivity analysis to evaluate the reliability of the NCST Calculator in estimating induced VMT resulting from the expansion of Caltrans facilities in rural areas. The section also presents a comprehensive examination of three study projects with a focus on investigating other causality factors.

4. **Technical Recommendations** provide guidance for assessing induced VMT based on a literature review on induced demand and causality of infrastructure projects for inducing travel demand. The study provides recommendations for screening projects, determining whether the requisite conditions for an induced effect to occur are present. It also provides analysis recommendations in the event an induced demand assessment is warranted. Lastly, recommendations for how to improve the NCST Calculator are provided.

2>
LITERATURE REVIEW



2.0. LITERATURE REVIEW

This section begins with a discussion of how academic literature was used in the formulation of current State policy regarding induced demand. It then gives a broader view of induced demand as a field of academic research. That is followed by a discussion of the methodology used to select the studies to be reviewed in this report and the findings from this review.

2.1. ORIGINS OF CURRENT STATE POLICY

Guidance from the major State agencies involved in SB 743, namely Caltrans, the Governor's Office of Planning and Research (OPR), and the California Air Resources Board (CARB), have settled on an elasticity[1] of 1.0 for project evaluation of freeways on the State Highway System[2] (SHS) and an elasticity of 0.75 for lower-order non-access-controlled state highway facilities. A reader perusing the State guidance documents might understandably interpret these elasticities as indicative of a consensus perspective, seemingly substantiating the notion that traffic demand will inevitably expand to occupy any supplementary road capacity. However, these elasticities do not in fact represent the consensus within the broader research community, nor do they fully reflect the conclusions of the original paper they are based on. For this reason it is useful to examine the contextual background by asking, "How did we get here?"

2.1.1. USE OF REVIEW STUDIES IN THE DEVELOPMENT OF STATE GUIDANCE

Review studies, or studies-of-studies, summarize the findings of original research studies for an audience that may not have the time or inclination to read through the original research papers. They serve an important function in making the results of research available to policymakers in an easily digestible form. However, this convenience may come at the cost of filtering out other relevant information found in the original studies. Depending on the subject matter and reviewer, the process of selecting what information to pass on to the audience (and what to exclude) can introduce distortions.

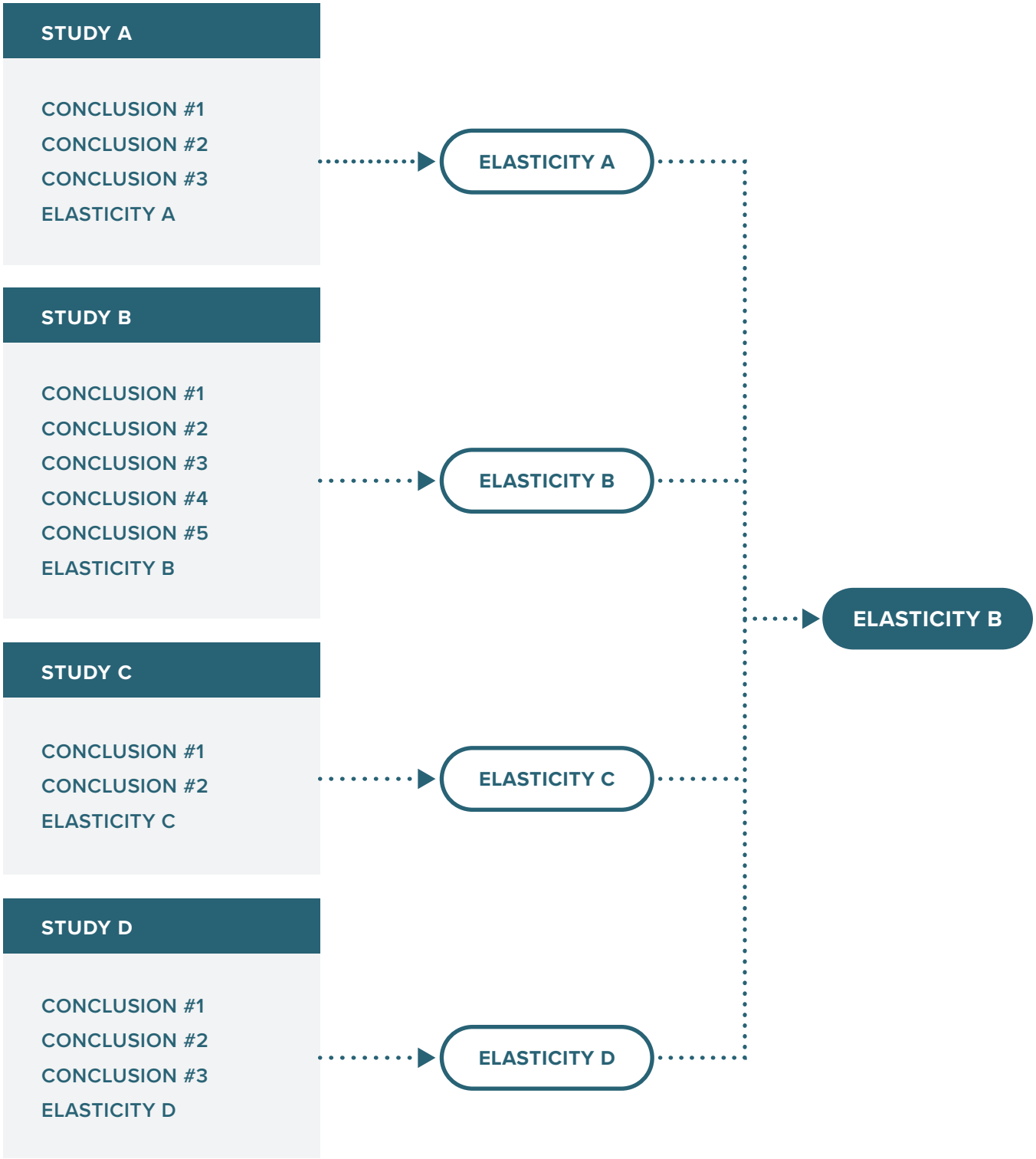
Figure 1 shows this schematically. In the figure, four studies are reviewed, from which the review study extracts the elasticities from each and then, from those elasticities, selects one for use. Quoting an elasticity from a paper while leaving out the caveats, qualifications, and context that appear in the original work may create a very different impression of the findings than presented in the original work, even when the sub-set of data passed to the audience is reported accurately.

---

1 An elasticity is the percentage change in one variable that is the result of a percentage change in a different variable. An elasticity of 1.0 means that a 10 percent increase in lane miles will be followed by a 10 percent rise in VMT in the long term.

2 This figure is referenced in OPR's *Technical Advisory on Evaluating Transportation Impacts in CEQA* (page 24). While the Advisory acknowledges that studies on induced travel reveal a range of elasticities, the 1.0 figure is the only one shown in the section on evaluating roadway projects. The 1.0 figure is also used in Caltrans' Transportation Analysis Framework (TAF). While the TAF acknowledges that the amount of induced demand is open to debate, the induced-demand calculator used by Caltrans uses the 1.0 figure from the Policy Brief.

FIGURE 1. THE FILTERING EFFECT OF REVIEW STUDIES



The selection of 1.0 as the elasticity for use in studies of the State Highway System came from a similar filtering process.

2.1.2. ORIGIN OF THE 1.0 ELASTICITY USED IN STATE POLICY

The elasticity of 1.0 enters State policy through a policy brief for CARB entitled *"Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions"*[1]. The Brief references 21 source papers, from which six were selected for inclusion in the summary table (Table 1 in the brief). In this initial filtering, the authors screened out studies that focused on ADT or on the relationship between VMT and travel time, claiming that *"... they do not have a direct relationship with greenhouse gas emissions."*[2] This assertion is noteworthy, given that travel time is a key component of both route selection and destination selection, which are major factors in an individual traveler's VMT, and ADT is a key component of a road segment's VMT. This screening criterion eliminated many valid studies from consideration. The fact that the bulk of the research was screened out is not mentioned in the Policy Brief but is instead found in a separate document, the Technical Background Document. Consequently, many readers of the Policy Brief will be unaware that the results being presented are from a small subset of the research.

Table 1 in the Policy Brief shows the elasticities from the six papers. The accompanying Policy Brief text states that:

> "THE **MORE RECENT STUDIES HAVE PRODUCED THE HIGHEST ESTIMATES OF LONG-RUN ELASTICITIES** USING MORE SOPHISTICATED METHODOLOGIES THAT ARE BETTER ABLE TO ILLUMINATE THE IMPACT OF HIGHWAY CAPACITY ON VMT (AS DISCUSSED IN THE ACCOMPANYING TECHNICAL BACKGROUND DOCUMENT). **THUS, THE BEST ESTIMATE FOR THE LONG-RUN EFFECT OF HIGHWAY CAPACITY ON VMT IS AN ELASTICITY CLOSE TO 1.0**, IMPLYING THAT IN CONGESTED METROPOLITAN AREAS, ADDING NEW CAPACITY TO THE EXISTING SYSTEM OF LIMITED-ACCESS HIGHWAYS IS UNLIKELY TO REDUCE CONGESTION OR ASSOCIATED GHG IN THE LONG-RUN."

TABLE 1. COMPONENTS OF INDUCED DEMAND

COMPONENT	LOW-END ESTIMATE	HIGH-END ESTIMATE
INCREASE IN TRUCK TRAFFIC	0.19	0.29
CHANGES IN INDIVIDUAL BEHAVIOR	0.09	0.39
MIGRATION OF PEOPLE BETWEEN REGIONS	0.05	0.21
RE-ROUTING OF TRAFFIC	0.00	0.10
TOTAL	**0.33**	**1.00**

1 Handy and Boarnet, 2014

2 Handy and Boarnet, 2014

From these six papers all of which are based on metropolitan area data, the Policy Brief recommends the elasticity from the Duranton and Turner for use.

There are several problems with this. Firstly, the consensus view would be better represented by taking the average of the studies' elasticities rather than the highest value. Secondly, the stated reason for selecting the highest value is that it was from the most recent study, which is not in of itself a strong rationale for its selection. It is notable that although the newest study in the table had the highest figure, the second-newest study in the table[1] had the lowest elasticity figure (0.39). This shows that there was no general progression where newer studies found higher elasticities.

A third problem is that the paper from which the 1.0 elasticity was taken, *The Fundamental Law of Road Congestion: Evidence from U.S. Cities,* presents a more nuanced view of the elasticity than is presented in the Policy Brief. It concluded that induced demand consisted of four components, as shown in **Table 1**.

It is worth considering these four components individually in relation to SB 743. The State's goals for greenhouse gas reduction require a reduction in state-wide VMT. Migration of people and re-routing of traffic measure a shift of VMT from one part of the state to another or from one road to another, respectively. This shift would be considered an induced demand on the roads studied in the paper, which used individual metropolitan areas as the geographic unit of analysis, but such shifts do not induce demand at the state level and have no effect on green-house gas emissions overall. Also, the induced demand related to truck traffic is not considered a VMT impact under SB 743, nor is it relevant to SB 375.[2] Thus, only one of the four components of the 1.0 elasticity – changes in travel behavior – is relevant to SB 743. Note also that although the original paper presented their estimated elasticities as a set of ranges, as we show in **Table 1**, only the high end appeared in the Policy Brief. If for instance the average of the range as the best representation of the range as a whole, then an elasticity of 0.24 (the average of 0.09 and 0.39), not 1.0, is the best interpretation of the Duranton and Turner work for CEQA purposes.

1 Cervero, 2003

2 Section 15604.3 (a) of the CEQA Guidelines specifies, "For the purposes of this section, "Vehicle Miles Traveled" refers to the amount and distance of automobile travel attributable to a project."

To summarize, the most widely used elasticity in the State guidance was the result of excluding 15 of 21 reviewed papers (71 percent) from consideration and then selecting the highest elasticity available from the remaining six. That high elasticity itself came from adding together the high end of the range for each component, three out of four of which, it could be claimed, are irrelevant under SB 743.

Additionally, pursuant to CEQA Guidelines Section 15187(d): *The environmental analysis shall take into account a reasonable range of environmental, economic, and technical factors, population and geographic areas, and specific sites. The agency may utilize numerical ranges and averages where specific data is not available, but is not required to, nor should it, engage in speculation or conjecture.*

The above discussion shows that when guidance is based on studies of studies, distortions can be introduced, and important information lost. This issue appears to be particularly pronounced in the context of induced demand. Every paper reviewed in this study had other findings besides an elasticity that are worthy of consideration. Later in this section, some of the findings that did not receive as much attention are presented to serve as a better-informed basis for policy development.

2.2. OVERVIEW OF INDUCED DEMAND AS A FIELD OF STUDY

Induced demand as a field of academic research was a significant research focus from the early-1990s to the early 2000s. At the time it seemed to offer a plausible explanation for why highway construction did not result in permanent congestion relief. Conversely, that the highways themselves were creating new demand. Some studies found long-term elasticities of up to 1.0, meaning that every percent increase in highway capacity was met with an equal percent increase in traffic demand.

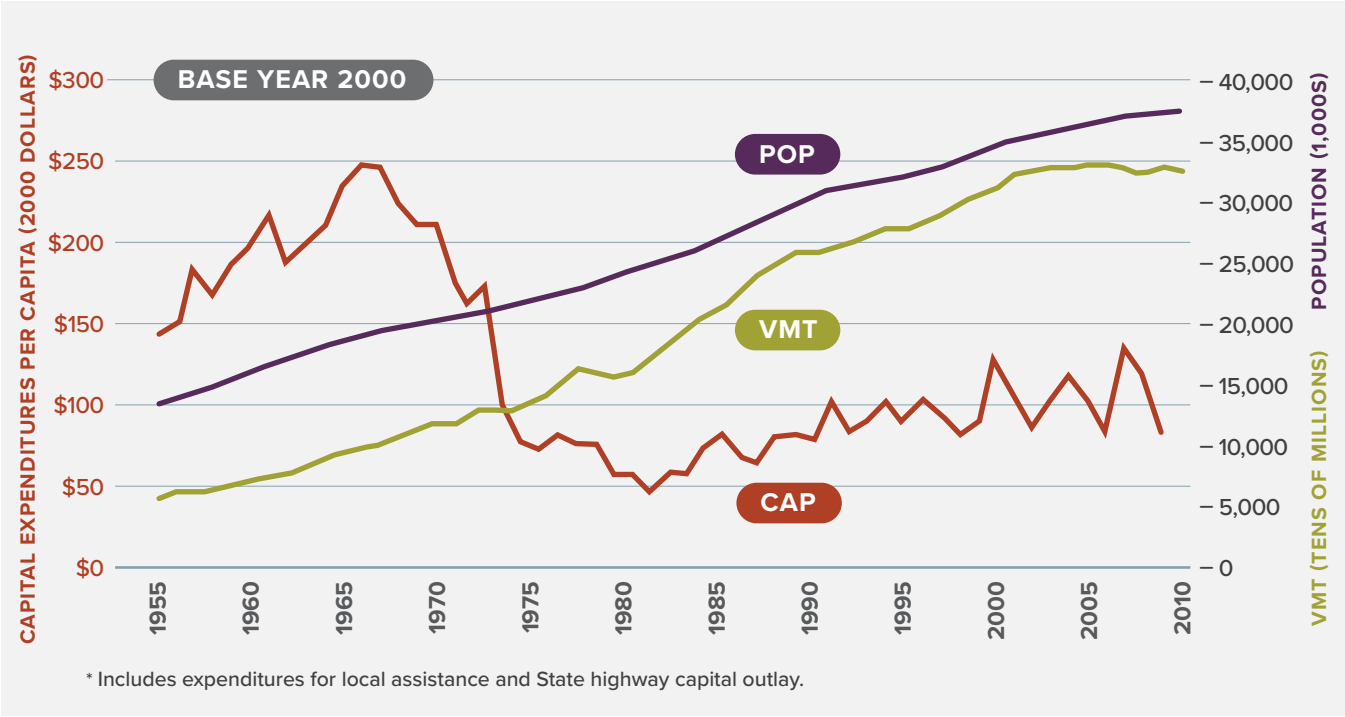
However, reviews of the first generations of studies concluded that most had serious methodological flaws that rendered their findings suspect. Among other things, researchers had to grapple with the fact that there was (and is) no universally-accepted definition of “induced demand”, the phenomenon they were attempting to measure[1]. As studies became better designed and other factors became better accounted for, the residual effect that could be attributed to induced demand declined. For example, in the two Cervero papers cited in the Policy Brief, the estimated short-term elasticity dropped from 0.59 to 0.10, and the estimated long-term elasticity dropped from 0.79 to 0.39, when consideration of induced investment (discussed later in this report) was added.

1 For example, a common response to major highway capacity improvement projects was that traffic diverted from other routes or from other times of the day to take advantage of the new capacity during the peak hour. Some papers considered this demand to be induced, while other considered it to be a rearrangement of existing demand. The debate over whether the release of existing demand that goes unserved due to capacity constraints, or is served by a different road or at a different time, should be considered “induced”, or whether the term “induced demand” should only apply to demand associated with new development that would not have occurred in the absence of new road capacity, continues to this day.

This is not to say that the research did not find that induced demand did not exist at all; rather, it was not the dominant explanatory factor as once purported. Moreover, induced demand had the effect of diverting policy attention away from other factors that had a greater impact on travel behavior. Dr. Cervero's 2003 article, "Are Induced- Travel Studies Inducing Bad Investments?" marked the point when induced demand was replaced with the theory that it was not the presence of road capacity but rather the absence of the sort of walkable mixed- used communities found in other parts of the world that accounted for America's auto dependency.

This "Smart Growth" theory offered a solution to a key weakness with the idea that over-provision of roads was driving VMT growth. Namely the fact that in recent decades roads have, in fact, not been over-provided. On the contrary, lane-miles per capita have experienced a sustained decline in California over the years, while VMT per capita has shown an upward trajectory, which explains the escalating congestion levels (see **Figure 2**).

FIGURE 2. HISTORICAL POPULATION, TRAVEL, AND PER CAPITA HIGHWAY CAPITAL EXPENDITURES (1955-2010)*



* Includes expenditures for local assistance and State highway capital outlay.

Source: California Transportation Plan 2040

2.3. METHODOLOGY USED FOR THE CURRENT LITERATURE REVIEW

2.3.1. HOW STUDIES WERE SELECTED

Hundreds of academic papers have been written about induced demand. Given the impracticality of reviewing the entirety of this extensive literature for the present study, several dozen of the most relevant studies were selected for examination. The selection was based on the following factors:

1. Identification as major papers with frequent citations in subsequent or later papers;
2. Citation in State guidance as part of the foundation for the guidance; and/or,
3. They appeared in web searches for studies of induced demand for rural areas.

While not comprehensive, this review is considered broad enough to draw conclusions about what can be usefully gleaned from the existing academic literature on induced demand.

2.3.2. HOW STUDIES WERE ANALYZED

The literature review is structured by key findings rather than by paper. In some cases, passages are quoted from the studies that were considered particularly telling, but this was only done when the passage was reasonably brief. Note that this findings-based approach results in some reviewed papers not being mentioned, given that their key findings either lack relevance to rural projects or because their main findings were already covered by other papers.

2.4. KEY FINDINGS

The key findings gleaned from the literature review are described below. Where quotes are provided, the use of bold font indicates text of particular relevance.

2.4.1. RELATIONSHIP BETWEEN LATENT DEMAND AND INDUCED DEMAND

The research paper “Closing the Induced Vehicle Travel Gap Between Research and Practice” by Milam, Birnbaum, Ganson, Handy, and Walters[1] delves into the intricate dynamics of induced demand and latent demand within transportation systems. Induced travel, as defined in the study, refers to the additional travel that ensues following capacity expansions, driven by decreased costs, while latent demand characterizes the suppressed travel demand due to high associated costs. The relation between induced travel and latent demand indicates that if capacity increases, more people will travel, tapping into the latent demand.

1 Milam, Birnbaum, Ganson, Handy, Walters, 2016

The phenomenon of induced travel is particularly pronounced when traffic volumes approach or exceed capacity thresholds, resulting in heightened congestion and increased travel times, creating latent demand. Conversely, in uncongested conditions, with limited to no expected decrease in travel time, there may not be latent or suppressed demand and, in turn, no induced demand. The research study identifies that:

> "WHILE INCREASING LANE-MILES IS A SUPPLY CHANGE, NOT ALL LANE MILE CHANGES HAVE THE SAME INFLUENCE ON **TRAVEL TIMES**, WHICH **IS THE KEY VARIABLE FOR INFLUENCING TRAVELER RESPONSE**."
>
> ***(MILAM, BIRNBAUM, GANSON, HANDY, AND WALTERS, 2016)***

The level of congestion serves as a critical determinant of induced vehicle travel. In summary, the paper underscores the importance of considering latent demand and changes in travel time when evaluating the impact of network capacity expansions on travel behavior.

The level of congestion serves as a critical determinant of induced vehicle travel. In summary, the paper underscores the importance of considering latent demand and changes in travel time when evaluating the impact of network capacity expansions on travel behavior.

2.4.2. EARLY CONTRADICTORY STUDIES

The first major study of the relationship between highway expansion, traffic generation, and air quality in California was a 1993 study[1] sponsored by Caltrans and undertaken by the University of California Transportation Center at UC Berkeley. Although this study is widely known and frequently cited in induced demand literature, no mention is made of the fact that it was originally circulated in Caltrans with a cover letter[2] from the Caltrans project manager overseeing the study, the Chief of Environmental Engineering in the Environmental Program at Caltrans Headquarters. The letter opens with this statement regarding the induced demand elasticities:

> "I SHARE THIS REPORT WITH SOME TREPIDATION. **I DO NOT BELIEVE THAT THE DATA IS STRONG ENOUGH TO SUPPORT THE FINDINGS** (SEE ATTACHMENT)."
>
> ***(BORROUM, 1995)***

The letter then goes on to show several graphs based on data from Caltrans' Office of Transportation Improvements, Caltrans' Accounting division, and the California Department of Finance, Financial & Economic Research division.

1 Hansen, Gillen, Dobbins, 1993

2 Borroum, 1995

These graphs led the author to conclude:

> "**THERE DOES NOT APPEAR TO BE ANY SIGNIFICANT, DIRECT RELATIONSHIP BETWEEN HIGHWAY IMPROVEMENTS AND** EITHER TOTAL POPULATION (OR) **PER CAPITA VMT** (FIGURES 1 AND 2 OF ATTACHMENT). THESE PATTERNS ARE REFLECTED IN ALL OF CALIFORNIA'S MAJOR REGIONS, ON AN INDIVIDUAL BASIS."
>
> ***(BORROUM, 1995)***

The next section discusses one reason why non-academics who review the research are skeptical of the results.

