
California Transportation Commission Application for Toll Facility

Yolo 80 Corridor Improvements Project Phase 1

Sol-80 PM 42.7 – 44.7, Yol-80 PM 0.0 – 9.5, and Yol-50 PM 0.0 – 0.17

Submitted by:
Capital Area Regional Toll Authority



Prepared for:



March 15, 2024



March 15, 2024

Tanisha Taylor
Executive Director, California Transportation Commission
1120 North Street, MS 52
Sacramento, CA 95814

Toll Facility Application for the Yolo 80 Corridor Improvements Project

Director Taylor,

I am pleased to submit the enclosed toll facility application for Phase 1 of the Yolo 80 Corridor Improvements Project (Project) for consideration by the California Transportation Commission (CTC) in accordance with Assembly Bill 194 guidelines. CTC approval of this toll facility project is critical to the timely delivery of \$86 million in discretionary Federal INFRA funding awarded to the project.

Interstate 80 (I-80) is the only freeway connection between the San Francisco Bay Area and the Sacramento region. The route also links the Bay Area with critical destinations in Northern California by providing connections to Highway 50 (US 50) and Interstate 5. The corridor is currently experiencing recurring congestion and inefficient movement of people, goods, and services, which impedes regional and interstate economic sustainability. The Project will improve mobility and trip reliability by adding high occupancy toll lanes in Yolo County and Sacramento County. CARTA is requesting toll authority for Phase 1, which includes 17 lane-miles between Richards Boulevard and the I-80/US-50 split.

The Project is included in the 'Megaregion Dozen,' a list of 12 projects jointly adopted by Sacramento Area Council of Governments (SACOG), San Joaquin Council of Governments, and the Metropolitan Transportation Commission to improve travel in the Northern California Megaregion. The Project demonstrates a commitment to collaborative and coordinated efforts to address statewide transportation challenges. The project is also a core investment of SACOG's Metropolitan Transportation and Sustainable Community Strategy (MTP SCS). It will be the first toll lane in the Sacramento Region and is an essential first step toward building a modern multimodal transportation system in the region. The Project has a complete funding plan, revenue projections that ensure the facility's long-term sustainability, an operations structure that will create seamless usability for the traveling public, toll revenue investments in transit, and an equity program to ensure accessibility for all users.

The enclosed application provides the information required to meet, and in many areas, exceed the minimum eligibility established by AB 194 and the supporting information requested through the toll facility application guidelines. We appreciate your consideration of this toll facility application and enclosed materials and look forward to your support in delivering this critical project. If you need any additional information or have any questions about the information in this submittal, please contact Autumn Bernstein (abernstein@yctd.org).

Sincerely,

A handwritten signature in blue ink, appearing to read "James Corless".

James Corless
Secretary, Capital Area Regional Tolling Authority

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Acronyms and Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
AB	Assembly Bill
Alameda CTC	Alameda County Transportation Commission
BA	Biological Assessment
BAIFA	Bay Area Infrastructure Financing Authority
BATA	Bay Area Toll Authority
BSA	Biological Study Area
CA MUTCD	California Manual on Uniform Traffic Control Devices
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CARTA	Capital Area Regional Tolling Authority
CAPTI	Climate Action Plan for Transportation Infrastructure
CAV	Clean Air Vehicle
CCP	Congested Corridor Plan
CCTV	Closed-Circuit Television
CD	Consistency Determination
CEQA	California Environmental Quality Act
CHP	California Highway Patrol
CM	Construction Manager
CMAQ	Congestion Mitigation and Air Quality (Improvement Program)
CMB	Change Management Board
CMS	Changeable Message Sign
CR	County Road
CRHR	California Register of Historical Resources
CSC	Customer Service Center
CTC	California Transportation Commission
CTOC	California Toll Operators Committee
CVC	California Vehicle Code
DMT	Design Management Team
DMV	Department of Motor Vehicles
EA	Environmental Assessment
EEA	Exploratory Equity Action
EIR	Environmental Impact Report
FBO	Financial Back Office
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FSP	Freeway Service Patrol
GC	General Contractor
GHG	Greenhouse Gas
GP	General Purpose
HDM	Highway Design Manual
HOT	High Occupancy Toll
HOV	High Occupancy Vehicle
INFRA	Infrastructure for Rebuilding America (Grant Program)
IPDT	Integrated Project Development Team
ITP	Incidental Take Permit
ITS	Intelligent Transportation System
JPA	Joint Powers Authority
LPR	License Plate Recognition
LRDP	Long Range Development Plan
MTC	Metropolitan Transportation Commission