2.4.3. DATA QUALITY

Researchers in the social sciences have become accustomed to the fact that data on human behavior, such as the decision on how often and how far to drive, never has the exactitude that can be found in the physical sciences. It may not occur to them that if a study based on behavioral data is submitted to a profession based on physical data (engineering), the recipients may give more credence to the studies than they really deserve. As such, it is important for those who are not academics to understand the quality of the data used in induced demand studies.

Some examples of data quality issues:

- "The enormous jump in vehicle miles traveled (VMT) reported by the 1990 U.S. Nationwide Personal Transportation Survey (NPTS) caused a great deal of concern among planners and policy analysts. Such a jump seemed to portend an era of ever increasing travel, pollution, and energy consumption. Later re-analyses of the NPTS data **revealed that the VMT jump was a statistical error.** The 1990 NPTS oversampled new vehicles and under-sampled old ones. Since new vehicles are driven two to three times as much as old ones, the sampling bias will overestimate VMT." (Lave, 1994)
- In some studies, the existing traffic on lower order facilities, which were simply reclassified to higher order facilities were counted as "new" VMT induced by "new" highway capacity. (Cervero, 2003)
- "Unfortunately, the quantity and quality of total VMT data are limited. We could locate such data only for the years 1980, 1982, 1986, 1988, and 1989. In addition to reducing the overall volume of data, the lack of observations before 1980 strips our data set of much of the longitudinal variation in State Highway Lane Miles. Furthermore, **total VMT is estimated mainly on the basis of gasoline sales rather than vehicle counts, and is therefore of dubious reliability**." (Hansen and Huang, 1997)

It was not the fault of the researchers that the quality of the data available to them was poor. It was their response to the limited options that is important. Specifically, the choice to use lane miles as the independent variable in induced demand studies was driven primarily by the lack of data on better metrics. This is discussed in the next section.

2.4.4. USE OF LANE MILES AS AN INDEPENDENT VARIABLE

The theoretical basis for induced demand is that when the price of something goes down, then, all else being equal, people will consume more of that thing. When referring to induced growth in VMT, when road expansion reduces the travel time cost, people will presumably respond by driving more. This point is made in, for example, Caltrans' TAF[1]. Other papers concur:

> "**IT IS NOT THE LANE MILES OF ROADS THAT PROMPT PEOPLE TO TRAVEL MORE, HOWEVER.** RATHER IT IS THE BENEFITS THAT THE LANE MILES CONFER. ONLY IF TRAVEL SPEEDS INCREASE AND TRAVEL TIMES FALL WILL MOTORISTS GRAVITATE TO AN IMPROVED CORRIDOR."
>
> *(CERVERO, 2001)*

> "LANE-MILES OF CAPACITY ARE COMMONLY USED TO REPRESENT THE BENEFIT OF HIGHWAY IMPROVEMENT. IN TRUTH, **BENEFITS ARE BEST EXPRESSED BY OUTPUTS (E.G., TRAVEL-TIME SAVINGS) NOT INPUTS (LANE ADDITIONS)**. AN ADDITIONAL HALF-MILE OF LANE ON A CROWDED BRIDGE CROSSING WILL PROVIDE MUCH MORE BENEFIT THAN A HALF-MILE OF LANE IN THE UNCONGESTED EXURBS. THE NOTION THAT LANE MILES THEMSELVES CAPTURE SUPPLY IMPROVEMENTS IS PRESUMPTUOUS."
>
> *(CERVERO, 2001)*

> "THUS THE CONTEXT OF THE CAPACITY ADDITION IS OF PRIME IMPORTANCE IN ESTIMATING INDUCED TRAVEL DEMAND, AND TRAVEL TIME IS THE PREFERRED INDEPENDENT VARIABLE FOR MORE RELIABLE ESTIMATES OF TRAVEL DEMAND ELASTICITY. CONSEQUENTLY, **USE OF ELASTICITIES BASED ON LANE-MILES IS UNDESIRABLE FOR POLICY ANALYSIS**, AND IT IS SUGGESTED THAT FUTURE RESEARCHERS FOCUS ON REFINING ELASTICITIES BASED ON TRAVEL TIME RATHER THAN LANE-MILES."
>
> *(DECORLA-SOUZA, 2000)*

1 California Department of Transportation, 2020, Figure 2.

The challenge for induced demand researchers is that although they would prefer to find the relationship between travel time and VMT, there is no source of data on travel times across long enough periods and for enough facilities to form a foundation for analysis. So they use lane-miles as a proxy:

> "**... STUDIES THAT HAVE EMPLOYED LANE-MILES AS A PREDICTOR TREAT IT AS A STAND-IN, OR PROXY, FOR TRAVEL-TIME SAVINGS FOR PRACTICAL REASONS**. LANE-MILES CAN GENERALLY BE MEASURED WITH A FAIR DEGREE OF ACCURACY, HOWEVER MEASURING TRAVEL TIME IS FRAUGHT WITH DIFFICULTIES."
>
> ***(DECORLA-SOUZA, 2000)***

> "IN TRUTH, ACCURATELY MEASURING TRAVEL TIMES OVER NUMEROUS TIME POINTS CAN BE A DAUNTING TASK. TRAVEL TIMES VARY CONSIDERABLY BY TIME-OF-DAY, DAY-OF-WEEK, AND SEASON OF YEAR; IN CONTRAST, A FIXED AMOUNT OF ROAD CAPACITY DOES NOT VARY."
>
> ***(CERVERO, 2001)***

Given that lane-miles is used as a proxy for changes in travel time, its use would not be valid in cases where travel times do not significantly change:

> "**ADDING NEW LANE MILES TO UNCONGESTED HIGHWAYS** (FOR EXAMPLE, TO IMPROVE SAFETY) **WILL NOT RELEASE ANY SUPPRESSED DEMAND AND WILL THEREFORE NOT PRODUCE INDUCED TRAVEL.** ONLY WHEN CAPACITY CHANGES RESULT IN A REDUCTION IN TRAVEL TIME "PRICE" BORNE BY THE TRAVELER CAN ANY NEW TRAVEL BE INDUCED. FOR EXAMPLE, WIDENING I-90 THROUGH THE STATE OF MONTANA WILL PRODUCE NO INDUCED TRAVEL, SINCE I-90 HAS LITTLE TO NO CONGESTION."
>
> ***(TRANSPORTATION RESEARCH BOARD, 1995. EXPANDING METROPOLITAN HIGHWAYS: IMPLICATIONS FOR AIR QUALITY AND ENERGY USE, SPECIAL REPORT 245, NATIONAL RESEARCH COUNCIL, NATIONAL ACADEMY PRESS, WASHINGTON DC)***

> "BUT THE AREAWIDE STUDIES SUFFER FROM AT LEAST TWO CRITICAL DEFICIENCIES; FIRST, THEY USE A SINGLE RELATIVELY SIMPLE MEASURE OF CAPACITY INCREASES (SUCH AS LANE-KILOMETERS OR LANE-MILES) THAT ARE **INSENSITIVE TO THE POTENTIALLY SIGNIFICANT DIFFERENT DEMAND EFFECTS THAT WOULD OCCUR IF THE SAME INVESTMENT IS MADE IN THE CENTER OF THE REGION VERSUS THE FRINGES.**"
>
> ***(DOWLING AND COLMAN, 1995)***

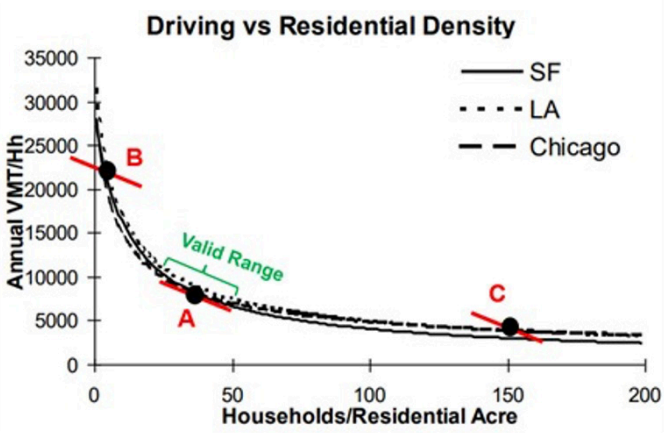
The key finding here is that lane-mile-based analyses, which form the basis of State policy, are not relevant for uncongested areas. The next section further examines the issue of whether conclusions from studies from one location should be applied to other locations.

2.4.5. MIS-APPLICATION OF ELASTICITIES

A review of the induced demand literature found many cases where, even if an author's findings were entirely correct, they would be of limited applicability. This is particularly true for elasticities, which are a mainstay of induced demand literature.

An elasticity describes the relationship between changes in an independent variable, such as gasoline prices, to changes in a dependent variable, such as VMT. The background graph in **Figure 3** is from a well-known study of the relationship between residential density and per-household VMT[1]. If a researcher computed the elasticity at any point on this curve, say Point A, then that elasticity would be a reasonable approximation of the effect of density on VMT/Household (HH) for neighborhoods whose densities were similar to Point A's. However, if someone then tried to use the elasticity from Point A to estimate the effect of increasing density at a place with a higher density, such as Point B, they would greatly over- estimate the effect of increasing density.

FIGURE 3. RELATIONSHIP BETWEEN VMT/HOUSEHOLD AND RESIDENTIAL DENSITY



The point here is that even when data is collected and analyzed properly, the results may simply be irrelevant for places dissimilar to where the data were collected. As one researcher puts it:

> "... MOST AREAWIDE STUDIES ASSUME A CONSTANT ELASTICITY OF DEMAND, PROBABLY DUE TO THE LACK OF ENOUGH DATA POINTS TO ESTIMATE ANYTHING ELSE. INTUITION SUGGESTS THAT THE **ELASTICITY IS NOT NECESSARILY CONSTANT, BUT INSTEAD DEPENDS ON THE AMOUNT OF CURRENT CONGESTION AND CAPACITY OF THE SYSTEM, THE TIMEFRAME INVOLVED (SHORT- VS. LONG-TERM), THE TRIP PURPOSES OF ROAD USERS, AND POSSIBLY OTHER FACTORS."**
>
> *(DOWLING AND COLMAN, 1995)*

1 Holtzclaw, Goldstein, Clear, Haas, and Dittmar, 2002

Elasticities measured in one location are unlikely to have much predictive value in another. This fact was borne out in the California Smart-Growth Trip Generation Rates Study[1]. That study evaluated several elasticity-based VMT estimator tools developed for the analysis of land use development projects, all of which were based on regression constructs similar to those used by Duranton and Turner. The purpose of the study was to test aggregate elasticity-based tools in order to determine which one(s) Caltrans could endorse for use in forecasting traffic for projects on the state highway system. The study found that none of the models worked well enough to be endorsed for use; each produced forecasts that were significantly off for different individual sites/locations. The best-performing of the tools had an average absolute error of 27 percent. Hence, elasticities are typically not transferable to locations with characteristics that differ from those used in their development.

The fact that VMT elasticities are extremely context-sensitive is a major issue for rural areas since nearly all of the research on VMT and induced demand is based on data collected in major metropolitan areas. The elasticities found in these studies, even if perfectly correct within their context, may be misleading if applied to rural areas.

1 https://dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/final-reports/ca13-1940-finalreport-a11y.pdf

The importance of context caused several authors to reject outright the use of elasticities from regional or state-level databases for project-level analyses:

"SIMPLE MODELS OF THE KIND PRESENTED HERE CANNOT SUPPLANT THE DETAILED ANALYSES NEEDED TO EVALUATE SPECIFIC PROJECTS. **IT SHOULD NOT BE ASSUMED THAT THE AGGREGATE ELASTICITIES OBTAINED IN OUR ANALYSIS APPLY EQUALLY TO EVERY URBAN REGION, LET ALONE TO ANY PARTICULAR PROJECT.**"

(HANSEN AND HUANG, 1997)

"THE ANALYSIS PRESENTED HERE USES AGGREGATE STATE LEVEL TIME-SERIES DATA TO DETERMINE RELATIONSHIPS TO VMT. **THE ANALYSIS IN THIS PAPER DOES NOT IMPLY THAT ANY SPECIFIC PROJECT WILL GENERATE ADDITIONAL TRAFFIC. OBVIOUSLY SPECIFIC PROJECT LEVEL ANALYSIS IS NEEDED TO ASSESS IMPACTS OF SPECIFIC TRANSPORTATION PLANS.**"

(NOLAND, 1998)

Other authors made the same point. These two quotes were selected because they are from authors cited in the documentation for the UC Davis NCST Induced Travel Calculator[1]. The Calculator applies aggregate elasticities for project evaluation, which appears to be contrary to the recommended practice.

2.4.6. INTERVIEWS WITH THE ACTORS INVOLVED CAST DOUBT ON THE UNDERLYING MECHANISMS

In most papers, the assumed mechanisms by which an increase in road capacity results in an increase in VMT is that motorists make more trips or select more distant destinations and that developers select sites for development based on roadway improvements. However, interviews with motorists and developers cast doubt on this. One paper that interviewed drivers found that they are not nearly as responsive to changes in traffic conditions as had been supposed and that they hardly respond at all when the travel time changes are small (under 15 minutes):

[REACHING A CONCLUSION FROM SURVEYS OF HUNDREDS OF CALIFORNIA DRIVERS]
"THE RESULT OF THIS IS THAT **90 PERCENT TO 95 PERCENT OF THE TRIPS WOULD BE UNCHANGED** OR WOULD HAVE SCHEDULE CHANGES IN RESPONSE TO TRAVEL TIME INCREASES AND REDUCTIONS OF 15 MINUTES OR LESS."

(DOWLING AND COLMAN, 1995)

1 Updating the Induced Travel Calculator, Volker and Handy, 2022

"**SURVEY RESPONDENTS INDICATED A HIGH DEGREE OF RESISTANCE TO CHANGE IN THEIR TRAVEL BEHAVIOR WHEN OFFERED TRAVEL TIME SAVINGS OF BETWEEN FIVE AND FIFTEEN MINUTES PER TRIP.** A FIVE MINUTE TRAVEL TIME SAVINGS (ON AVERAGE) RESULTED IN A THREE PERCENT INCREASE IN DAILY TRIPS MADE PER PERSON, AND A 15 MINUTE TIME SAVINGS RESULTED IN A FIVE PERCENT INCREASE IN TRIPS/PERSON/DAY. SINCE MOST TRIPS IN METROPOLITAN AREAS ARE UNDER 15 MINUTES DURATION AND REALISTIC TIME SAVINGS ON SUCH SHORT TRIPS WOULD RARELY EXCEED FIVE MINUTES, **IT APPEARS UNLIKELY THAT NEW HIGHWAY CAPACITY WOULD SIGNIFICANTLY REDUCE TRAVEL TIMES FOR THE MAJORITY OF TRIPS.**"

(DOWLING AND COLMAN, 1995)

A paper that interviewed developers cast further doubt on the assumed mechanisms. It was found that developers were looking for cheap land that had some access to the roadway system and that, in most cases, they were indifferent to congestion levels. This means that their development plans are unresponsive to road widenings that reduce congestion but do not increase access:

"WHILE THE EXISTENCE OF THE FACILITY ITSELF IS CRUCIAL, **THE LINK BETWEEN THE EXPANSION OF A HIGHWAY AND GROWTH AND DEVELOPMENT IN THE CORRIDOR IT SERVES APPEARS TO BE MUCH WEAKER**, OR AT LEAST LESS DIRECT."

(HANSEN, GILLEN, AND DOBBINS, 1993), UNDERLINING IS ORIGINAL

"LAND COST AND AN ATTRACTIVE RURAL ENVIRONMENT APPEAR TO BE THE OVERRIDING FACTORS MOTIVATING HOUSING DEVELOPMENT IN ALL FOUR CASE STUDY REGIONS. OUTLYING AREAS WITH LOTS OF UNDEVELOPED LAND GENERALLY GREW FASTER THAN MORE DEVELOPED COMMUNITIES. **THESE TYPES OF FACTORS APPEAR TO BE MORE DIRECTLY RELEVANT TO THE PROJECT DECISIONS OF REAL ESTATE DEVELOPERS THAN THE LEVEL OF HIGHWAY CONGESTION IN THE AREA.**"

(HANSEN, GILLEN, AND DOBBINS, 1993)

"WHILE THE EXPANSION OF I-580 IS SEEN AS A BONUS TO DEVELOPERS IN THE AREA, **ALL INDICATE THAT THEIR PROJECTS WOULD STILL HAVE BEEN CONSTRUCTED IN THE ABSENCE OF THE FREEWAY IMPROVEMENT.**"

(HANSEN, GILLEN, AND DOBBINS, 1993)

The interview findings cast doubt as to whether the purported mechanisms for induced demand are valid.

2.4.7. CHANGES IN THE WORKFORCE OFTEN NOT ACCOUNTED FOR

A frequent refrain in the literature is the fact that there are other factors besides road supply that influence travel behavior and that the predominant causes of the growth in VMT lie with these other factors. It is critical to the analysis that these other factors be controlled for since most studies attribute any otherwise unexplained differences in VMT growth to induced demand.

While many studies controlled for population, per capita income, and gasoline prices when examining regional VMT growth, very few controlled for labor force participation. Thus, the increase in dual-income households, which coincided with a period of rapid expansion of the highway system, appears to have led, in some cases, to increases in VMT/capita that were incorrectly attributed to induced demand. Note that controlling for per-capita income will not effectively capture this effect because there is a big difference in VMT between a household whose income doubled because the head of household got a raise and one whose income doubled because a second person started working.

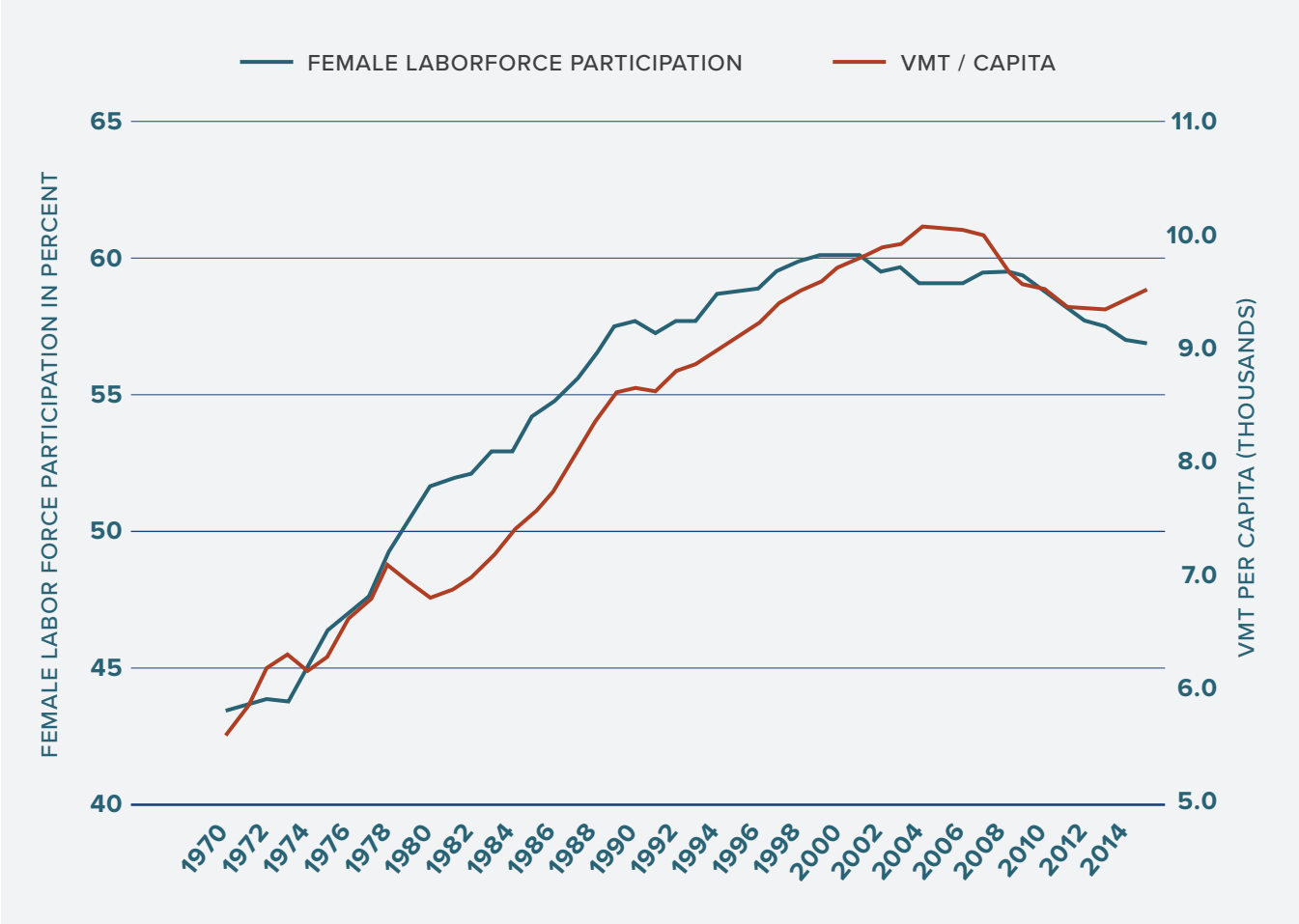
One study that looked at changes in labor force participation shows why this factor is crucial to understanding historical changes in VMT:

"**A PRINCIPAL REASON WHY OUR HIGHWAYS ARE BECOMING INCREASINGLY CONGESTED IS THAT THE NUMBER OF WORKERS HAS RISEN DRAMATICALLY.** WHILE THE POPULATION IN THE SIX-COUNTY METROPOLITAN AREA ONLY INCREASED FROM 1970 TO 1990 BY A MERE FOUR PERCENT, THE NUMBER OF WORKERS ROSE BY OVER 20 PERCENT. STATED DIFFERENTLY, WE EXPERIENCED A LABOR-FORCE INCREASE OF MORE THAN 600,000 WORKERS AT A TIME IN WHICH THE POPULATION INCREASED BY APPROXIMATELY HALF THIS NUMBER."