MTP	Metropolitan Transportation Plan
MTIP	Metropolitan Transportation Improvement Program
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOD	Notice of Determination
NOP	Notice of Preparation
NRHP	National Register of Historic Places
PA/ED	Project Approval/Environmental Document
PDT	Project Development Team
PID	Project Initiation Document
PM	Particulate Matter
PMT	Project Management Team
PRM	Project Risk Management
PS&E	Plan, Specification and Estimate
PSR	Project Study Report
RFQ	Request for Qualifications
RIP	Regional Improvement Program
ROW	Right of Way
RTP	Regional Transportation Plan
RTSI	Roadside Toll System Integrator
SACOG	Sacramento Area Council of Governments
SCCP	Solutions for Congested Corridor Program
SCS	Sustainable Communities Strategy
SHOPP	State Highway Operation and Protection Program
SHPO	State Historic Preservation Office
SHS	State Highway System
SMCELJPA	San Mateo County Express Lanes Joint Powers Authority
SOV	Single Occupancy Vehicle
STAA	Surface Transportation Assistance Act
STIP	State Transportation Improvement Program
T&R	Traffic and Revenue (Study)
TAR	Transportation Analysis Report
TIFIA	Transportation Infrastructure Finance and Innovation Act
TMS	Transportation Management Systems
UAIC	United Auburn Indian Community
UC	University of California
USFWS	US Fish and Wildlife Service
VHD	Vehicle Hours of Delay
VHT	Vehicle Hours Traveled
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
VTA	(Santa Clara) Valley Transportation Authority
YoloTD	Yolo Transportation District

PART A. Preface

The Yolo 80 Corridor Improvements Project (“Project”) Phase 1 will add a high-occupancy toll lane along Interstate 80 (I-80) from Richards Boulevard to the Highway 50 (US 50) interchange in the eastbound direction and from the US 50 interchange to Mace Boulevard in the westbound direction and. Pursuant to California Streets and Highways Code Section 149.7, Capital Area Regional Toll Authority (CARTA) is requesting approval to establish and manage this toll facility. Formed in January 2024 as a joint powers authority (JPA) between Yolo County Transportation District (YoloTD), the Sacramento Area Council of Governments (SACOG), and the California Department of Transportation (Caltrans), CARTA was established to assume responsibility for policy decisions related to express lanes in the Sacramento Area, including this Project. As a JPA, CARTA holds the powers granted by its member agencies, YoloTD, Caltrans, and SACOG, in compliance with California Government Code Section 6500 et seq. and satisfies the criteria of Sections 149.7(a) and 149.7(k)(4) of the California Streets and Highways Code.

The purpose of the Project is to:

- Support reliable transport of goods and service through the region;
- Ease congestion and improve freight and person throughput¹;
- Improve safety by reducing congestion-related collision types;
- Improve freeway operation on the mainline, ramps, and at system interchanges;
- Improve modality² and travel time reliability; and
- Provide expedited traveler information and monitoring systems.

The Project is urgently needed due to several current conditions, including:

- Inefficient movement of goods and that impedes regional and interstate economic sustainability;
- Recurring congestion during the AM and PM peak periods and during weekend recreational peak seasons that exceeds current design capacity, bringing freight and person throughput to a standstill;
- Increased collisions in the Project area, predominantly rear-end collisions, due to congestion;
- Lane drops, short weaving, and merging areas that create bottlenecks and exacerbate congestion;
- Limited rail and bus service that reinforces dependence on single-occupant vehicle trips;
- Poor travel time reliability for the corridor’s bus routes, which depend on traffic conditions in congested general purpose lanes;
- A Degraded attached bikeway with limited connections to local active transportation networks;
- Lack of real time traveler information and coordinated traffic communication systems that impedes timely response to roadway incidents. This results in secondary collisions and increased non-recurring congestion.
- Transportation inequity where disadvantaged communities within Yolo County must bear the air quality, mobility, and safety consequences of trips on the corridor even though more than 90 percent of trips through the Project area start and end outside Yolo County

¹ Throughput is the number of people moving efficiently through a region.