(URBAN TRANSPORTATION CENTER, UNIVERSITY OF ILLINOIS, 1999)

The main reason why the number of workers increased at a much higher rate than the population was because the study covered a period when women were entering the paid labor force in much greater numbers than before. This was further investigated using data from the U.S. Census and the Federal Reserve Bank of St. Louis. As can be seen in **Figure 4**, the relationship between changes in VMT/capita and female labor force participation is striking (R-square over 90 percent – high level of correlation). The conclusion drawn from this analysis is that studies that failed to control for the effect of changes in labor force participation almost certainly attributed to induced demand changes to VMT that actually arose from an entirely difference cause.

FIGURE 4. RELATIONSHIP BETWEEN FEMALE LABOR FORCE PARTICIPATION AND VMT/CAPITA



The literature review included a study that controlled for female labor force participation and other exogenous factors (demographic changes, local economic growth, growth controls, etc.) that might not be fully accounted for in aggregate studies. It did this by comparing traffic growth on California state routes that were widened with similar roads in the same area that were not widened. The results suggest that the induced demand found in other studies may have come from exogenous factors that were not properly controlled for:

"**WE FOUND THE GROWTH RATES BETWEEN THE TWO TYPES OF SEGMENTS TO BE STATISTICALLY AND PRACTICALLY INDISTINGUISHABLE**, SUGGESTING THAT THE CAPACITY EXPANSIONS, IN AND OF THEMSELVES, HAD A NEGLIGIBLE EFFECT ON TRAFFIC GROWTH OVER THE PERIOD STUDIED."

(MOKHTARIAN., SAMANIEGO, SHUMWAY, WILLITS, 2002)

2.4.8. CAUSALITY RUNS IN BOTH DIRECTIONS

Besides labor force participation, perhaps no other factor has been more overlooked, especially in the early studies, than the fact that land development spurs road construction. In other words, there is induced supply as well as induced demand. A large-scale example is the fact that the growth in VMT/capita outstrips the growth in lane-miles/capita in California, indicating that supply is chasing demand, not the reverse.

"ONE OF THE MAJOR SPECIFICATION PROBLEMS CONFRONTED BY ALL INDUCED DEMAND STUDIES IS THE CONFLATION OF CAUSE AND EFFECT. UNTIL RECENTLY, EFFORTS TO MEASURE INDUCED DEMAND EFFECTS COULD BE CRITICIZED FOR IGNORING ISSUES OF CAUSALITY. DISENTANGLING CAUSE AND EFFECT IN THE INTERACTION BETWEEN ROAD SUPPLY AND TRAVEL DEMAND IS EXCEEDINGLY DIFFICULT. **ROAD INVESTMENTS ARE NOT MADE AT RANDOM BUT RATHER AS A RESULT OF CONSCIOUS PLANNING BASED ON ANTICIPATED IMBALANCES BETWEEN DEMAND AND CAPACITY. THIS IMPLIES THAT, IRRESPECTIVE OF ANY TRAFFIC INDUCEMENT EFFECT, ROAD SUPPLY WILL GENERALLY CORRELATE WITH ROAD USE. SKEPTICS CAN EASILY CLAIM THAT ALL OR MOST OF THE OBSERVED RELATIONSHIPS BETWEEN TRAFFIC AND ROAD INVESTMENT DERIVE FROM GOOD PLANNING RATHER THAN TRAFFIC INDUCEMENT**."

(CERVERO, 2001)

A number of studies have pointed out that the construction of major highways often lags land development rather than leading it:

> [SPEAKING OF THE GROWTH OF SUBURBS IN THE CHICAGO REGION] "THE PRINCIPAL CONCLUSION OF THIS SECTION IS THAT DECENTRALIZATION STARTED WELL BEFORE THE ADVENT OF THE LIMITED-ACCESS HIGHWAY SYSTEM. POPULATION GAINS, IN AREAS NOW IN PROXIMITY TO MAJOR LIMITED-ACCESS HIGHWAYS, OCCURRED LONG BEFORE THE CONSTRUCTION OF THE HIGHWAYS AND THESE HIGHWAYS WERE LOCATED IN AREAS WHERE FUTURE GROWTH WAS ANTICIPATED. **GIVEN THESE POINTS, IT IS DIFFICULT TO ARGUE THAT HIGHWAYS CAUSED THE DECENTRALIZATION OF POPULATION**."
>
> *(URBAN TRANSPORTATION CENTER, UNIVERSITY OF ILLINOIS, 1999)*

Accounting for induced supply reduces the residual VMT growth that is attributed to induced demand:

> "THAT IS, A SIGNIFICANT SHARE OF THE STATISTICAL CORRELATION BETWEEN TRAVEL DEMAND AND ROAD SUPPLY HAS LONG BEEN ASSIGNED TO INDUCED DEMAND EFFECTS; HOWEVER, WHEN A PATH-MODEL FRAMEWORK IS ADOPTED THAT ACCOUNTS FOR INTERMEDIATE STEPS AND INDUCED INVESTMENT EFFECTS, **LONGER-RUN ELASTICITIES OF VMT GROWTH TEND TO BE SMALLER, MATCHED BY HIGHER "INDUCED INVESTMENT" ELASTICITIES**."
>
> *(CERVERO, 2001)*

2.4.9. LACK OF A NO PROJECT SCENARIO

From a CEQA practitioner's perspective, the lack of a No Project alternative in most academic studies can be an issue. One might argue that they are implicit in the studies that compute elasticities. However, as mentioned earlier, there are potentially many other factors that affect VMT that make this presumption quite tenuous. As one researcher put it:

"WHILE SOME INDICATORS OF THE BACKGROUND FACTORS MENTIONED ABOVE HAVE BEEN INCORPORATED INTO AGGREGATE, REGION-LEVEL MODELS OF TRAFFIC GROWTH, **ANY SUCH MODEL WILL INEVITABLY FAIL TO MEASURE (OR WILL MEASURE INCOMPLETELY) SOME OF THE FACTORS THAT MAY BE IMPORTANT TO THE OBSERVED PATTERNS**. IN THAT CASE, THE POSSIBILITY CANNOT BE RULED OUT THAT THE **INCLUSION OF ADDITIONAL EXPLANATORY VARIABLES COULD MATERIALLY ALTER THE RESULTS BY REDUCING THE WEIGHT (PERHAPS TO NEGLIGIBILITY) ATTRIBUTED TO THE CAPACITY IMPROVEMENTS IN EXPLAINING INDUCED TRAFFIC**."

(GOODWIN, 1996)

Matched-pair analysis compares similar corridors to see how different changes or improvements work while keeping other variables constant. In the study, the segments were paired with control segments that matched the improved segments to unimproved ones with regard to facility type, region, approximate size, and initial volumes and congestion levels.[1] This type of analysis leads to the conclusion that induced demand may not be an issue under CEQA:

"THE MOST NOTABLE FACT THAT EMERGES FROM THESE TESTS IS THAT **IT IS NOT POSSIBLE TO DETECT A STATISTICALLY SIGNIFICANT DIFFERENCE IN TRAFFIC GROWTH FOR IMPROVED AND UNIMPROVED SEGMENTS**. ...INDEED, THE DATA ARE SURPRISING IN THAT, IF ANYTHING, THEY SHOW THE GROWTH OF UNIMPROVED SEGMENTS BEING SLIGHTLY LARGER THAN THAT OF THE IMPROVED SEGMENTS."

(MOKHTARIAN., SAMANIEGO, SHUMWAY, WILLITS, 2002)

1 Mokhtarian, Samaniego, Shumway, Willits, 2002

The interview study mentioned earlier reinforces the idea that the with and without project alternatives under CEQA should use identical projected land use assumptions based on latest planning assumptions when analyzing widening projects:

> "WHILE THE EXPANSION OF I-580 IS SEEN AS A BONUS TO DEVELOPERS IN THE AREA, **ALL INDICATE THAT THEIR PROJECTS WOULD STILL HAVE BEEN CONSTRUCTED IN THE ABSENCE OF THE FREEWAY IMPROVEMENT**."
>
> ***(HANSEN, GILLEN, AND DOBBINS, 1993)***

2.4.10. LACK OF SUBSTANTIAL EVIDENCE THAT INDUCED DEMAND OCCURS IN RURAL AREAS

When induced demand in rural areas gets mentioned at all, it is usually with an unstated assumption that whatever is true in large metropolitan areas probably holds true in rural areas as well:

> "OVERALL, **THE FEW STUDIES TO DATE THAT HAVE TRIED TO STATISTICALLY MEASURE HOW ROAD INVESTMENTS INTERACT WITH OTHER FACTORS TO INDUCE TRAVEL DEMAND HAVE YIELDED INCONCLUSIVE RESULTS.** A LITERAL INTERPRETATION OF EMPIRICAL FINDINGS WOULD BE THAT INDUCED DEMAND EFFECTS DO NOT VARY TREMENDOUSLY ACROSS SETTINGS – WHETHER DENSELY POPULATED, HIGHLY CONGESTED URBAN AREAS OR SPARSELY INHABITED, LESS CONGESTED EXURBS. **WHILE COMMON SENSE SUGGESTS THIS IS NOT THE CASE**, SO FAR THE COLLECTIVE RESEARCH COMMUNITY HAS BEEN UNABLE TO JETTISON THIS "NULL HYPOTHESIS." THIS IS PROBABLY **MORE OF AN INDICTMENT OF METHODOLOGICAL TOOLS AND THEIR INABILITY TO PROVIDE FINE-GRAIN INSIGHTS INTO THE INDUCED DEMAND PHENOMENON THAN AN ASPERSION OF THE IDEA THAT INDUCED DEMAND IMPACTS VARY.** CLEARLY, MORE AND BETTER RESEARCH IS NEEDED ON HOW INDUCED DEMAND EFFECTS VARY ACROSS DIFFERENT SETTINGS AND CONTEXTS."
>
> ***(CERVERO, 2001)***

This study identified one induced demand study that explicitly distinguished between rural and urban area types. This study utilized national data spanning from 1998 to 2008[1]. It applied simultaneous equation models to predict VMT across a range of factors and roadway characteristics. The findings showed that elasticities vary significantly between rural and urban lane mile additions. A one percent increase in rural lane miles yielded a de-minimis 0.083 percent increase in VMT. The impact of increasing urban lane miles was found to be more than three times higher (an elasticity of 0.267). The salient point being it is not so much the values of the elasticities but the fact that they are significantly different.

Note that the 0.267 elasticity is also much less than the 1.00 elasticity applied in the NCST calculator to Class I facilities and the 0.75 elasticity applied to Class II and Class III facilities.

The absence of definitive evidence regarding induced demand in rural areas presents a significant challenge within the framework of CEQA, which mandates that findings be grounded in substantial evidence. The question arises: does the absence of evidence indicating induced demand in rural areas signify its non-existence in these regions? Or should the lack of evidence that rural areas are different from urban areas be interpreted to mean that studies of urban areas can be applied to rural areas? CEQA does not require lead agencies to study phenomena whose existence is not supported by substantial evidence. By this standard, induced demand might not be viewed as a significant impact under CEQA in rural areas.[2]

2.4.11. EFFECT DIMINISHING OVER TIME

Early studies, which analyzed data from the 1960's and 70's, attributed a much larger contribution of VMT change to a possible induced effect compared to later studies using more recent data. One study that segmented data by era[3] found that induced demand effects accounted for 44 percent of VMT growth in California for the period 1977-1980, dropping to just 10 percent for 1980-1985 and then eight percent for 1985-1990. The fact that land development in California went from unregulated booms in the 1970s to becoming a highly regulated industry by 1990 undoubtedly affected the market's ability to respond to accessibility changes resulting from new roadway capacity.

1 Rentziou, Gkritza, Souleyrette, 2011

2 CEQA Guidelines Section 15187(d) - The environmental analysis shall take into account a reasonable range of environmental, economic, and technical factors, population and geographic areas, and specific sites. The agency may utilize numerical ranges and averages where specific data is not available, but is not required to, nor should it, engage in speculation or conjecture.

3 Hansen and Huang, 1997

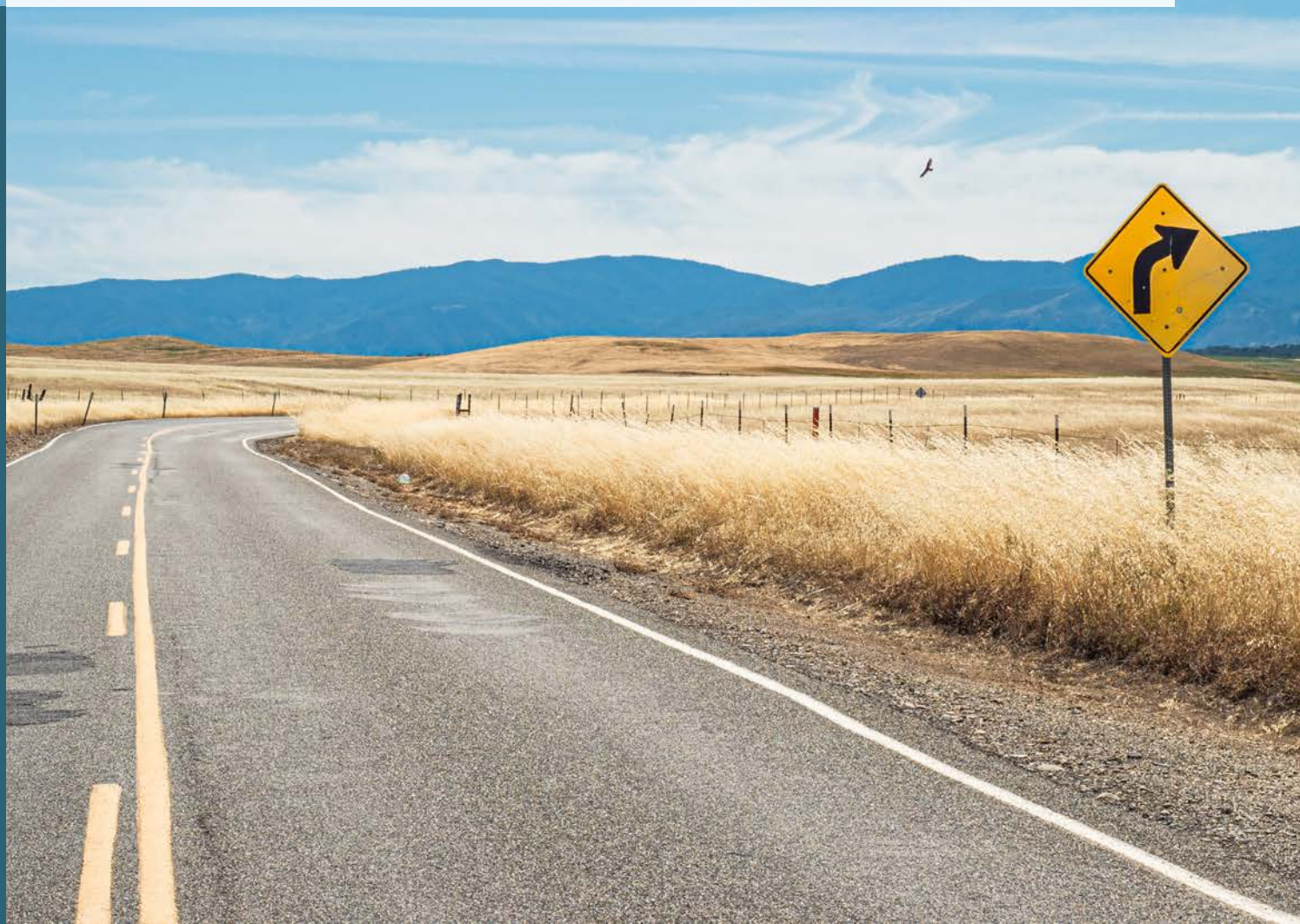
2.5. CONCLUSIONS FROM THE LITERATURE REVIEW

Based on a comprehensive review of the research on induced demand, the following conclusions can be made:

- The reliance on review studies appears to have resulted in guidance that is contradicted by empirical evidence, including the findings from researchers cited within the guidance.
- The idea that increases in road capacity will induce increases in demand on a one-for-one percentage basis (i.e., an elasticity of 1.0) is not supported by much of the induced demand research.
- The theory and empirical observations collectively indicate that changes in lane-miles is a poor indicator to predict induced demand regardless of area type. If induced demand occurs, it predominantly stems from the presence of latent demand that is "released" as a result of significant reductions in travel times. Notably, highway enhancements that fail to substantially decrease travel times are unlikely to induce demand.

In summary, the absence of clear evidence that induced demand occurs in rural areas strongly suggests that application of current state VMT policies may prevent or disadvantage projects that are being proposed pursuant to other State objectives. This is particularly concerning for emergency evacuation and safety initiatives, where the preservation of lives takes precedence.

3>
REVIEW OF GUIDANCE DOCUMENTS



3.0. REVIEW OF GUIDANCE DOCUMENTS

Navigating California's environmental policy landscape involves a critical evaluation of transportation impacts, particularly under the CEQA. This review examines key guidance documents provided by OPR, Caltrans, and CARB. The focus of this section is on understanding how these documents address the intricate challenge of assessing vehicle miles of travel (VMT) impacts, particularly in rural areas, as mandated by SB 743. The review includes the diverse methodologies suggested, the gaps in guidance for rural counties, and the implications for regional transportation planning agencies and grant applicants.

3.1. OPR'S TECHNICAL ADVISORY ON EVALUATING TRANSPORTATION IMPACTS IN CEQA[1]

SB 743 assigned[2] the OPR the task of preparing revisions to the CEQA guidelines to, "... promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." OPR duly prepared the revisions, along with a Technical Advisory describing the practices it recommends for evaluating the VMT impacts for land use and transportation projects.

Although the Advisory offers detailed advice regarding projects in urbanized areas, it provides only two pieces of guidance on how SB 743 is to be applied in rural areas:

- It suggests (page 19) that, *"In rural areas of non-[Metropolitan Planning Organization (MPO)] counties (i.e., areas not near established or incorporated cities or towns), fewer options may be available for reducing VMT, and significance thresholds may be best determined on a case-by-case basis."*
- On page 24, where the Advisory discusses an elasticity-based technique for forecasting induced demand, it says, *"This method would not be suitable for rural (non-MPO) locations in the state which are neither congested nor projected to become congested."*

The effect of this guidance is to absolve rural counties of the need to follow the guidance provided for urban projects, but it does not identify alternative methodologies that should be used instead.

This is an issue considered by earlier looks at SB 743 by OPR. A 2021 working group session contained notes regarding VMT in rural areas:

> *"Most (or perhaps all) research around induced VMT comes from metropolitan-area settings (including rural portions of MSAs).*
>
> *While it is reasonable to assume induced travel is possible in rural counties, reliable means for capturing the phenomenon are lacking. Where demand models exist, they*

1 https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

2 Public Resources Code §21099(b)(1)

require some method for determining land use scenarios. In places without demand models, the analyst must make a qualitative case for VMT assessment.

In many cases, based on existing knowledge, we would expect to see little VMT effect from widening in rural counties. (Rural land use development, however, may well induce travel.)

Some potential ways to justify a no-impact finding include:

- *Pointing to a lack of congestion in the project area. If the project would not speed up traffic at completion or in the future, it should not induce more or longer trip-making.*
- *Pointing to barriers to land use change, such as topography or government ownership of affected land. (Such an assertion should address commercial as well as residential land uses and might need to also take into account other drivers of induced travel.)*
- *Developing projects that do not add VMT-inducing capacity. For example, if evacuation routes can be improved by strengthening shoulders or parallel bike-ped paths for emergency use, no day-to-day VMT effect should pertain.*
- *Projects that are determined to be exempt from federal air quality conformity per 40 CFR 93.126 and 40 CFR 93.127.*

These findings may not address all instances where induced VMT is unlikely or difficult to measure. It may be necessary to pursue additional research to better describe conditions that cause induced demand in rural counties."[1]

As described below, these intimations of a lack of research are effectively as close to firm guidance that OPR and Caltrans have offered.

3.2. CALTRANS' TRANSPORTATION ANALYSIS FRAMEWORK[2] AND TRANSPORTATION ANALYSIS UNDER CEQA[3]

Caltrans has developed practices for complying with SB 743 for projects on the State Highway System. Caltrans' current guidance is found in their Transportation Analysis Framework and Transportation Analysis under CEQA (TAC). As with OPR, Caltrans' guidance on rural projects is limited:

- Section 5.6.1 of the TAC says, in its entirety, *"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."*
- **Table 2** of the TAC states that in rural counties, induced demand should be assessed using a travel demand model or other quantitative methods (pictured on the following page). However, while the table does not mention qualitative methods, an example on page 45 states that a qualitative analysis can be completed.

1 https://dot.ca.gov/-/media/dot-media/programs/sustainability/documents/sb743-working-group-090921-2-a11y.pdf

2 https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-09-10-1st-edition-taf-fnl-a11y.pdf

3 https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-09-10-1st-edition-tac-fnl-a11y.pdf

TABLE 2. SELECTION MATRIX FOR INDUCED TRAVEL ASSESSMENT METHOD FOR PROJECTS ON THE SHS

PROJECT TYPE ▶ / PROJECT LOCATION ▼	GP OR HIGH OCCUPANCY VEHICLE (HOV) LANE ADDITION TO INTERSTATE FREEWAY	GP OR HOV LANE ADDITION TO CLASS II & III STATE ROUTES	OTHER VMT INDUCING PROJECTS AND ALTERNATIVES
COUNTY WITH MSA WITH CLASS I FACILITY	Apply the NCST Calculator by MSA and/or TDM benchmarked with NCST Calculator	Apply the NCST Calculator by county and/or TDM benchmarked with NCST Calculator	Apply TDM or other quantitative methods
OTHER MSA COUNTY	Apply TDM or other quantitative methods		
RURAL COUNTY	Apply TDM or other quantitative methods		

- The TAF also uses **Table 2**. The table indicates that the elasticity-based NCST calculator is to be used for analyses of non-interstate highways in all counties except for 21 rural counties listed in **Table 3** of the TAF[1] below.

TABLE 3. THE 21 RURAL COUNTIES WHERE THE NCST CALCULATOR DOES NOT APPLY

ALPINE	INYO	NEVADA
AMADOR	LAKE	PLUMAS
CALAVERAS	LASSEN	SIERRA
COLUSA	MARIPOSA	SISKYOU
DEL NORTE	MENDOCINO	TEHAMA
GLENN	MODOC	TRINITY
HUMBOLDTH	MONO	TUOLUMNE

So, as with OPR's guidance, the effect of Caltrans' guidance is to absolve rural counties of the need to follow the methodologies established for urban projects, but it does not identify alternative methodologies that should be used instead. Conversely, MPOs with significant rural areas within their boundaries (e.g., MPOs in the San Joaquin Valley, Central Coast, Northern California, and Southern California) must adhere to the Caltrans' TAF.

1 A travel demand model can also be used, but must be benchmarked with the NCST calculator

3.3. CALIFORNIA AIR RESOURCES BOARD (CARB) SB 375 REGIONAL PLAN CLIMATE TARGETS

The State's primary goal for reducing VMT is to reduce Greenhouse Gas (GHG) emissions from the transportation sector. SB 375 requires CARB to develop and set regional targets for GHG emission reductions from passenger vehicles. The current targets for VMT reduction are published on CARB's website[1]. Targets are set for each MPO area, with reductions ranging from four percent to 19 percent depending on the region. MPOs are required to comply with these targets in planning Sustainable Communities Strategies (SCS) as part of the Regional Transportation Plan process.

An approved RTP is required in order for MPOs to access the vast majority of state and federal funding programs. Additionally, an approved SCS is required in order for MPOs to access the vast majority of state grant funding. MPOs with significant rural areas within their boundaries are still required to meet VMT reduction targets established by CARB. VMT is a primary metric used by CARB in evaluating SCSs. While the SCS Evaluation Guidelines affirm that professional judgment may be used regarding induced travel, CARB requires that MPOs document the methodology, assumptions, and datasets used to evaluate these effects. In practice, MPOs that include capacity-increasing projects in their financially constrained capital improvement list have had their third round of SCS approvals held up for not explicitly applying the NCST Calculator to estimate induced VMT and reflect that increment towards their GHG emission reduction assessment. This was even the case for several MPOs that demonstrated the appropriate model feedback loop with a land use allocation model – considered the most effective process for estimating the long-term effects of induced VMT in the Caltrans Traffic Analysis Framework guidance.

MPOs that cannot meet the reduction goal "in any feasible way" must submit an Alternative Planning Strategy (APS) in lieu of an SCS. An APS can assume changes in law and funding beyond an SCS. However, an APS is still required to show that with significant changes and additional resources, the MPO can meet CARB's GHG reduction requirements.

Regional transportation planning agencies (RTPAs) outside MPOs are not required to submit SCSs. According to the 2020 California Public Roads Data, the largest four of the 18 MPO regions (SCAG, SANGAG, MTC, and SACOG) generate 78 percent of the light-duty vehicle VMT in California and 85 percent of the on-road mobile source GHG emissions[2]. The remainder of the state contributes roughly 22 percent of the State's estimated VMT[3]. Non-MSA rural counties generate about four percent of the Statewide VMT.

Rural areas must still comply with SB 743. Hence, individual projects are still evaluated under the CEQA environmental review process.

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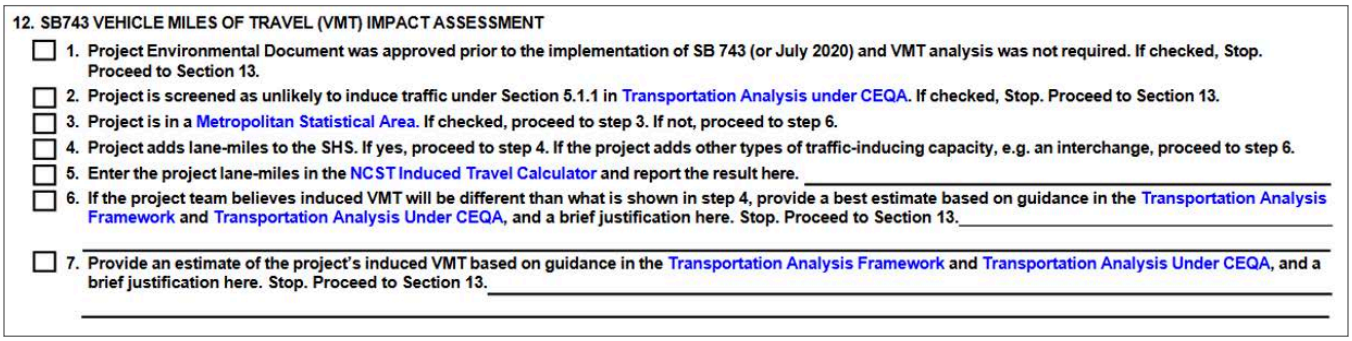
1 https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets

2 2022 Progress Report | California's Sustainable Communities and Climate Protection Act, CARB, 2022

3 https://dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/california-public-road-data/prd-2020-a11y.pdf

3.4. GRANT REQUIREMENTS FOR INDUCED DEMAND CALCULATIONS

SB 1 grants now feature a section describing state highway system impacts under SB 743 (this common language can be found in the SB 1[1] guidelines as part of the application for the Trade Corridor Enhancement Program (TCEP), Solutions for Congested Corridors (SCCP), and Local Partnership Competitive Funds (LPPC)).[1] [2] [3]



12. SB743 VEHICLE MILES OF TRAVEL (VMT) IMPACT ASSESSMENT

- ☐ 1. Project Environmental Document was approved prior to the implementation of SB 743 (or July 2020) and VMT analysis was not required. If checked, Stop. Proceed to Section 13.
- ☐ 2. Project is screened as unlikely to induce traffic under Section 5.1.1 in Transportation Analysis under CEQA. If checked, Stop. Proceed to Section 13.
- ☐ 3. Project is in a Metropolitan Statistical Area. If checked, proceed to step 3. If not, proceed to step 6.
- ☐ 4. Project adds lane-miles to the SHS. If yes, proceed to step 4. If the project adds other types of traffic-inducing capacity, e.g. an interchange, proceed to step 6.
- ☐ 5. Enter the project lane-miles in the NCST Induced Travel Calculator and report the result here. _____
- ☐ 6. If the project team believes induced VMT will be different than what is shown in step 4, provide a best estimate based on guidance in the Transportation Analysis Framework and Transportation Analysis Under CEQA, and a brief justification here. Stop. Proceed to Section 13._____
- ☐ 7. Provide an estimate of the project's induced VMT based on guidance in the Transportation Analysis Framework and Transportation Analysis Under CEQA, and a brief justification here. Stop. Proceed to Section 13._____

As described above, the NCST Induced Travel Calculator is not applicable to many rural counties. The TAF and TAC documents in Step 6 give no firm guidance to an alternative method of calculating induced VMT other than travel demand modeling or "other method".

In fact, tracing the guidance further back results in the same answer: "flexible guidance." For a route to be eligible for SCCP funds, it must have a Comprehensive Multimodal Corridor Plan (CMCP). The SCCP guidelines state the following:

> *"Induced demand analysis methodologies vary among agencies and flexibility will be given for agencies to determine and use the method most appropriate for their region. One example of an induced demand analysis methodology that could be used: Appendix 2 of the Governor's Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA: http://opr.ca.gov/docs/20180416743_Technical_Advisory_4.16.18.pdf"*[4]

The guidance on using induced demand with flexible guidance is likewise echoed in federal grantmaking. The 2021 Infrastructure Investment and Jobs Act (IIJA) created the Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation Program (PROTECT) program, which supplements the existing Infrastructure for Rebuilding America (INFRA), Rural Surface Transportation, and Mega programs (now rolled into the single Multimodal Project Discretionary Grant (MPDG) program, as well as the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) program (formerly Transportation Investment Generating Economic Recovery (TIGER)).

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1 https://catc.ca.gov/-/media/ctc-media/documents/programs/sccp/08-17-22-adopted-2022-sccp-guidelines.pdf

2 https://catc.ca.gov/programs/sb1/trade-corridor-enhancement-program

3 https://catc.ca.gov/-/media/ctc-media/documents/programs/local-partnership-program/competitive/2022-guidelines-competitive/20220819-lpp-c-guidelines-2022-v2-a11y.pdf

4 https://catc.ca.gov/-/media/ctc-media/documents/120518-approved-cmcp-guidelines-a11y.pdf

PROTECT is administered in California through the CTC's Local Climate Transportation Adaptation Program, which states that VMT should be minimized while maximizing person throughput.

MPDG and RAISE programs share the same Federal discretionary grant program benefit-cost guidance, which simply states, "Forecasts should incorporate indirect effects (e.g., induced demand) to the extent possible."[1]

Caltrans' intake form for Federal grants also asks for VMT considerations:

> *"**VMT IMPACT:** The purpose of this question is to determine the Project's VMT impacts. Caltrans is looking to support projects that do not significantly increase motor vehicle travel, particularly in congested urbanized settings where other mobility options can be provided and where projects are shown to induce significant auto travel. These projects should generally aim to reduce VMT and not induce significant VMT growth (CAPTI page 17). In less congested rural areas, highway capacity expansion can be less likely to induce travel. Nevertheless, the benefits and drawbacks of widening roadways in this context must be weighed carefully. Describe how the Project proposes to reduce VMT and include alternatives to highway capacity expansion, such as providing multimodal and non-auto mode options in the corridor, employing pricing strategies, and using technology to optimize operations. Describe if the Project considers alternatives to general purpose lane, HOV, and High Occupancy Toll (HOT) lane additions that may potentially induce demand. Provide available data/exhibits."* [2]

Calculating the cost-benefit required for applying to these Federal programs can not rely on the Caltrans' Excel-based Cal-B/C to calculate VMT, as it indicates:

> *"The user should account for induced demand, if applicable, in the inputs provided since Cal-B/C does not estimate it automatically. Induced demand is an unintended effect that may occur if a project alleviates traffic congestion by increasing roadway capacity (e.g., building new roadways or adding lane miles). With induced demand, the roadway network experiences an increase in vehicle-miles traveled (VMT) because the added roadway capacity reduces travel delay or the "price" of travel, enticing motorists to drive more. If there is enough extra demand, congestion relief may be temporary as VMT increases. Cal- B/C users can account for the effects of induced demand by making sure the extra travel is included in the ADT for the Build scenario, shown in the Project Information tab."*

Again, the program asks for a calculated VMT impact for benefit-cost considerations. It is anticipated that grant programs will increasingly require induced VMT considerations. For rural counties, the State has offered "flexibility" without clear further guidance. While this seems to allow rural counties the option of exploring a new methodology, it also does not ensure that their submissions will be accepted. A clear statement that projects located in areas where the causal factors for latent demand are not clearly present, are not required to perform an induced demand analysis would resolve the matter and avoid needless costs incurred in doing unnecessary analyses.

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1 https://www.transportation.gov/sites/dot.gov/files/2023-01/Benefit%20Cost%20Analysis%20Guidance%202023%20Update.pdf

2 https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/strategic-investment-planning/final-mpdg-raise-intake-form-04-2023-a11y.docx (Also mirrored in the Reconnecting Communities Pilot Grant Program Caltrans intake form).

3.5. CALIFORNIA ACTION PLAN ON TRANSPORTATION INFRASTRUCTURE (CAPTI) AND CALTRANS SYSTEM INVESTMENT STRATEGY (CSIS) GUIDANCE FOR CLIMATE CHANGE RELATED EXPENDITURES

The following Executive Orders focused on reducing on-road mobile source GHG emissions from California's transportation sector:

- Executive Order (EO) N-19-19 empowers the CALSTA to leverage discretionary state transportation funds to help meet the state's climate goals.
- Executive Order N-79-20 moves the transportation sector toward a zero-emission future by requiring all new cars sold in the state to be zero-emission by 2035 and all commercial trucks sold to be zero-emission by 2045.

Pursuant to EO N-19-19, the CAPTI Investment Framework aims to align the state transportation infrastructure investments with state climate, health, and social equity goals built on the foundation of the "fix-it-first" approach established in SB 1. To reduce emissions from transportation, the Investment Framework is premised on exacting significant reductions in VMT as stated in the key guiding principle of CAPTI:

> *"Promoting projects that do not significantly increase passenger vehicle travel, particularly in congested urbanized settings where other mobility options can be provided and where projects are shown to induce significant auto travel. These projects should generally aim to reduce VMT and not induce significant VMT growth.*
>
> *When addressing congestion, consider alternatives to highway capacity expansion, such as providing multimodal options in the corridor, employing pricing strategies, and using technology to optimize operations."*

The framework specifically states that historical investments in new roadway capacity in urbanized areas have promoted VMT growth and, in fact, "induced travel," which has failed to reduce congestion over the long term. The same research addressed in the Literature Review section of this report is cited to support this claim. Conversely, CAPTI explicitly acknowledges that "context", and specific project analysis and attributes are key to determining a project's VMT impacts. The CAPTI guiding principle focuses on whether a project induces significant travel as the key attribute of concern rather than whether it is simply a highway expansion project. It also acknowledges that though highway capacity expansion projects in congested urbanized settings have a particularly high tendency to result in inducing additional travel, in less congested rural areas, highway capacity expansion is much less likely to induce travel. This is particularly relevant given that improvement options such as transit, active transportation, and travel demand management strategies are simply not as viable in most rural areas of the state. More importantly, an important distinction is that roadway capacity improvements in rural areas are often not intended to address or relieve significant recurring congestion (a prerequisite for an induced effect to occur) but are driven more by safety, goods movement, evacuation, and access concerns.

Below are just a few examples of the various sustainable transportation solutions that CAPTI supports that could be applied in rural settings. In CAPTI Action S6.3 will facilitate further discussion about these and many other rural transportation solutions, with the goal of ensuring better state support for their deployment:

- Increasing transit and passenger rail service in a corridor through investments in bus service, vanpools, micro-transit or mobility on-demand services, park-and-ride facilities, and adjacent passenger rail improvements;
- Improving freight rail lines in major goods movement corridors to support mode shift from truck to zero-emission rail, increase passenger rail service, and promote zero- emission locomotives;
- Addressing safety through the multidisciplinary Safe System Approach that employs tools for speed management, such as road diets, conversion of intersections to roundabouts, and signal coordination to slow speeds;
- Eliminating project components that contribute additional risk and stress to bicyclists, pedestrians, and other vulnerable road users;
- Improving multimodal connectivity in local street networks (including overcrossing opportunities of Caltrans facilities) in order to enable more direct routing and efficient access to destinations for short trips, thereby removing trips from the state highway system;
- Adding and improving connected facilities for walking and bicycling in the corridor and for first/last-mile connections to local, interregional, and regional transit routes;
- Facilitating emergency evacuations through efficient traffic management strategies, such as the use of contra flow, use of two-way left turn lanes as through travel lanes, construction of full structural sections of shoulders, and installation of Transportation Management Systems (TMS) elements, such as Closed-Circuit Television (CCTV) cameras, Changeable Message Signs (CMS), and traffic detection equipment;
- Converting to truck-only lanes in major goods movement corridors, utilizing the Caltrans right-of-way or other lands to provide safe truck parking opportunities, and installing charging facilities that support zero-emission trucks, especially in neighborhoods burdened by poor air quality; and,
- Deploying zero-emission vehicle charging or fueling infrastructure —including battery electric, fuel cell (hydrogen) electric, and other zero-emission vehicle technologies.

Rural areas of the state lack clear guidance in terms of the State's SB 743 implementation guidance. On the positive side, this means that rural agencies are not bound by the guidance that many urban agencies must address. On the negative side, however, beyond "develop a sufficiently robust travel demand model", rural agencies have not been given any effective assistance in how to approach VMT analyses and have no State guidance they can point to in defense of their actions.

Rural agencies must decide for themselves how to evaluate projects, as stated in CEQA Guidelines §15064.3(b)(4) (new with SB 743):

> "METHODOLOGY. **A LEAD AGENCY HAS DISCRETION TO CHOOSE THE MOST APPROPRIATE METHODOLOGY TO EVALUATE A PROJECT'S VEHICLE MILES TRAVELED**, INCLUDING WHETHER TO EXPRESS THE CHANGE IN ABSOLUTE TERMS, PER CAPITA, PER HOUSEHOLD **OR IN ANY OTHER MEASURE**. A LEAD AGENCY MAY USE MODELS TO ESTIMATE A PROJECT'S VEHICLE MILES TRAVELED AND MAY REVISE THOSE ESTIMATES TO REFLECT PROFESSIONAL JUDGMENT BASED ON SUBSTANTIAL EVIDENCE. ANY ASSUMPTIONS USED TO ESTIMATE VEHICLE MILES TRAVELED AND ANY REVISIONS TO MODEL OUTPUTS SHOULD BE DOCUMENTED AND EXPLAINED IN THE ENVIRONMENTAL DOCUMENT PREPARED FOR THE PROJECT. THE STANDARD OF ADEQUACY IN SECTION 15151 SHALL APPLY TO THE ANALYSIS DESCRIBED IN THIS SECTION."
>
> ***EMPHASIS ADDED**

Establishing a defensible, replicable, and accepted precedent will be key in facilitating transportation improvements under future grant program guidelines.

Rural areas are relying on capacity-increasing projects to meet key goals surrounding access, safety, operations, goods movement, and evacuation. Rural areas have low VMT compared to large MPOs, have projects far less likely to significantly reduce travel times to induce VMT, and have fewer options for VMT mitigation. The overweighting of VMT reduction criteria and induced demand for selecting projects for grant funding or prioritization presents a significant equity issue for rural areas throughout the state.

In many cases, there simply are few or no other options for rural counties. Projects that add additional capacity to reduce bottlenecks and smooth traffic flow to reduce GHG emissions can remain consistent with the CAPTI and the goals of the Caltrans System Investment Strategy (CSIS).[1] [2] While the CSIS does give some consideration to the unique challenges facing rural areas, there is no guarantee at this time that future grant scoring guidelines will continue to remain cognizant of rural needs. A narrow focus on VMT fails to adequately capture the full benefits of a project, which can significantly limit the ability of rural counties to seek and receive funding for vital safety, resiliency, and operational projects.

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1 https://calsta.ca.gov/subject-areas/climate-action-plan

2 https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/strategic-investment-planning/draft-interim-csis-mar-2022-a11y.pdf

4>
INDUCED VMT SENSITIVITY ANALYSIS

4.0. INDUCED VMT SENSITIVITY ANALYSIS

The Caltrans' TAF provides guidance on assessing induced VMT resulting from capacity-increasing projects on state highway facilities. The TAF recommends two approaches – an empirical approach using the NCST Induced Travel Calculator and/or applying a regional or local area travel demand model based on the criterion described in the TAF.

The NCST calculator estimates induced travel by applying long-term aggregate elasticities based on empirical (before-after) studies from national databases and review studies.[1] The NCST Calculator elasticities rely solely on the addition of lane miles and are not sensitive to location-specific factors and the unique travel characteristics of a given project area. As such the Calculator does not account for socio-economic changes (i.e. population and employment growth), the land use context, existing congestion/bottlenecks, improvements providing shorter travel routes, or geographic constraints. Consequently, adding lane miles in rural areas with no congestion will produce the same induced VMT estimate as project areas with high levels/multiple hours of congestion. This will invariably result in over-estimating the induced effect in areas with no sensitivity to adjacent land use and lack of latent demand, particularly uncongested rural areas, resulting in an ecological fallacy.

To test this, a simple sensitivity analysis was performed to gauge the reasonableness of applying the NCST Calculator to estimate induced VMT resulting from the expansion of Caltrans facilities in both rural non-MSA areas as well as rural areas within MPO regions. Given the rural context, this analysis specifically focused on Federal Highway Administration (FHWA) Functional Class II and III facilities. For a given project located in a specified county, the VMT with induced effect projections was estimated using pre-construction year countywide Highway Performance Monitoring System (HPMS) VMT, which is then "grown" out three, 10, and 20 years into the future based on the countywide population growth rate[2] plus the added increment of induced VMT estimated by the NCST's induced Demand Calculator. These VMT estimates were then compared to the "actual" HPMS VMT estimate for each horizon year after the roadway capacity expansion project was completed and open to traffic. This analysis draws from readily available historical countywide HPMS data and DOF population estimates between 1990 and 2022.

The intent of this sensitivity exercise is simply to demonstrate how accurately future VMT would be estimated had the NCST tool been used at the time of the project approval process. The analysis also includes a more in-depth case-study evaluation of three of the capacity expansion projects where the NCST Calculator emulated or under-predicted actual VMT growth. The sensitivity analysis and the case studies underscore the need to understand local conditions to contextualize the findings from the Calculator, as noted in the documentation provided by the developers of the NCST Calculator.

1 Duranton, G., & M. A. Turner (2011).

2 Department of Finance

4.1. PROJECT SELECTION

The analysis included a comprehensive and systematic approach to project selection, collaborating with interested RTPAs, MPOs, and Caltrans Districts to identify and shortlist the projects. The candidate projects were selected based on the following criteria.

- **Capacity-increasing Improvements**. Each candidate project considered for inclusion in the study resulted in an increase in transportation capacity.
- **Rural Geographical Context**. The candidate projects are located in rural areas or rural parts of Metropolitan Planning Organizations (MPOs).
- **Temporal Consideration (Construction Period)**. Projects that were constructed at least five to 25 years ago, facilitating the examination of projects' long-term induced demand potential.
- **Available Project Data**. The candidate projects have the information required for the sensitivity analysis, e.g., the number of lanes added, improvement type, and year of construction.

The data request resulted in the submission of 43 projects, 14 of which met all the desired criteria. **Table 4** presents the list of the projects, project location, construction year, and the lane miles added. Five of the selected projects are in areas within a non-MSA RTPA region. Pursuant to the Caltrans TAF guidelines, these projects will not be required to apply the NCST calculator and would instead rely on a travel demand model or other analytical techniques. Nine projects are located within rural areas of an MPO region. These improvement if going through environmental clearance today would be expected to apply the NCST calculator to estimate induced demand. The regional differentiation underscores the diversity in the study's analytical framework.