² Modality is the variety in modes of transportation. This includes access and multiple options for the movement of people and goods. Examples include access to transit, carpool, bicycle, and pedestrian facilities.

The Project improves existing conditions by:

- Moving over 6,000 more people through the corridor in the AM peak and close to 8,000 more people in the PM peak, as well as increasing freight throughput by 5 percent;
- Reducing travel times during the peak by up to 80 percent and reducing the congested conditions during which many collisions occur;
- Improving traffic flow at both the corridor’s worst bottlenecks: Mace Boulevard and the Causeway;
- Increasing the frequency of Capitol Corridor train service between Sacramento and the Bay Area and multiple bus routes between Yolo and Sacramento counties, and reducing fares for transit service in the area;
- Creating a high-occupancy toll lane that can be managed to ensure reliable travel times for all bus routes on the corridor;
- Upgrading the existing attached bikeway and creating a Class I connection to the local active transportation network;
- Installing Intelligent Transportation System (ITS) infrastructure, like Changeable Message Signs (CMS) and Closed-Circuit Television (CCTV) to warn of changing travel conditions; and
- Pricing single-occupant travel in the toll lane and reinvesting the revenue to reduce the impacts of this interstate and interregional facility on Yolo County’s disadvantaged communities

The Project will be delivered utilizing a phased construction schedule, and it is important to note that this Application only seeks tolling authority for the planned Phase 1 of construction, covering 17 lane miles of a single lane toll facility as described in Table 1 below. As progress continues and CARTA seeks to advance subsequent project phases, tolling authority for subsequent phases will be sought in future applications.

Table 1: Phase 1 vs Full Project Limits

Phase	Project Limits	Centerline miles	Lane Miles
Phase 1	Sol-80 PM 42.7 – 44.7 Yol-80 PM 0.0 – 9.5 Yol-50 PM 0.0 – 0.17	8.5 miles	17 miles
Final Build	Sol-80 PM 40.7 – 44.7 Yol-80 PM 0.0 – 11.72 Sac-80 PM 0.0 – 1.36 Yol-50 PM 0.0 – 3.12 Sac-50 PM 0.0 – 0.617	17 miles	34 miles

Note: Project scope in Solano County is limited to advanced warning signs for the managed lane.

Unless otherwise indicated, data regarding the benefits of the Project are focused on the expected outcomes from Phase 1 alone. This commitment to Phase 1 only data is a particular focus in PART B.1, which details how the Project meets the minimum requirements of AB 194 and the supplemental

requirements of the CTC's Toll Facility Project Application. However, several of the detailed sections later in the application include information regarding the performance of the full project to provide readers with context of the benefits of future phases. In these cases, the information is specified as "Full Project."

Similarly, unless otherwise specified, data regarding the benefits of the Project are focused on the expected outcomes from Alternative 4B, the preferred alternative out of several analyzed during the environmental review process, which adds a high-occupancy toll lane in each direction for free use by vehicles with three or more occupants (HOT 3+). Vehicles with fewer than three occupants would pay a fee for lane usage. For more information on the alternatives analyzed, please see PART B.4.A Project Definition.

To further clarify the organization of the Application, please see Table 2.