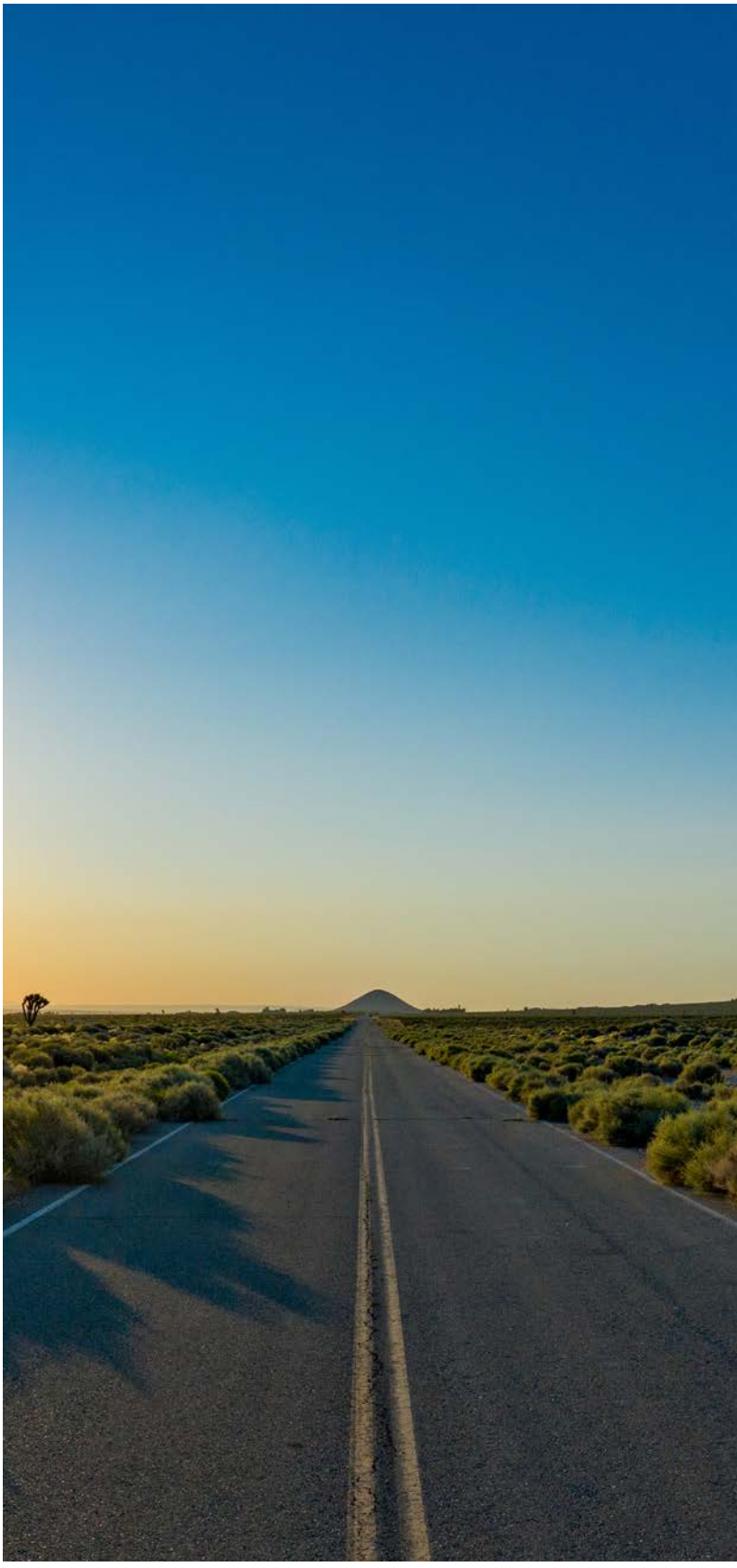


TABLE 4. CASE STUDY PROJECT LIST

PROJECT	PROJECT LIMITS	COUNTY	OPENING YEAR	LANE MILES ADDED
US 395	Various Segments	Mono	1999	48.6
US 395	Various Segments	Inyo	2007/2008	25.2
US 395	Various Segments	Inyo	2001	61.4
SR 267	I-80 to County Line	Nevada	2002	4.0
SR 49	Bear River to Wolf Crombie	Nevada	2007	4.4
SR 70	Various Segments	Sutter	2008	14
US 101 CUESTA GRADE IMPROVEMENT	US 101 n/o City of San Luis Obispo	San Luis Obispo	1998	14.4
SR 65 LINCOLN BYPASS	Industrial Boulevard to north of Riosa Road	Placer	2013	20.8
SR 46 LOST HILLS	Kern County Line to Brown Material Rd	Kern	2012	67.4
SR 14 N. OF MOJAVE	Cal City Blvd to Minard Trail	Kern	2007	8.6
SR 58 MOJAVE FREEWAY BYPASS	California City Cutoff to 25th Street	Kern	2004	9.0
SOUTH SR 41	SR 41 from Manning Ave to Conejo Ave	Fresno	1999	15.0
HWY 180 EAST	Hwy 180 East expansion between Clovis Ave and Temperance Ave	Fresno	2009	4.6
STATE ROUTE (SR) 149	SR 149 from SR 99 to SR 70	Butte	2003	16.0

Note: Projects in rows that are highlighted in light green are in non-MSA RTPA region and are excluded from applying NCST calculator per Caltrans TAF; Unhighlighted are in MPO regions

Source: DKS Associates, 2024

4.2. ANALYSIS METHODOLOGY AND RESULTS

The sensitivity analysis involved a comprehensive examination of the countywide VMT growth over distinct time horizons: a three-year, 10-year, and 20-year period. These analysis horizons were selected pursuant to the NCST Calculator guidance and other research on the duration needed to allow the long-term induced effect to fully play out. The objective was to compare the actual Highway Performance Monitoring System (HPMS) VMT growth against a countywide VMT estimate that combines the elasticity-based induced VMT estimate, plus a forecast based on the baseline HPMS VMT (prior to the improvement being open to traffic) that is "grown" to a given horizon period using the county's population growth rate. Countywide VMT and population growth trends between 1990–2022 for the counties selected for this analysis are shown in **Figure 5**. As shown, little to no growth trend in either VMT or population is evident for the rural non-MSA RTPA counties, while more variance was experienced between VMT growth and population growth in the rural MPO counties.

As described, this analysis applied multiple databases, including the HPMS for countywide VMT information, Caltrans' countywide lane miles for road infrastructure data, and the Department of Finance (DOF) for population statistics. The temporal scope of the data ranged from 1990 to 2022, providing a robust dataset for an examination of long-term trends. Five projects could not be included in the 20-year horizon assessment, simply because they have not been open to traffic for that duration.

All the study projects considered in this analysis pertain to Class II and Class III facilities and apply a 0.75 elasticity factor used in the NCST Calculator as appropriate.

Figures 6 through 8 present a visual representation over a three-year, 10-year, and 20-year comparison between actual countywide VMT growth in conjunction with population growth and elasticity-based induced VMT derived from the NCST Calculator. Each figure corresponds to a different time horizon.

As shown, the NCST Calculator exhibited consistent overestimation issues in rural areas, regardless of whether the project was within an MPO region or not. The Calculator consistently overestimated (100 percent overestimation rate) for projects in non-MPO rural areas. For rural area MPO projects, the overestimation occurred 50 to 70 percent of the time depending on horizon year. This overestimation trend persisted across different forecast periods, including three, 10, and 20 years, although there was a gradual reduction in the magnitude of the overestimation over time. A noteworthy observation was the NCST Calculator's heightened sensitivity to incremental small capacity increases, leading to worse performance as the project's significance increased. This suggests that the Calculator is acutely sensitive (i.e., the larger the capacity increase, the larger its induced demand overestimation) and overly reactive to capacity adjustments.

No other SHS capacity increasing projects, other than the identified improvements, are accounted for in this sensitivity assessment. If for a given county additional SHS lanes miles were constructed between 1990- 2022 and incorporated, the NCST Calculator would yield a greater induced VMT increment contributing to a greater countywide VMT estimate.

FIGURE 5. DAILY VMT AND POPULATION GROWTH TRENDS (RTPA AND MPO)

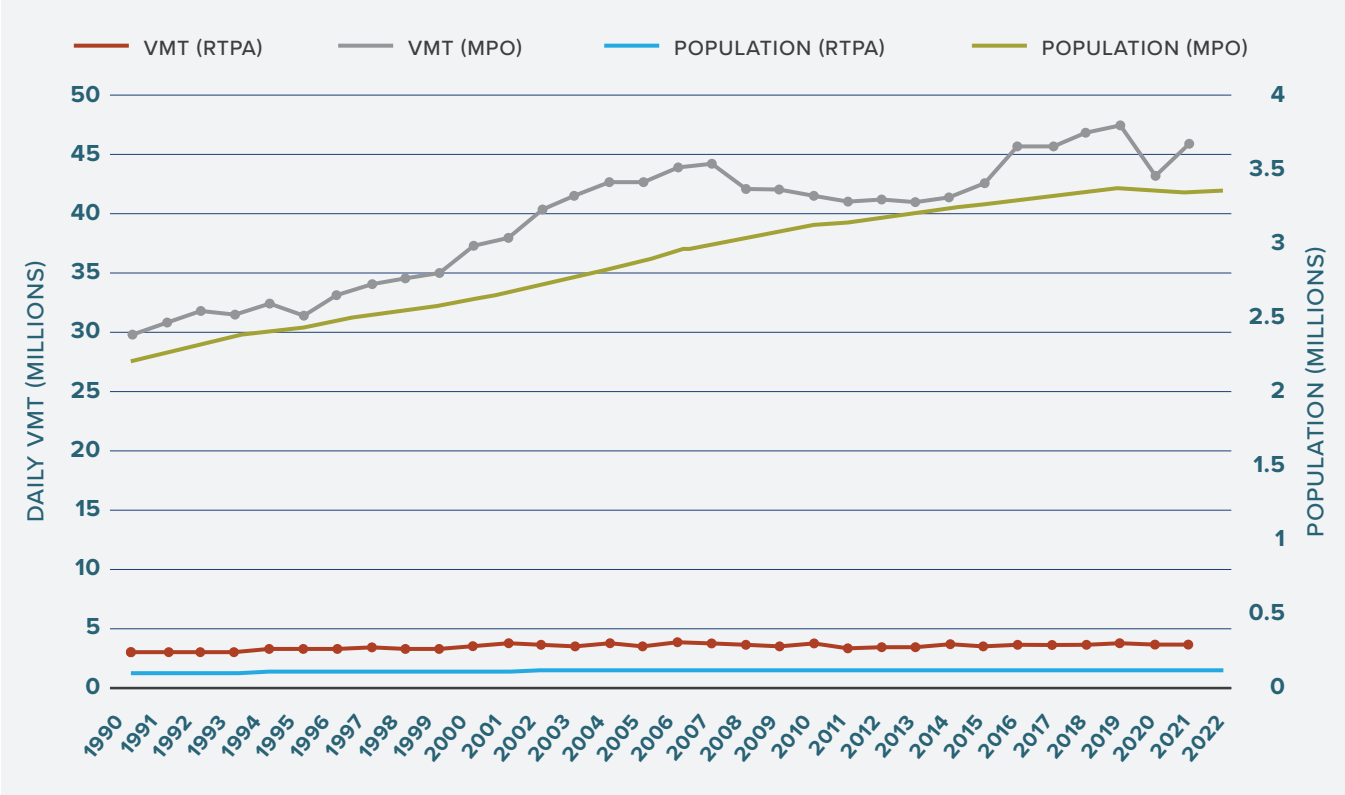


FIGURE 6. NCST CALCULATOR + POPULATION GROWTH VMT VS. HPMS VMT – 3-YEAR ESTIMATE COMPARISON

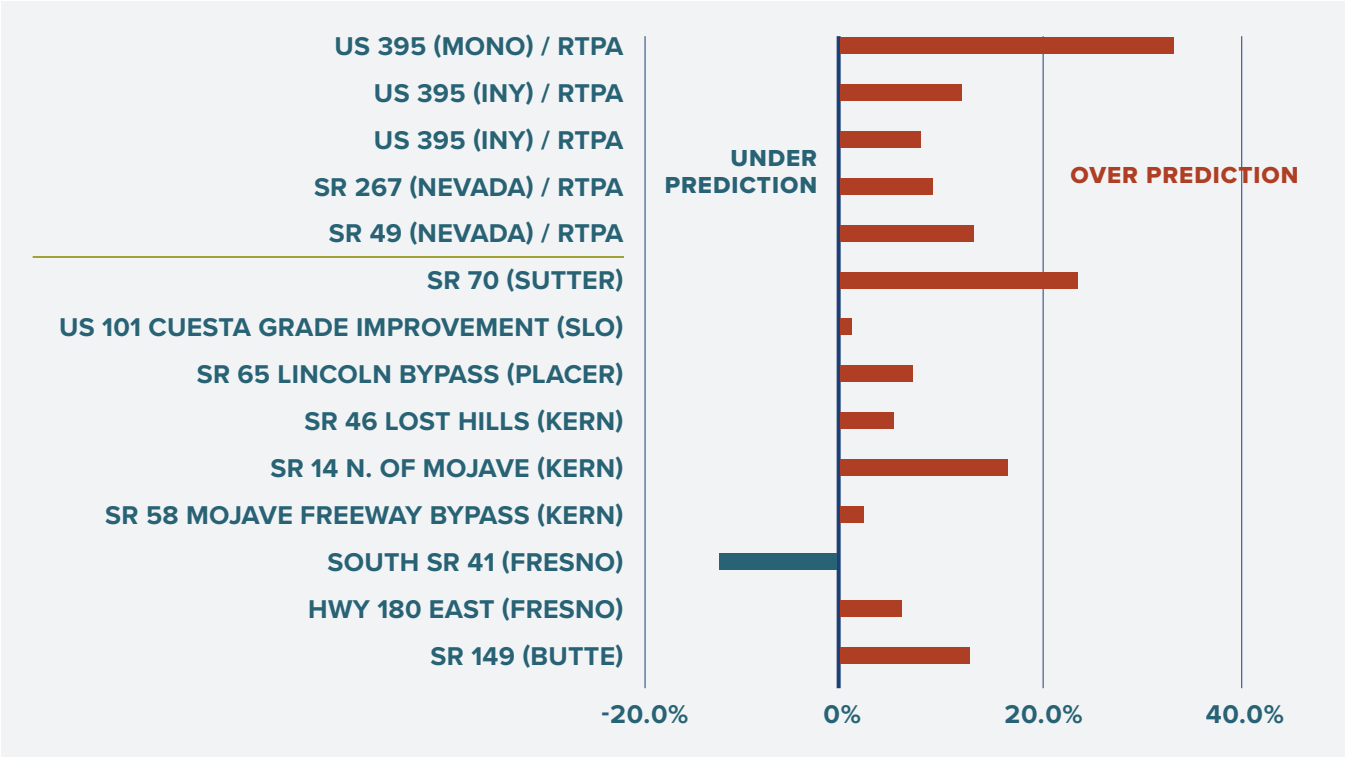


FIGURE 7. NCST CALCULATOR + POPULATION GROWTH VMT VS. HPMS VMT – 10-YEAR ESTIMATE COMPARISON

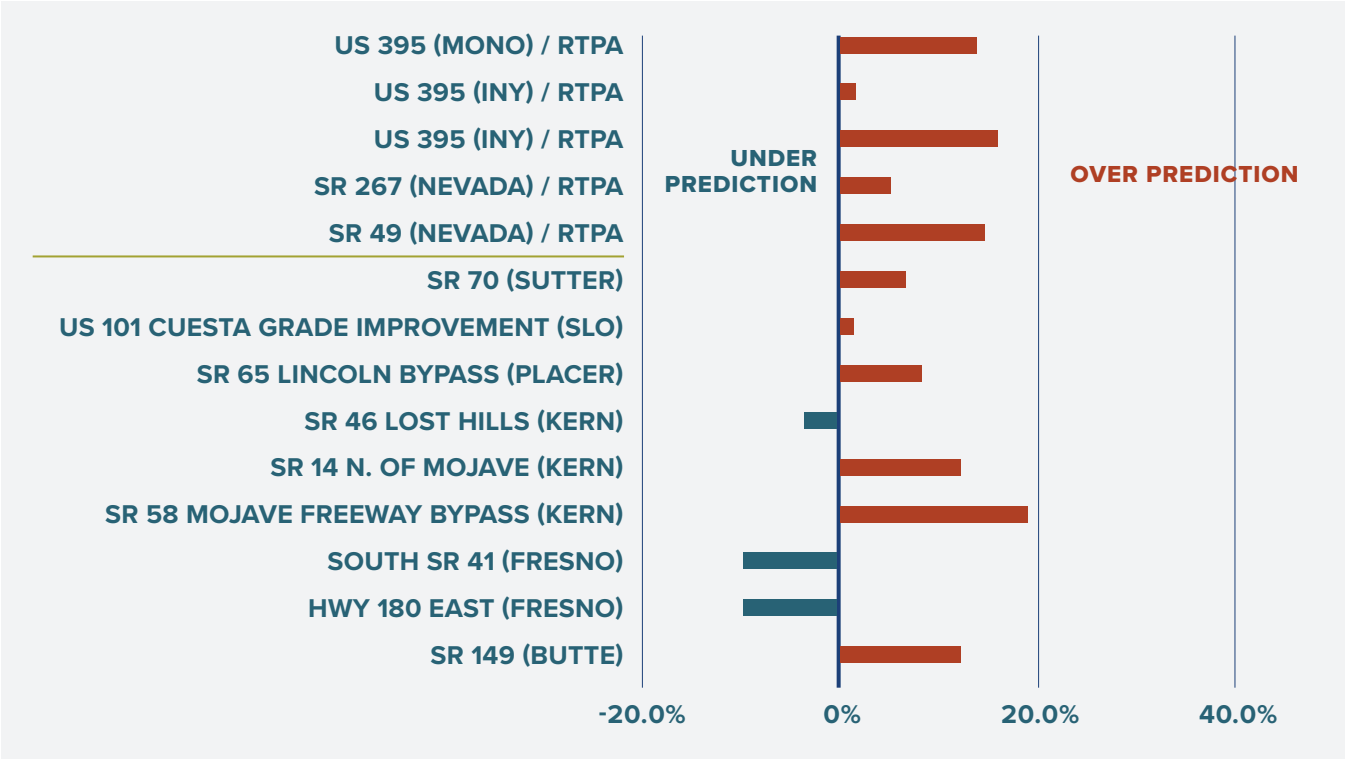
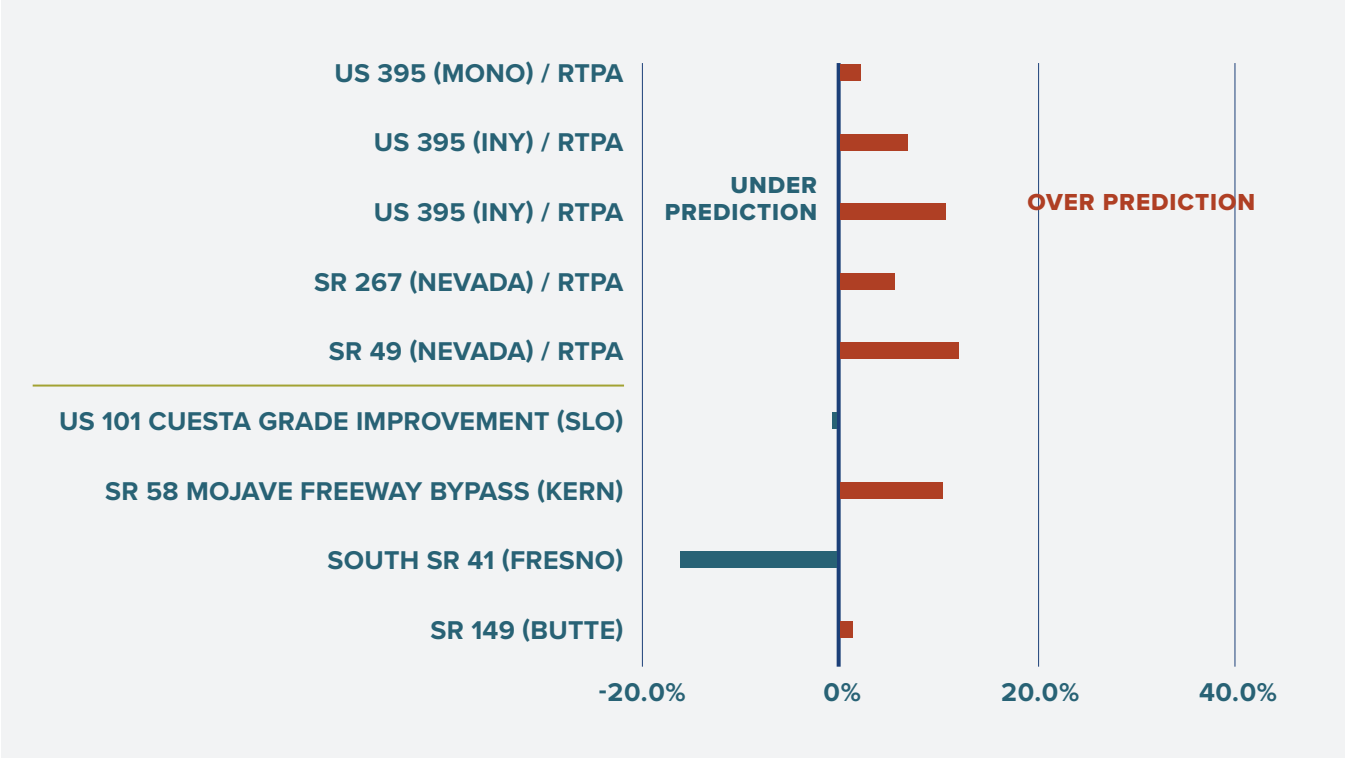


FIGURE 8. NCST CALCULATOR + POPULATION GROWTH VMT VS. HPMS VMT – 20-YEAR ESTIMATE COMPARISON



4.3. PROJECT SPECIFIC CASE STUDIES

Three of the 14 study projects were selected for a comprehensive examination with a focus on investigating the presence of congestion as a prerequisite condition. All three of these projects can be classified as "capacity expansion through widening." Each case study involves a before and after examination and makes findings on the underlying causal factors for VMT growth. These case studies underscore the need for the knowledge of local conditions to contextualize the findings from the Calculator, as noted in the documentation provided by the developers of the NCST Induced Demand Calculator. Lastly, two socio-economic exogenous factors affecting VMT growth in California are described.

CASE STUDY 1: US 395 INYO COUNTY

One expansion project where the Calculator came within two percent of the actual VMT with an assumed elasticity value of 0.75 is the US 395 widening (Project 7C) in Inyo County, completed in 2008. While the widening may have contributed to some induced demand, a careful review of the context points toward the major expansion of Broadband internet delivered by the CPUC's (California Public Utilities Commission) Digital 395 project as the most probable reason for the increase in residential and non-residential development and resulting VMT. Going as far back as 2001, the Inyo County General Plan called out the need for high-speed internet in the County as a necessary step to allow new development and business expansion in the County[1].

To address this need, the Digital 395 project was conceived in 2009 and completed in 2014 by the CPUC[2]. Since the completion of Digital 395, there has been a significant expansion in Broadband internet service, with 92.6 percent of households in the County currently served by broadband, up from close to zero households back in 2008 (when the highway expansion was completed). The VMT over-estimation in the three-year analysis (more than 10 percent) vs. the 10-year and timing of completion for the Digital 395 project (2014) is also consistent with the Digital 395 project being the major driver for new development and resulting VMT growth rather than the roadway expansion.

Overall, the results from projects in the non-MSA RTPA regions are consistent with the documentation provided as Frequently Asked Questions for the NCST's Calculator website, which state that "Calculator remains limited to use in California's 37 urbanized counties (counties within MSAs), since urbanized counties, urbanized areas, and MSAs were the units of observation and analysis used in the most relevant studies." The documentation provided with the Calculator based on Volker and Handy[3], along with the analysis presented in this report, makes it clear that the Calculator should not be used to estimate induced VMT outside of the 37 counties in the state that are served by an MSA. This is reconfirmed by the NCST calculator overestimation of all projects located in the non-MSA RTPA region.

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1 GP Goals and Policy Report 12.2001.Pdf. Inyo County USA. https://www.inyocounty.us/sites/default/files/2020 -02/GP%20Goals%20and%20Policy%20Report%2012.2001.pdf. Accessed Feb. 12, 2024.

2 California Broadband Cooperative. http://www.cbccoop.com. Accessed Feb. 12, 2024.

3 Volker, J., and S. L. Handy. Updating the Induced Travel Calculator. 2022.

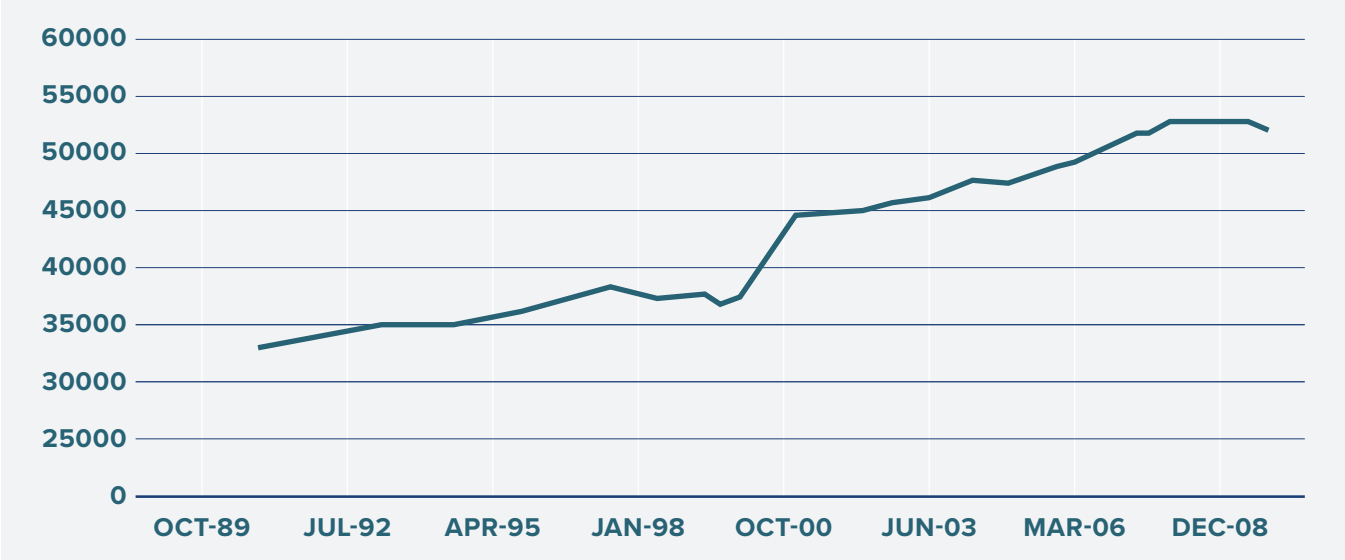
CASE STUDY 2: SR 41 SOUTH FRESNO COUNTY

Among the segments expanded from two lanes to four lanes, South SR 41 between Manning Avenue and Conejo Avenue is the only project where the Calculator consistently under-predicted the VMT increase over every time horizon. The project is part of the SR 41 corridor that connects the Naval Air Station (NAS) in Lemoore (Kings County, California) to the Fresno metropolitan area. The roadway expansion project was completed in 1999, and its completion almost coincided perfectly with the major expansion of the Naval Air Station in Lemoore. The Lemoore NAS was selected in July 1998 as the West Coast site for the F/A-18E/F Super Hornet strike-fighter aircraft, and the selection brought approximately 92 additional aircraft, 1,850 additional active-duty personnel, and 3,000 family members to NAS Lemoore over the subsequent years. The NAS also became home to four new fleet squadrons between 2001 and 2004[1].

Also, in 1994 the Santa Rosa Rancheria Tachi Yokut Tribe added slot machines at the Palace Indian Gaming Center just outside of Lemoore, which grew to 385 slots by 1997. In 2005, a major expansion was opened, and it was renamed as Tachi Palace. The following year, a seven-story, 255-room hotel was opened on the property. Employment grew to approximately 5,000 employees with the expansion.

These growth impacts may be seen in the total employment figures for the Kings County, CA employment data series shown as a 12-month moving average in **Figure 9**. There is a steep rise in employment starting in January 2000, coinciding with expansion at the NAS. The expansion of the NAS was certainly a strategic decision by the Navy. Similarly, the expansion of the Tachi Palace was also planned/inevitable. Hence neither must not be misconstrued as a development 'induced' by the South SR 41 expansion.

FIGURE 9. 12-MONTH MOVING AVERAGE EMPLOYMENT DATA SERIES FOR KINGS COUNTY[2]



1 NAS Lemoore Economic Impact. Navy.mil. https://cnrsw.cnic.navy.mil/Portals/84/NAS_Lemoore/Documents/NAS%20Lemoore%20Econ%20Brochure_E.pdf?ver=ojBwgOTy7bWxqOU9VgYdUw%3D%3D. Accessed Feb. 7, 2024.

2 Timelines Explorer - Data Commons. https://www.datacommons.org/tools/timeline#&place=geoId/06031&statsVar=Count_Person_Employed. Accessed Feb. 12, 2024.

It should also be noted that the expansion of the NAS Lemoore base coincided with the closure of the NAS Alameda base. Anecdotally, those closures resulted in lower traffic in Alameda (access routes to Alameda Island) during that time. This is an example of an issue raised earlier in the literature review that a shift in population and/or employment across jurisdictional boundaries should not be considered induced demand.

CASE STUDY 3: US 101 CUESTA GRADE

US 101 in San Luis Obispo County is one of the only rural routes where actual VMT matched closely with the NCST calculator's estimate of the expected VMT due to the addition of truck climbing lanes on Cuesta grade. The US 101 route where the truck climbing lanes were added connects the City of San Luis Obispo (the county seat) with the relatively sizeable northern communities of Atascadero and the burgeoning wine country of Paso Robles. The City of San Luis Obispo, in addition to being the county seat, is also home to large trip generators in the region, including the flagship CSU (California State University) campus (Cal Poly) and California Men's Colony prison. In the regional context, these north County cities (Atascadero and Paso Robles) function as bedroom communities to San Luis Obispo. This regional context may cause the VMT to rise following a capacity expansion on the only route connecting these bedroom communities with the Central Business District (CBD).

At the same time, there were other confounding factors that may cause VMT growth. For example, Cal Poly's enrollment increased 18.6 percent between 1998 and 2008 and 33.8 percent between 1998 and 2018[1]. Furthermore, the north county cities of Atascadero and Paso Robles were experiencing population growth above the county's growth even prior to the addition of the truck climbing lane. Housing stock data from the 1990s compared to the 2000s shows that North County cities (Atascadero and Paso Robles) saw a growth of 57.2 percent, while the City of San Luis Obispo observed a decline of 23.8 percent in their respective housing stock. The decline in the amount of housing being built in the City of San Luis Obispo resulted in median housing price growth of 84 percent from an already higher base, and the price increase was higher in percentage terms than both North County cities (~78 percent). While identifying the relative contribution of housing stock growth in the three

1 #Enrollment 15-Year Profile. Institutional Research. https://ir.calpoly.edu/enrollment-15-year-profile. Accessed Feb. 12, 2024.

cities on increased VMT is beyond the scope of this work, it does indicate that a significant amount of the VMT growth may be countered by pro-housing policies.

Truck climbing lanes are identified as a very effective crash safety countermeasure that reduces crashes by up to 43 percent (Crash Modification Factor (CMF) 0.57)[1]. The estimate is based on Haq et al.[2], and the study had a statistically rigorous safety evaluation process (based on its 4-star rating by the CMF Clearinghouse)[3]. This tradeoff between the "potential" for induced VMT or addressing a safety need through capacity expansion is being played out in many places in California. Should agencies forgo projects of such high safety benefits, especially since there may be other ways to mitigate VMT growth (in this example, through pro-housing policies near CBDs served by rural routes). On that front, it is a positive sign that, as of 2024, San Luis Obispo is recognized by the state of California as a pro-housing city[4].

CASE STUDY SUMMARY

In general, the findings from this analysis are consistent with how the NCST Induced Travel Calculator is intended to be used. The FAQs for the Calculator note that it is NOT intended to be used outside of the 37 California counties part of the MSAs.

Even on rural routes that fall within MSAs, it appears that the Calculator significantly overestimates the VMT increases in general.

In such cases, a careful review of context becomes critical. In areas where central business districts and bedroom communities are connected by rural routes, there may be a potential for a long-term induced effect. However, jobs-housing imbalances, geographically disparate housing markets and home prices and/or other exogenous factors including military base or university expansions are the actual drivers to increased travel demand.

Also, two examples of exogenous socioeconomic factors currently influencing VMT change in California include: Expansion of Indian Gaming in California; and Emergence of Transportation Network Companies (TNCs). The expansion of Indian gaming over the last 25 years is particularly applicable to rural areas of the State whereas the emergence of Transportation Network Companies like Uber and Lyft is most applicable to metropolitan areas.

EXPANSION OF INDIAN GAMING IN CALIFORNIA

Indian gaming in California significantly impacts VMT within the state due to the popularity and geographical distribution of casinos operated by Native American tribes. These gaming establishments serve as major attractions, drawing visitors from various regions, including urban centers and out-of-state areas. The attraction of casinos, coupled with the increased travel distances to rural and suburban areas where

1 CMF Clearinghouse. https://www.cmfclearinghouse.org/detail.php?facid=10074. Accessed Feb. 12, 2024.

2 Haq, M. T., M. Zlatkovic, and K. Ksaibati. Evaluating Safety Effectiveness of Truck Climbing Lanes Using Cross-Sectional Analysis and Propensity Score Models. Transportation Research Record: Journal of the Transportation Research Board, Vol. 2673, No. 7, 2019, pp. 662–672. https://doi.org/10.1177/0361198119847987.

3 CMF Clearinghouse. https://www.cmfclearinghouse.org/score_details.php?facid=10074. Accessed Feb. 12, 2024.

4 City News Center | City of San Luis Obispo, CA. https://www.slocity.org/Home/Components/News/News/10311/2359. Accessed Feb. 12, 2024.

many casinos are located, can lead to an increase in VMT. Conversely, the presence of more casino locations within California can reduce long-distance travel within the state and to neighboring states (i.e., Nevada).

A study[1] by the University of Nevada emphasizes the profound economic and social changes brought about by Indian gaming on reservations in California. While VMT is not the direct focus of this study, it highlights the broader impact of Indian gaming beyond its economic effects, illustrating its role in reshaping travel behaviors and mobility patterns in California. Another study[2] examines the economic and competitive effects of tribal casinos in California on Nevada's gaming industry. The expansion of tribal casinos in California starting in the 1990's has led to a significant shift in travel and gaming patterns. The study found that the accessibility of these tribal casinos has reduced the need for Californians to travel to Nevada, resulting in fewer long-distance trips but more regional trips within California, thereby contributing to higher VMT within the state. These casinos not only draw local visitors but also attract tourists from neighboring states, increasing travel distances and frequencies.

EMERGENCE OF TRANSPORTATION NETWORK COMPANIES

The emergence of Transportation Network Companies like Uber and Lyft has drastically transformed urban mobility by offering users greater convenience and flexibility. An Empirical Bayes approach study[3] examined the changes in VMT in Atlanta, estimating the impact of TNC operations on travel demand by comparing VMT changes to a hypothetical scenario without TNCs. The study indicates that TNC activity promotes VMT growth, challenging the expected benefits of TNCs in reducing car ownership and overall vehicle use through improved shared mobility. Based on a study performed by Fehr & Peers[4] revealed that in September 2018, TNCs accounted for approximately two and three percent of total VMT in Los Angeles and San Francisco regions respectively. When looking solely at the core county (Los Angeles County and San Francisco County), the share of TNC VMT is approximately three and 13 percent respectively. These findings reveal that TNCs contribute to higher VMT and greenhouse gas emissions, mainly due to deadheading and additional trips that would not have occurred without TNC services. Furthermore, TNCs have been found to decrease public transit usage, as some users opt for the convenience of TNCs over public transportation and non-motorized modes like walking and biking.

These are two just examples of exogenous socioeconomic factors that can have a significant influence on VMT change in California irrespective of roadway capacity expansion. Academic studies on induced demand would need to control for these factors or their residual effects could be misinterpreted as "induced" demand.

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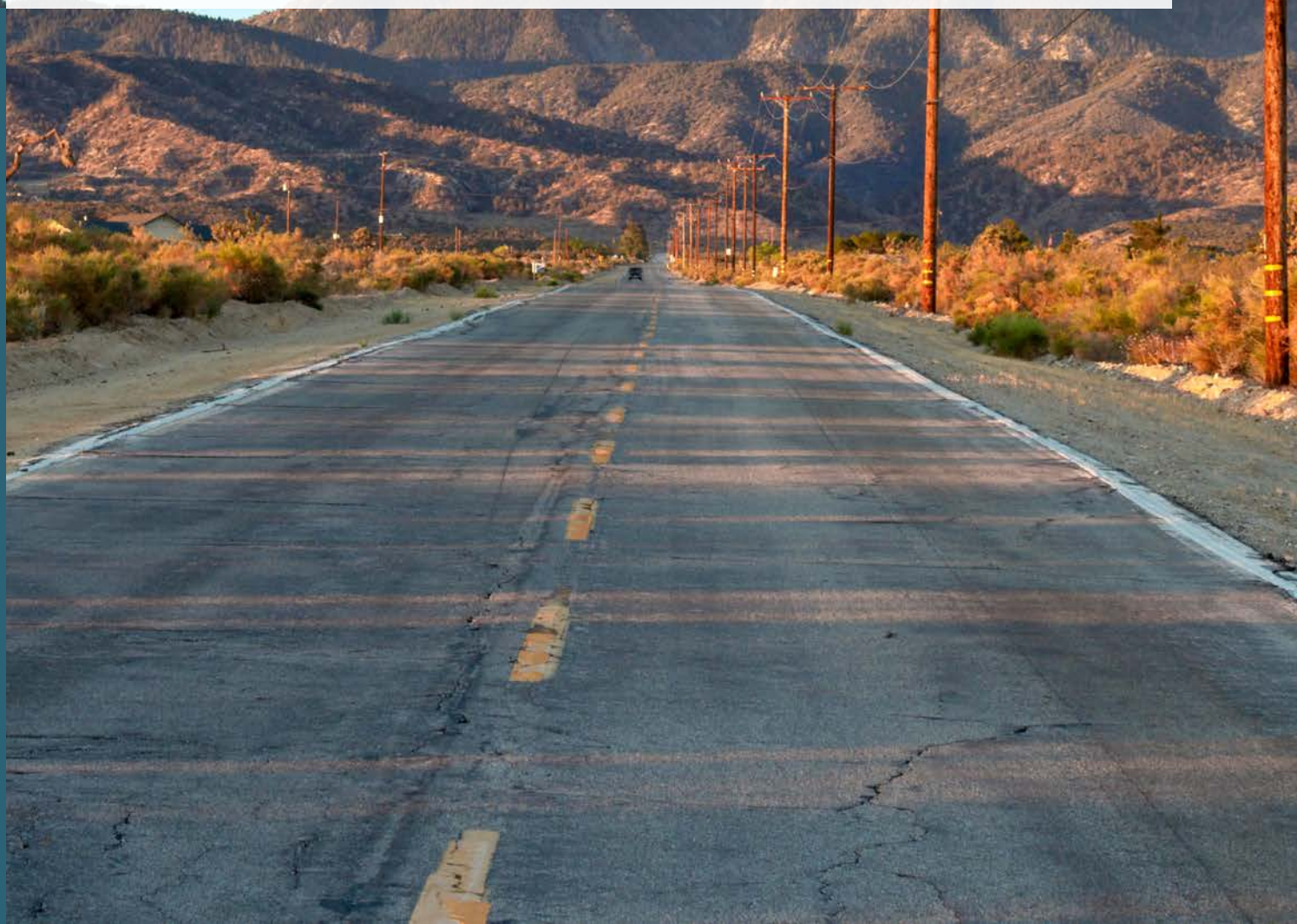
1 Randall A., Katherine S., Jonathan B. T., Social and Economic Changes on American Indian Reservations in California: an Examination of Twenty Years of Tribal Government Gaming, 2014

2 William R. E., Richard H. W., Derek G., Estimating the Impact of California Tribal Gaming on Demand for Casino Gaming in Nevada, 2010

3 Choi Y., Guhathakurta S., Pande A., An empirical Bayes approach to quantifying the impact of transportation network companies (TNCs) operations on travel demand, 2022

4 https://www.fehrandpeers.com/what-are-tncs-share-of-vmt/

5>
TECHNICAL GUIDANCE



5.0. TECHNICAL GUIDANCE

This section reviews current recommended methods to estimate induced VMT and provides recommendations and insights to assist practitioners and decision-makers in assessing the induced travel resulting from transportation capacity-increasing projects. The guidance draws upon the in-depth literature review and sensitivity testing performed in the earlier section.

5.1. CURRENT METHODS TO ASSESS INDUCED VMT

The Caltrans' TAF provides two approaches to assess the induced VMT attributable to a capacity-increasing state highway project: an aggregate elasticity approach using the NCST Calculator and applying a regional or local area travel demand model. Both the calculator and the travel demand models have strengths and limitations when estimating induced VMT depending on the specific corridor under analysis. Therefore, the reviewer needs to consider both the corridor context and analysis limitations when using VMT forecasts from either method.

The NCST Calculator elasticities rely solely on the addition of lane miles and are not sensitive to location-specific factors and the unique travel characteristics of a given project area. As such they do not account for the land use context, existing congestion/bottlenecks, improvements providing shorter travel routes, and geographic constraints.

Three validation procedures were considered during the development of the NCST Calculator. This included a simple comparison of VMT in the relevant area (county or MSA) before and after (e.g., 10 years after) a major capacity expansion project using HPMS data (similar to the sensitivity method performed as part of this study), a difference-in-differences analysis using facility level traffic flow data, and an interrupted time series technique using facility level traffic flow data. Ultimately, none of the three validation approaches were performed based on concerns over data issues, or the lack thereof, and technical challenges.

The NCST Calculator uses an elasticity of 1.0 for Class I facilities. Based on a review of the supporting research[1], components of the induced effect can be classified into four types of travel behavior responses, of which three can be stratified into either a Short-Term (i.e., capacity improvement elicits an immediate behavioral response) or Long-Term (i.e., full response takes three to 20 years to fully play out) induced effect. These are summarized below.

COMPONENTS OF INDUCED DEMAND

CHANGES IN COMMERCIAL DRIVING	= 19 to 29%
CHANGES IN INDIVIDUAL OR HOUSEHOLD DRIVING (SHORT-TERM EFFECT)	= 09 to 39%
DIVERSION OF TRAFFIC (SHORT-TERM EFFECT)	= 00 to 10%
CHANGES IN POPULATION – GROWTH AND MIGRATION (LONG-TERM EFFECT)	= 05 to 21%

Travel demand models are specifically built to reflect the local context of a given area. This includes roadway network detail and roadway attributes (functional classification, number of lanes, capacity) as well as parcel level land use data and land use projections that are based on the latest planning assumptions and economic and demographic

1 Duranton, G., & M. A. Turner (2011).

forecasts of the area. Travel demand models are developed to be sensitive to trip-making behavior in response to changes in accessibility, travel times, and other cost impedances. As such, travel demand models are sensitive to the short-term effects of highway capacity-increasing projects and account for VMT changes resulting from diversion (diversion from other facilities[1], diversion from other modes, consolidation of trips) and the induced VMT caused by a change in origin-destination and trip lengths due to changes in accessibility/travel time (i.e., accessibility improvements that result in travel time reductions allow a given motorist to travel longer distances while maintaining their overall all travel costs). The use of a calibrated/validated 4-step or activity-based travel demand model is more appropriate for capturing these short-term induced demand effects[2] for a given project or program of projects. In fact, care must be taken to ensure that these effects are not double-counted if a travel demand model is used in conjunction with an elasticity-based method like the NCST Calculator. Conversely, most travel demand models do not include a feedback mechanism to the regional land use allocation process. As such, changes in accessibility resulting from network changes (i.e., capacity improvements), would not exact a change in land use. For example, a constrained corridor with worsening accessibility characteristics may result in a long-term private/public market response that otherwise would differ if the corridor operations were improved. Hence, travel demand models in themselves do not explicitly have the ability to capture the long-term induced effect, which based on NCST research, constitutes up to a maximum of 21 percent of the 1.0 elasticity. The lack of land use response to the individual project network changes may result in the model not capturing the expected induced travel due to potential changes in land-use allocations over the planning horizon.

5.1.1. TRAVEL DEMAND MODELS

Travel demand models are specifically built to reflect the local context of a given area or region. This includes travel demand characteristics (via household travel surveys and other locally generated data), roadway network and roadway attributes (functional classification, number of lanes, capacity) as well as parcel level land use data and land use projections that are based on the latest planning assumptions and economic and demographic forecasts of the area. Travel demand models are also held to a high standard of use when applied for federal or state funded or mandated planning purposes. Before being applied, travel demand models must demonstrate that they meet established federal/state calibration/validation criteria. Several travel demand model application topics that relate to induced VMT are described below.

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1 Motorist choice of alternative routes to avoid congestion may be on routes with shorter travel times but require longer distances to travel. Improvements to roadways of a higher functional classification (i.e., state highway facilities) that reduce travel times relative to available non-state parallel routes will invariably attract these trips back onto the primary facility which will lower VMT. New roadway connections such as a river bridge can also significantly lower VMT by establishing are more direct route for travelers who would make the trip regardless of the improvement, or conversely, increase VMT by tapping into latent demand caused by the congested bridge. Given that these effects can work both ways, a more plausible/defensible induced demand range for diversion of traffic would be -10 to 10 percent rather than 0 to 10 percent.

2 3-step travel demand models capture all the short-term induced effect of 4-step models less diversion to other modes (reflected as part of: Changes in Individual or Household Driving). Given that transit service and service frequencies in rural areas are less than in urban areas and that choice ridership (those that would otherwise drive if not for transit service) is relatively less in rural areas than urban, application of a 3-step model in a relatively rural county/area does not introduce significant error to the travel forecasting process.

5.1.2. DYNAMIC TRAFFIC ASSIGNMENT

Travel demand models typically employ static traffic assignment procedures when assigning trips onto the model roadway network. Travel models use aggregate link-level travel time information over a few time-of-day periods to assign traffic. This results in every vehicle traveling over the same set of links within a particular period. Although volume-to-speed curves (i.e., BPR curves) specific to link type (i.e., functional classification) are applied for static assignments, these can only affect the pathing/routing of trips when meeting a given origin-destination (O-D) pair. Ultimately, all O-D pairs must be satisfied, which may result in some links (i.e., roadways) experiencing a volume/capacity ratio greater than 1.0. This may result in an overestimation of the degree of future year congestion as many motorists would vary their departure times to avoid congested peak periods. This might exaggerate the estimated operational benefits of a capacity increasing project. Conversely, dynamic traffic assignment utilizes finer demand slices (such as 15 minutes) and a shortest path algorithm (travel time, delay) to accommodate route changes and varying times of departure to avoid congestion. It reflects realistic traveler behaviors such as time of departure and route selection. However, the use of dynamic traffic assignment will have a negligible impact on daily VMT estimation given that the temporal changes in trip making (i.e., from peak to the off-peak periods) will not result in a change in total number of daily trips.

5.1.3. VMT BENCHMARKING

The Caltrans TAF guidance suggests if the induced VMT estimate from a travel demand model is within 20 percent of the NCST Calculator estimate, the travel demand model estimates can be used for CEQA purposes. If the travel demand model induced VMT estimate differs by more than 20 percent relative to the NCST Calculator, the NCST Calculator should be either be used exclusively or be used to benchmark the travel demand model.

Benchmarking is the process of modifying the travel demand model's inputs (i.e., land use inputs) to generate induced VMT results that come within 20 percent of NCST Calculator estimate. This is done by adding "hypothetical" land use in order to increase model vehicle's trips (and therefore VMT) along the improved corridor. Select link analysis is used to identify the origin and destination zones that would generate trips that would be assigned to the improved facility/corridor. Additional land use is then incrementally (and artificially) added to the origin and/or destination zones until the model achieves the target-induced VMT.

Benchmarking is concerning given the questionable modeling practice of arbitrarily adding land use inputs to zones that are inconsistent with the local jurisdiction's General Plan or the regional RTP/SCS land use to generate a pre-conceived outcome. It is also concerning to artificially "jerry rig" a calibrated/validated model that reflects the local context in order to emulate the results of a non-calibrated/validated aggregate elasticity-based tool devoid of local context. Benchmarking also introduces the potential for double counting of the short-term induced demand responses. Given that a calibrated/validated travel demand model can effectively

capture the short-term induced effects, which constitute approximately 50 percent of the 1.0 elasticity for Class I facilities, the within 20 percent tolerance threshold for triggering the need for benchmarking appears too stringent – particularly if these are superior to the aggregate elasticity-based method for accurately estimating induced VMT.

5.1.4. CALTRANS TAF MODEL CHECK LIST

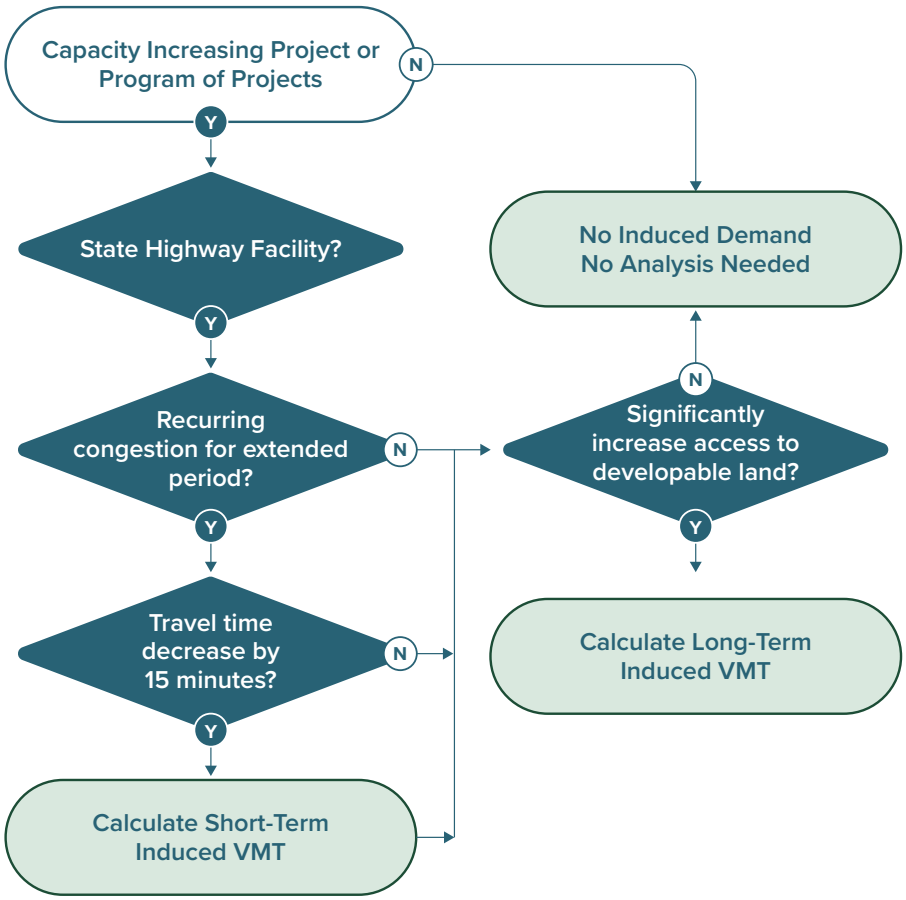
The TAF provides a checklist for evaluating the adequacy of travel demand models for estimating induced travel related to state highway facilities. This list does not differentiate between short-term or long-term induced effects as applicable to desired/recommended modeling features. For instance, travel demand models that meet the calibration/validation criteria documented in the 2024 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations (CTC, January 2024) and Regional Transportation Planning Agencies (CTC, January 2024) respectively are capable of capturing the short-term induced effects resulting from new roadway capacity and can be applied for that purpose (see also Section 5.3).
As stated in the previous section, travel demand models cannot explicitly capture the long-term induced effect. The TAF checklist, which includes the requirement of land use response to network changes (i.e., a feedback mechanism between the travel model and a land use allocation model) only applies to this long-term induced increment which based on NCST research constitutes 21% of the elasticity of 1.0. This suggests that combining travel demand model and aggregate elasticity-based tools may be more appropriate when a long-term induced effect is at play. Use of hybrid approaches are described in Section 5.3.

5.2. INDUCED VMT SCREENING CRITERION

Based on the research presented earlier in the document, it is clear that not all lane miles are created equal. In other words, lane mile additions do not automatically result in induced VMT. This is particularly plausible in rural areas where many of the key factors that need to be present if an induced effect is even possible generally do not exist. The induced demand effect is dependent on various factors – the most significant being the presence of significant recurring congestion on the corridor (i.e., latent demand), travel behavior dynamics, availability of developable land, and other factors. Understanding these complexities is essential for screening projects susceptible to induced VMT. **Figure 10** presents a proposed screening criterion for determining when an induced VMT analysis is warranted[1].

If a project or program of improvements cannot be screened from having to perform an induced VMT analysis, the following section provides recommendations to more appropriately apply the NCST Calculator (or any aggregate elasticity approach).

FIGURE 10. INDUCED VMT SCREENING CRITERION



1 Other important considerations should also include whether the project results in approved development or if the project will result in a diversion that reduce VMT rather than increasing it.

5.3. RECOMMENDED APPROACHES TO ADDRESS INDUCED DEMAND

The literature notes a critical consideration regarding Caltrans's existing methodology for estimating induced VMT, emphasizing its potential unsuitability for rural counties. The literature suggests that any assessment of potential VMT in rural areas should account for factors influencing travel behavior, such as travel time/congestion and the specific land use context, indicating the need for a more nuanced and context-sensitive approach. This statement should be broadened to all areas – rural and urban but is most prevalent for rural areas.

Travel demand models are built upon actual and planned land use, existing roadway network, and local/regional travel characteristics (i.e., household surveys) ostensibly calibrated/validated to state/national criteria governing the use of travel demand models. Travel demand models are specifically designed to capture the short-term induced effect associated with changes in accessibility (i.e. added network capacity). Given their greater comprehensiveness and technical veracity, travel demand models should be considered superior to one-variable aggregate elasticity-based methods for estimating short-term induced demand.

Hybrid approaches that apply both a travel demand model and an elasticity-based method have been proposed. Hybrid approaches attempt to match the appropriate analytical method depending on the type of induced VMT effect anticipated (short-term, long-term, or both). The analysis approach will depend on the modeling capabilities available. Hybrid methods have been explored in the paper "Balancing Congestion Relief and Induced VMT."[1]

The premise of any hybrid approach is that a well-calibrated/validated travel demand model is capable of capturing short-term induced demand resulting from increased roadway capacity. Recent research from the University of Kentucky reinforces the applicability of travel demand models in estimating short-term induced VMT. As shown in **Figure 11**, models developed and applied in the 1980s were less effective at forecasting VMT than models applied since 2005. This may be the result of advancements in travel modeling (i.e., the use of activity-based constructs and/or more robust data inputs) and/or land use being more regulated (i.e., allowing future land use growth patterns to be better understood/predictable). The figure illustrates that since 2008 travel demand model forecasts on average are doing a better job emulating if not slightly over-predicting actual ground-truth VMT growth (and any short-term induced effect that may be contributing to that growth).

Hence, assuming the availability of a validated travel demand model, the following hybrid approach is proposed. This approach is designed to be used in conjunction with the screening process shown in **Figure 10**.

- **Areas with 4-step or Activity-Based Travel Demand Models**
  - » Use travel demand model to estimate short-term induced effect (less commercial truck component)
  - » If the long-term induced effect is applicable, use a maximum induced elasticity of 0.21[2].
  - » If no long-term induced effect is anticipated, no adjustment is needed.

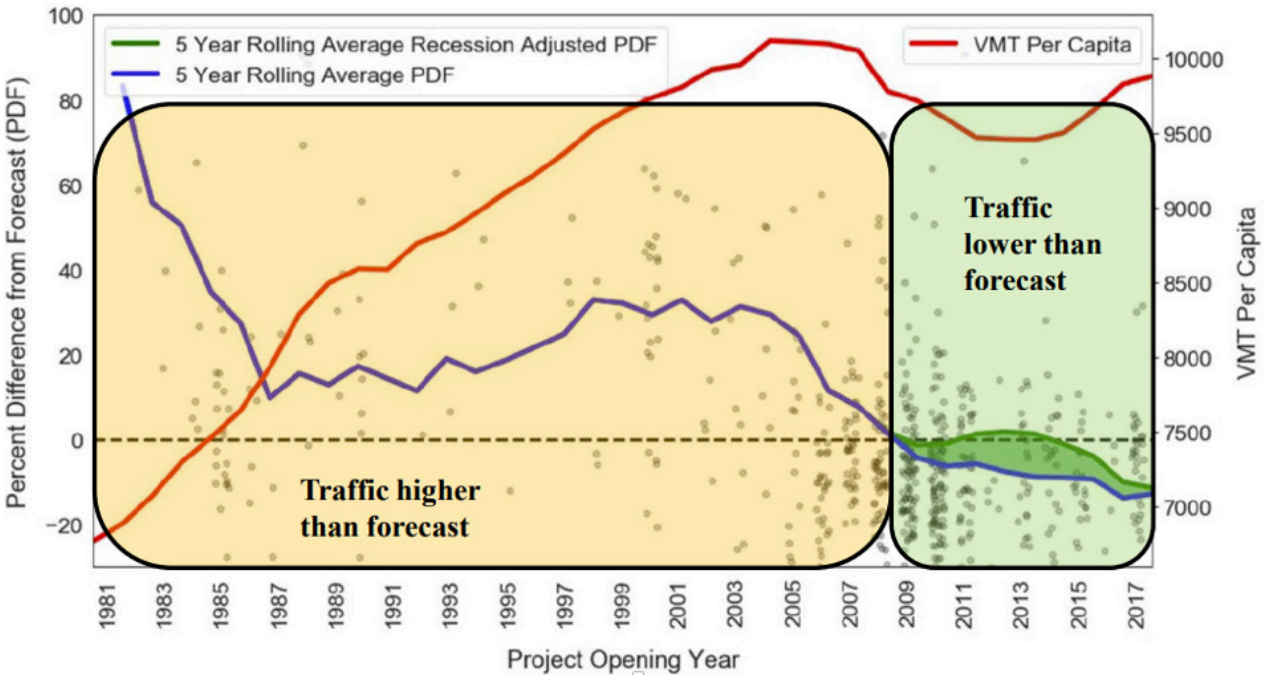
1 Milam, Walters, Gill, 2022

2 Source: NCST Calculator – high end of the long-term effect "Changes in Population" component.

- **Areas with 3-step Travel Demand Models**
  - » Use travel demand model to estimate short-term induced effect (less commercial traffic component)
  - » If the short-term induced effect is applicable, use a maximum induced elasticity of 0.09[1].
  - » If the long-term induced effect is applicable, use a maximum induced elasticity of 0.21[2] (urban area).
  - » If no long-term induced effect is anticipated, no adjustment is needed.
- **Areas with Land Use Allocation model with validated feedback mechanics**[3]
  - » No adjustments are needed for long-term induced effects.
- **Areas with no travel demand model (statistical trends, statewide model, big data)**
  - » Apply qualitative analysis tools.

Note that this approach is indifferent to area type and should be applied regardless of area type, whether urban or rural. However, it is applicable to rural or urban areas within an MPO region only. Rural counties outside of MPO should not use the NCST Calculator consistent with Caltrans' TAF.

FIGURE 11. TRAVEL DEMAND MODELS ESTIMATING SHORT-TERM INDUCED VMT



Source: Hoque, et al. The Changing Accuracy of Traffic Forecasts. Transportation, 2021.

1 Given that 3-Step models cannot reflect mode shift from transit to driving, this elasticity reflects the low-end elasticity response of "Changes in individual or household driving" (0.9).

2 Source: NCST Calculator – high end of the long-term effect "Changes in Population" component.

3 Dynamic validation: to demonstrate that the land use allocation process is sensitive to changes in accessibility

5.4. TRAVEL MODEL VALIDATION REQUIREMENTS

To ensure the reliability of a travel demand model in forecasting traffic, it must undergo thorough validation to closely replicate existing traffic patterns in the region. This validation process entails comparing the model's output with observed data and necessary adjustments to the model parameters (calibration) until the outputs fall within an acceptable range of error. The Caltrans 2024 Regional Transportation Planning RTP Guidelines provide recommendations on travel demand model quality control and consistency. The guidance includes static validation and dynamic validation (model sensitivity) criteria to check the model's predictive capabilities before it is used to generate forecasts. The static validation checks recommended in the RTP guidelines are presented in **Table 5**.

In addition, the validation criterion recommended in the Caltrans RTP guidelines, the Travel Model Validation and Reasonability Checking Manual (FHWA 2010b), recommends additional checks, including screenline/cutline checks and VMT by functional class and Annual Average Daily Traffic (AADT). The VMT metric is important for validating transportation models as it serves as a key indicator of the accuracy and reliability of the model's predictions. VMT is also utilized for environmental impact assessment, policy development, and assessing and mitigating the impacts of transportation projects, funding allocation, and potential gas-tax revenues. As such, it should be included in the model validation process. However, VMT validation should only be applicable to agencies that can generate boundary-based countywide VMT estimates (to match the countywide VMT HPMS estimate) and that have 90-10 HPMS sample precision level (i.e., Federal non-attainment areas of the National Ambient Air Quality Standards classified as Serious or above). Modeled regional baseline VMT should generally be within three percent (plus or minus) of the observed regional VMT estimate.

The TAF Guidelines recognize modeling processes that include a travel demand model with direct feedback to a land use allocation model for estimating long-term induced demand. As such, the Caltrans RTP guidelines should be amended to include guidance on dynamic validation methods that, if applied, adequately demonstrate the modeling process is appropriately sensitive to generate differing development patterns as a result of changes in accessibility.

TABLE 5. RECOMMENDED STATIC AND DYNAMIC VALIDATION CRITERION

VALIDATION METRIC	THRESHOLDS
PERCENT OF LINKS WITH VOLUME-TO-COUNT RATIOS WITHIN CALTRANS DEVIATION ALLOWANCE	At Least 75%
CORRELATION COEFFICIENT	At Least 0.88
PERCENT ROOT MEAN SQUARED ERROR (RMSE)	Below 40%
DIFFERENCE BETWEEN ACTUAL COUNTS TO MODEL RESULTS FOR A GIVEN YEAR BY ROUTE GROUP (E.G., LOCAL BUS, EXPRESS BUS, ETC.)	+/- 20%
DIFFERENCE BETWEEN ACTUAL COUNTS TO MODEL RESULTS FOR A GIVEN YEAR BY TRANSIT MODE (E.G., LIGHT RAIL, BUS, ETC.)	+/- 10%

5.5. RECOMMENDED CHANGES TO THE NCST CALCULATOR

Caltrans has provided further guidance that induced demand associated with goods movement (i.e., commercial truck activity) should not be reflected in any SB 743 or SB 375 analysis of induced demand[1]. Given findings from the literature review of this study, it is also recommended that if a validated travel demand model is available, the short-term induced demand will likely be double counted if used in conjunction with the NCST Calculator. Given these issues, it is recommended that a more flexible user interface be developed for the NCST Calculator that allows the analyst to determine which induced demand effects and elasticities should apply for a given analysis.

Additionally, Research Report 717, "Assessing Induced Road Traffic Demand in New Zealand," (a study that employs the same foundational research[2] as the NCST Calculator to calculate induced VMT), emphasizes that causal factors vary based on the project context, often resulting in elasticity values less than 1.0. The report underscores the substantial impact of incorporating roadway volumes, changes in travel time due to the project, and the potential for traffic diversion on induced demand.

This research considers estimating induced VMT due to new lane additions but also warns of several limitations. The generalized assumption can lead to biases due to regional variability and changes over time. The tool accounts for user input on travel costs (a generalized cost that combines travel time and vehicle costs) changes, as well as diverted traffic/latent demand, to estimate the induced VMT for a given roadway expansion project. The tool also cautions that utilizing an elasticity-based approach is more suitable for program-level rather than project-specific evaluations.

The following steps are recommended for improving the applicability of the NCST tool:

- **Flexible Interface:** Develop a more interactive user interface that allows the analyst to input which induced demand effects and elasticity values are appropriate for a given analysis context.
- **Context-Specific Elasticities:** Develop a more nuanced approach that incorporates context-specific elasticity values. To improve accuracy, recognize regional variations and project-specific conditions.
- **Incorporate Travel Time Changes:** Enhance the tool to factor in changes in travel time/cost more explicitly. Consider using analytical tools (demand or simulation models) that can capture the impact of travel time reductions or increases due to the project.
- **Account for Latent Demand:** Improve the estimation of latent demand by including more detailed data on potential users who are not currently traveling due to existing congestion (Origin-Destination analysis—big data or demand models).
- **Validation and Calibration:** Regularly validate and calibrate the tool against real-world data and outcomes from completed projects. This will help ensure that the tool remains accurate and reliable over time.

By implementing these recommendations, the NCST Calculator can provide more contextually relevant estimates of induced VMT, although the use of an elasticity-based approach should be limited to a program-level evaluation whenever possible.

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1 https://dot.ca.gov/programs/esta/sb-743/resources/ncst-truck-adjustment

2 Duranton, G., & M. A. Turner (2011).

6>
CONCLUSION

6.0. CONCLUSION

Caltrans adopted VMT as the primary metric for evaluating transportation impacts on the SHS in response to SB 743 and OPR guidance. The guidelines emphasize assessing induced travel effects, yet tools and guidelines may not suit rural contexts, potentially hindering rural project competitiveness for state funding. In many rural highway corridors, congestion isn't a significant issue, with no latent demand present. Consequently, the focus of rural improvements tends to prioritize safety, operational efficiency, goods movement, and evacuation preparedness rather than congestion relief.

Based on the evidence presented in the literature review, aggregate elasticity-based approaches, particularly those that rely solely on lane-mile addition (e.g., the NCST Calculator), are inadequate for project-level induced VMT analysis. While lane-mile additions may serve as a proxy for travel time reductions in congested urban areas, the NCST Calculator does not adequately address projects in regions where changes in travel time and the presence of latent demand are not significantly present for induced demand to occur.

The literature review highlights shortcomings in current approaches to assessing induced demand, particularly in rural contexts, and emphasizes the importance of incorporating relevant findings into policymaking. The report highlights numerous relevant findings that haven't been incorporated into current guidance, which is essential for policymaking. Findings include recognizing that lane miles is an imperfect measure for travel time savings, as induced travel primarily results from reduced travel times rather than increased capacity. Moreover, regulatory guidance from entities like OPR and Caltrans lacks specificity for rural projects, leaving evaluation methods ambiguous. While various regulatory bodies acknowledge the importance of assessing induced VMT, there's a need for tailored methodologies and further research to address rural transportation challenges effectively.

Based on a comprehensive review of literature and research findings, a screening criterion has been developed to delineate the primary factors that must be met before considering performing an induced VMT analysis. The study recommends an approach for screening whether an induced effect is possible for a given roadway improvement project – regardless of area type – and further technical guidance for estimating induced VMT through a hybrid approach. These findings and recommendations strongly support the need to amend or revisit existing state guidance documents.

INDUCED DEMAND ANALYSIS RECOMMENDATIONS

Based on a comprehensive review of literature and research findings, the primary recommendations of this study are:

- Aggregate elasticity-based methods (like the NCST Calculator) should be used with caution for CEQA Project Level Analysis (Rural, Suburban, or Urban). The use of such methods for project-level analysis is not supported by the literature and generally lacks the requisite context and specificity required for CEQA project-level analysis.
- Capacity-increasing projects that do not exhibit the following requisite conditions for an induced effect should not be analyzed for induced effects or penalized by grant funding scoring criteria, Caltrans CSIS criteria, or funding decisions by the CTC or other State agencies:
  - » Presence of significant congestion to generate latent demand;
  - » Potential to yield significant travel time savings (15 minutes or more per motorist); and
  - » Increases access to existing or future marketable/developable land (i.e., land not constrained by topography or regulation).
- For programmatic regional analyses (i.e., programmatic EIR's and SCS analyses), the application of the NCST Calculator and lane mile input variables should be predicated on whether the factors that cause induced demand resulting from capacity increases are present (per proposed screening presented in Figure 10 of the report), including the availability of a validated travel demand model.

RECOMMENDATIONS TO UPDATE STATE GUIDANCE DOCUMENTS

The study proposes a recommended approach for estimating induced VMT regardless of area type (rural or urban). These findings and recommendations strongly support the need to amend or revisit existing state guidance documents.

- The CAPTI should consider expanding the list of appropriate improvement projects to include rural area projects that are not deemed likely to induce VMT. This includes roadway capacity-increasing projects with societal co-benefits (e.g., greater accessibility to needed services and facilities, evacuation, etc.).
- Guidance in the California Regional Transportation Plan Guidelines for validating and calibrating regional travel demand models should be updated to be more sensitive to addressing induced VMT. The RTP Guidelines should include guidance regarding if and how the NCST Calculator should be used in conjunction with a travel demand model. The guidelines should also provide guidance for performing dynamic validation of modeling processes that include a feedback mechanism between the travel demand model and a land use allocation model.
- NCST Calculator benchmarking should not be a recommended practice.
- Lastly, the OPR CEQA SB 743 Implementation Guidance and Caltrans' TAF and TAC should also be amended to incorporate the findings and recommendations from this study.

RECOMMENDATIONS TO UPDATE NCST CALCULATOR

The following steps are recommended for improving the applicability of the NCST tool:

- **Flexible Interface:** Develop a more interactive user interface that allows the analyst to input which induced demand effects and elasticity values are appropriate for a given analysis context.
- **Context-Specific Elasticities:** Develop a more nuanced approach that incorporates context-specific elasticity values. To improve accuracy, recognize regional variations and project-specific conditions.
- **Incorporate Travel Time Changes:** Enhance the tool to factor in changes in travel time/cost more explicitly. Consider using analytical tools (demand or simulation models) that can capture the impact of travel time reductions or increases due to the project.
- **Account for Latent Demand:** Improve the estimation of latent demand by including more detailed data on potential users who are not currently traveling due to existing congestion (Origin-Destination analysis—big data or demand models).
- **Validation and Calibration:** Regularly validate and calibrate the tool against real-world data and outcomes from completed projects. This will help ensure that the tool remains accurate and reliable over time.

By implementing these recommendations, the NCST Calculator can provide more contextually relevant estimates of induced VMT, although the use of an elasticity-based approach should be limited to a program-level evaluation whenever possible.

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Mono County
Local Transportation Commission

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LTC Staff Report

TO: Mono County Local Transportation Commission

DATE: April 14, 2025

FROM: Chad Senior, Associate Engineer

SUBJECT: Update on Mono County Transportation Projects

RECOMMENDATIONS: Receive quarterly update from Mono County regarding status of transportation projects.

FISCAL IMPLICATIONS: n/a

ENVIRONMENTAL COMPLIANCE: Environmental compliance is determined during appropriate component of project development on a project-by-project basis.

RTP / RTIP CONSISTENCY: These projects are programmed in previous and current STIP cycles and under Mono County's 5-year Capital Improvement Program. Consistency with the RTP/RTIP was established at time of programming.

DISCUSSION:

Status of current projects.

Mono County Transportation Projects in Construction Phase

PROJECT	DESIGN FEATURES	STATUS
Mono County Guardrail Replacement Project Phase 1 (HSIP and SB1/RMRA)	Upgrade of existing guardrail at select locations throughout the county including portions of Benton Crossing Rd, Lower Rock Creek Rd, Twin Lakes Rd, and Gull Lake Rd.	This project will be bid for construction in April 2025. Construction Summer / Fall 2025 depending on bids received.

Mono County Transportation Projects in Phases Prior to Construction

PROJECT	DESIGN FEATURES	STATUS
Pinenut Road Rehabilitation (SB1 / RMRA Funding)	Rehabilitation of Pinenut Road in Walker.	PS&E in-progress; Project to be bid for construction in May or June 2025.
Aspen Springs Ranch Road Rehabilitation (SB1 / RMRA Funding)	Rehabilitation of Aspen Springs Ranch Road in the community of Aspen Springs.	PS&E in-progress; Project to be bid for construction in May or June 2025.
Swall Meadows Emergency Access Road (LTC OWP, Whitebark Institute)	Project scoping for emergency access route from Quail Circle to Swall Meadows Road.	Road alignment feasibility study is complete. This project is ready to move from planning phase to project phase when needed funding is obtained.
Saddlebag Lake Road Project (FLAP with local match)	Road and drainage improvements to provide full-width paved roadway to Saddlebag Lake.	Environmental and preliminary design is in-progress. Construction scheduled for 2028.
Benton Crossing Road Rehabilitation Project – Phase I (STIP, Federal Funding)	Rehabilitation and Benton Crossing Road from Highway 120 to approximately 7 miles west. Note, paved bike lanes have been removed from the project scope due to ROW issues.	Environmental and Right-of-Way phases in-progress. Construction scheduled for 2026-27.

Public Works Engineering
Capital Project Update
April 2025 - LTC

Project	Notes	Budget
CRC "Phase 2" - Interior TI Work	The front LA Kings sign/pergola has been installed. Concrete flooring, partition wall and lights for bleacher area installed on top of locker room. Progress is being made towards the installation of stairs and bleachers by the end of the month. with the ADA lift and office spaces following in May.	$1.12M
The Parcel Phase 1 "The Sawyer"	Bus shelters and landscaping are substantially complete, and streetlights remain in progress.	$58M (buildings) ~$5.6M (public infrastructure)
The Parcel Phase 2 "Kingfisher 1"	Work on underground utilities and perimeter site retaining walls will resume in the spring.	$46M (Kingfisher 1) TBD (Kingfisher 2)
60 Joaquin	The project is substantially complete, and staff has begun working with Eastern Sierra Community Housing toward the sale of the units.	$2.42M
Town Civic Center	The concrete floor slab was poured at the beginning of December, and the contractor has demobilized for winter. The contractor is currently re-mobilizing and structure steel will be delivered and erected later this month.	$27M
Childcare Center (Core & Shell only)	The project is complete with only minor punch-list items yet to be addressed.	$1.65M
Mammoth Creek Park West (CRC)	Installation of the climbing boulder and associated concrete work, a picnic/performance pavilion and CRC patio railing and shade structure are being planned for later this summer.	$500K
Mammoth Arts & Cultural Center (MACC)	The Town has restarted the plan check process and is working towards completing bid documents. Staff hope to bid the project in 2 months	~$15M + (TBD)
Airport Reconstruct GA and Terminal Parking Lot	Construction is expected to begin in May 2025.	$2M
2025 Road & MUP Rehabilitation	Staff is evaluating roads and multi-use paths (MUPs) for a variety of potential rehabilitation or reconstruction methods to be performed later this summer.	~$2M
2025 Slurry Seal	Staff is evaluating roads and parking lots for slurry seal rehabilitation to be performed later this summer.	~$1M
2025 Town Facility Repairs/Improvements	Staff is working to identify repairs and improvements needed to a variety of minor facilities, such as sidewalks, asphalt, fences, walls, ADA improvements etc, to be incorporated into a project with the intent of going out to bid this spring for construction this summer.	TBD
Volcom Skate Park Maintenance	Staff will be soliciting bids this winter for a multi-year maintenance contract for the Volcom Skate Park. Staff intend to work with the awarded contractor in the spring to determine specific scopes of work to be completed this summer.	~100K annually
Airport Tee-Hangar Taxilane Rehabilitation	Staff is working to design the rehabilitation of deteriorated asphalt, grading and drainage improvements along 3 taxilanes at the airport. The airport's Pavement Maintenance Management Plan (PMMP) recommended the asphalt be reconstructed in 2018. The design will be completed this year, with the intention of going out to bid early in 2026 for construction next summer.	$229K (design)

Airport Multipurpose Building – Site Work Phase 1	The project consists of reconstruction and extension of the service road from the airport entrance to Taxiway A including grading, drainage, utility stubs, paving, marking, and fencing. There is an alternate that includes removing existing Taxiway A3 and construction of the new Taxiway A3 connector taxiway between Taxiway A and the runway including pavement removal, grading, drainage, paving, marking, lighting, and signage. Phase 1 site work is going out to bid March 2025 for construction next summer.	$2.5M (Phase 1)
Airport Multipurpose Building (ARFF and SRE) Phase 2	Staff is working to re-design the ARFF and SRE building which has been renamed to the Multipurpose Building for funding eligibility purposes. Recent changes in airport operations have caused some of the previously designed spaces to become ineligible for funding. The re-designed building will include seven bays, two restrooms, a lobby, workshop, training room, breakroom, and other office space. Design will be completed this year with the building structure and phase 2 sitework likely going out to bid in early 2026 for construction next summer.	TBD
Main Street MUP	Staff is working to design a multi-use path (MUP) to complete the gap on the south side of Main Street (SR 203) between Callahan Way and Minaret/Lake Mary Rds. Design should be completed this year, however construction funds or schedule have not yet been identified.	~$200K (design)
Shady Rest Restroom	Staff is working to design a new restroom and associated site improvements to replace the existing aging restroom near the playground at Shady Rest Park. Design should be completed this year, with the intent of going out to bid in early 2026 for construction next summer.	~$200K (design)
Minaret/Meridian Roundabout	Staff is working to design a roundabout at the intersection of Minaret Rd and Meridian Blvd to replace the aging traffic signal. The project would also include signage/wayfinding, pedestrian improvements and lighting, and would be coordinated with the design of the future Minaret MUP. Design should be completed this year, however construction funds or schedule have not yet been identified.	~$180K (design)
The Parcel Phase 3 (homeownership)	Staff is working with The Pacific Companies to design a phase of approximately 40 townhome-style homeownership units to be located at roughly the southeast corner of The Parcel. The project would include a new public road extension of Inyo St connecting to Chaparral Rd, and associated utilities. Design is expected to be completed this spring and summer, and site preparation may begin as early as this summer or fall.	TBD
Mountain Blvd HSIP Project	The Town was awarded $350k to provide a pedestrian activated crosswalk at the intersection of 203 and Mountain Blvd. The installation will be like the Post Office and Laurel Mountain crosswalks. Design will be coordinated with the S Main MUP project	$350k

April 9, 2025
Item B-1

ESTA STAFF REPORT

Subject: Executive Director's Report
Presented by: Phil Moores, Executive Director

Staffing

I am happy to announce that Mike Burgoon is ESTA's Employee of the Quarter. Mike received several nominations that mentioned his willingness to help with anything ESTA needs. He drives open shifts and helps with picking up buses from the shop. One coworker stated, "He is very reliable and a good candidate for Employee of the Quarter". Mike is always willing to fill shifts and help as needed. We can always count on Mike! Please join me in congratulating him as the 1st quarter winner.

Vehicles

I have been waiting for over four months to receive the Mammoth bus quote from Gillig. Once that is received, I will place the order for the Mammoth 40-foot buses. I expect them to arrive at the end of 2026.

Ridership

There were no significant service cancellations affecting ridership. The tables below show the ridership by month and year since pre-Covid. The chart at the bottom shows the 2019 dark blue line which has served as our ridership goal for the last few years. We had another year of growth in 2024. Since we have experienced increasing ridership growth every year for the past five years, I will make a prediction that ESTA will break one million rides in 2025.

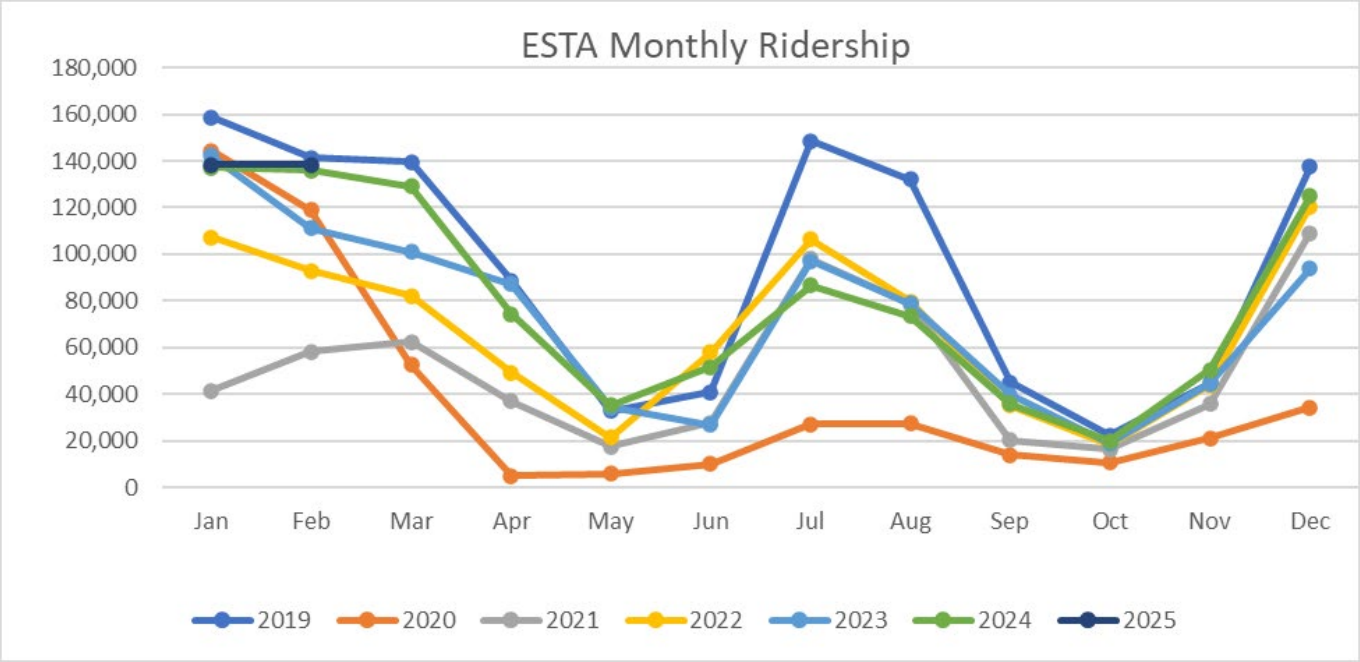
January Ridership Report

Route	Pre-Covid 2019	2020	2021	2022	2023	2024	2025	Change Current vs. Last year	% Change Current vs Pre-Covid
Benton	28	38	1	0	1	8	6	-2	-79%
Bishop DART	3,637	3,492	2,170	2,428	3,531	3,598	3,451	-147	-5%
Bridgeport-Carson	14	20	3	12	8	8	20	12	43%
Lancaster	356	383	120	298	289	350	492	142	38%
Lone Pine-Bishop	273	272	133	169	234	231	348	117	27%
Lone Pine DART	370	481	319	351	393	400	552	152	49%
Mammoth Fixed	30,904	28,658	5,269	16,693	23,961	29,006	27,664	-1,342	-10%
Mammoth DART	426	151	97	183	327	210	288	78	-32%
Mountain Resort	121,230	108,752	32,894	85,954	112,126	101,217	103,315	2,098	-15%
Mammoth Express	564	520	141	454	518	572	623	51	10%
Night Rider	230	324	88	218	210	266	294	28	28%
Other	682	612	0	0	238	369	352	-17	-48%
Reno	606	592	240	620	546	874	947	597	166%
Walker DART	116	32	6	3	0	35	60	25	-48%
Total	159,436	144,327	41,481	107,383	142,382	137,144	138,412	1,268	-13%

April 9, 2025
Item B-1

February Ridership Report									
Route	Pre-Covid 2019	2020	2021	2022	2023	2024	2025	Change Current vs. Last year	% Change Current vs Pre-Covid
Benton	33.00	38.00	3.00	0.00	6.00	4.00	9.00	5	-73%
Bishop DART	3,279.00	3,334.00	1,957.00	2,112.00	3,250.00	3,192.00	3,386.00	194	3%
Bridgeport-Carson	14.00	18.00	4.00	20.00	19.00	13.00	21.00	8	50%
Lancaster	378.00	311.00	172.00	317.00	308.00	305.00	486.00	181	29%
Lone Pine-Bishop	174.00	213.00	197.00	146.00	211.00	239.00	268.00	29	54%
Lone Pine DART	331.00	464.00	317.00	372.00	387.00	369.00	492.00	123	49%
Mammoth Fixed	27,317.00	24,221.00	6,917.00	16,280.00	19,514.00	27,746.00	26,363.00	-1,383	-3%
Mammoth DART	309.00	121.00	127.00	185.00	255.00	286.00	305.00	19	-1%
Mountain Resort	108,157.00	89,277.00	47,820.00	72,116.00	85,746.00	102,098.00	103,880.00	1,782	-4%
Mammoth Exp	446.00	396.00	215.00	515.00	441.00	497.00	539.00	42	21%
Night Rider	300.00	238.00	80.00	241.00	214.00	285.00	266.00	-19	-11%
Other	254.00	242.00	0.00	0.00	101.00	0.00	0.00	0	-100%
Reno	378.00	311.00	172.00	317.00	308.00	305.00	893.00	588	136%
Walker DART	94.00	45.00	9.00	0.00	0.00	44.00	52.00	8	-45%
Total	141,464	119,229	57,990	92,621	110,760	135,383	136,960	1,577	-3%

Historical Ridership Data							
Year	2019	2020	2021	2022	2023	2024	2025
Jan	158,754	144,341	41,512	107,382	142,382	137,144	138,412
Feb	141,240	118,822	58,171	92,870	111,066	135,978	138,412
Mar	139,505	52,582	62,457	82,051	100,995	128,995	
Apr	88,883	5,086	37,046	49,395	87,321	74,479	
May	32,963	5,970	17,744	21,511	34,378	35,293	
Jun	40,859	10,175	27,664	58,080	26,893	51,591	
Jul	148,430	27,061	98,102	106,363	97,231	86,605	
Aug	131,970	27,404	78,722	79,686	78,931	73,509	
Sep	45,200	13,952	20,362	35,385	39,788	35,921	
Oct	22,493	10,684	16,439	18,409	18,715	20,006	
Nov	44,798	21,122	35,868	43,835	44,608	50,538	
Dec	137,404	34,229	109,009	120,536	93,774	124,938	
Total	1,132,499	471,428	603,096	815,503	876,082	954,997	



Technology

We are in the process of replacing our dial-a-ride software, and once that is complete, we will begin implementing the touchless fare payment system for the buses.

The new website software is performing well and it is much easier to edit.

Marketing

The All Aboard! 2025 program is under way with visits to Head Start preschool on the reservation. Each child receives a backpack with the Esty coloring book, crayons, schedule brochures, and free ride passes for the family. Feedback on the program is positive, and we have over a dozen events planned for the year.


DEBBIE 720
ESTA

LTC Co-Executive Director Report

April 14, 2025

Administration

- Response to Caltrans comments on the FY 25-26 OWP.

Meetings

- Met with Caltrans and staff to review agenda.
- Meeting with ESTA on SB 125 hydrogen fuel project.
- Multi-Jurisdictional Hazard Mitigation public stakeholder meeting and project management meetings.
- Social Services Transportation Advisory Council (SSTAC) meeting on unmet transit needs.
- Rural Counties Task Force meeting.
- YARTS Advisory Council meeting.
- Unmet transit needs at Regional Planning Advisory Committee meetings (Bridgeport, Long Valley, Mono Basin; Antelope Valley and June Lake were completed in March).

Trainings

- None

Programs

- Bi-State Sage Grouse conservation: Executive Oversight Committee meeting, lek counts, meeting with Los Angeles Department of Water and Power on water management in Long Valley
- Projects underway: MJHMP update, Town's safe park facility, County's RVs as residences policy work, tracking and participating in Caltrans main street projects (Bridgeport and Lee Vining).
- Coordinating continued efforts on the Wildlife Crossing project.

Grant Tracking

- Developed grant application for June Lake Active Transportation Plan implementation – grant application period was delayed, then opened. Staff submitted the application, but then the application portal was closed due to website issues, the application period was cancelled, and it has not been reopened. Application timeline is uncertain.
- The Town was awarded $350k in Highway Safety Improvement Program funds to construct a pedestrian activated crosswalk at SR203 and Mountain Blvd. The project will be designed to integrate into the planned multi-use path on Main Street.

Projects

- The Contractor working on the Reds Meadow Road project has not yet confirmed a start date but is actively monitoring conditions. The contractor may start work as soon as conditions permit. There are no restrictions on when work can begin. The full summer public access schedule is available on the USFS website: https://www.fs.usda.gov/detail/inyo/alerts-notices/?cid=fseprd1127643

Please contact Haislip Hayes for questions about Town of Mammoth Lakes projects at 760-965-3652 or hhayes@townofmammothlakes.ca.gov.

For questions about Mono County projects and/or administration, please contact Wendy Sugimura at 760-924-1814 or wsugimura@mono.ca.gov to be directed to the appropriate staff.