Table 2: Application Index by Topic

Topic	Section Reference	Page Reference
Agreements	PART B.1.D	12
	PART B.4.E	41
Air Quality	PART B.6.D	60
Alternatives	PART B.4.A	21
Community/Stakeholder Support	PART B.6.E	61
Conforming Regional Transportation Plan / Regional Consistency	PART B.1.B	11
	PART B.6.A	48
Concept of Operations	PART B.4.C	28
Cooperation between Regional Transportation Agency and Caltrans	PART B.1.C	12
Cost Estimation	PART B.7.D	66
CTC Data Requests	PART B.1.D	12
Environmental Considerations	PART B.6.D	60
Equity	PART B.4.C	28
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Federal Involvement	PART B.4.D	41
Freight	PART B.3	16
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Funding Plan	PART B.1.F	15
	PART B.5.A	42
Governance	PART B.1.D	12
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Impacts – Diversion & VMT	PART B.6.B	58
Minimum Requirements	PART B.1	10
Modes – Non-Auto	PART B.3	16
	PART B.5.B	46
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Performance Improvements	PART B.1.A	10
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Procurement Approach	PART B.7.C	66
Project Controls	PART B.4.B	25
Project Definition	PART B.4.A	21
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Project Initiation Document	PART B.1.E	15
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Project Performance	PART B.7.B	65
Requirements of SHC § 149.7	PART B.1.D	12
Revenue Policy/Expenditure	PART B.1.D	12
	PART B.4.D	41
	PART B.5.B	46
Safety	PART B.3	16
	PART B.5.B	46
	PART B.6.C	59
Toll Policy	PART B.1.D	12
	PART B.4.A	21
	PART B.4.C	28
Transportation System Compatibility	PART B.2	15
	PART B.6.A	48

PART B. Supporting Application Information

In evaluating applications, the Commission will consider all provided information to determine whether to approve the proposed toll facility. Accordingly, in conjunction with responding to the statutorily defined minimum criteria, applications should address the following questions whenever applicable.

1. Compliance with State Law

Has the applicant demonstrated that the proposed project is consistent with the established standards, requirements, and limitations that apply to the toll facilities in Section 149.7 of the Streets and Highways Code as well as all other applicable sections of state law?

The following sections under PART B.1 outline how Phase 1 of the Project fulfills the minimum requirements for the approval of toll authority under Section 149.7 of the California Streets and Highways Code.

1.A Demonstration of Improvement in Corridor Performance

A demonstration that the proposed toll facility will improve the corridor's performance by, for example, increasing passenger throughput or reducing delays for freight shipments and travelers, especially those traveling by carpool, vanpool, and transit.

By the year 2049, Phase 1 of the Project will yield significant operational benefits that improve the performance for users in all lanes.

- Improved traffic flow at eastbound Mace Boulevard bottleneck: Increased person throughput from 31,000 (No Build) to 33,400 (Build Phase 1) people in the AM Peak Period and from 25,900 (No Build) to 32,900 (Build Phase 1) people in the PM Peak Period.
- Improved traffic flow at westbound Causeway bottleneck: Increased person throughput from 38,000 (No Build) to 41,900 (Build Phase 1) people in the AM Peak Period and from 33,100 (No Build) to 33,800 (Build Phase 1) people in the PM Peak Period.
- Reduced eastbound peak-period travel time (Kidwell Road Off-ramp to US 50 Off-ramp): Reduction of up to 3% reduction average travel time in the AM peak hour and up to 19% in average travel time in the PM peak hour.
- Reduced westbound peak-period travel time (US 50 On-ramp to Kidwell Road Off-ramp): Reduction of up to 4% average travel time in the AM peak hour. Low levels of congestion in the PM peak hour will be maintained.
- Improved eastbound peak hour travel time reliability by 46% for general-purpose lane users.
- 5% increase in total daily truck volumes from Richards Boulevard to US 50 from No Build.

The Project will improve general purpose lane conditions from the No-build alternative, however, the operational benefits for horizon year 2049 are even more significant for carpool, vanpool, and transit users in the high occupancy toll lane.

- Travel time improvements will exceed those found in General Purpose lanes:
 - Reduced eastbound peak-period travel time (Kidwell Road Off-ramp to US 50 Off-ramp): Reduction of up to 80% in average travel time in the PM peak hour and up to 16% reduction average travel time in the AM peak hour.

-
- Reduced westbound peak-period travel time (US 50 On-ramp to Kidwell Road Off-ramp): Reduction of up to 9% in average travel time in the PM peak hour and up to 9% reduction average travel time in the AM peak hour.
 - The most significant congestion along the corridor in the Eastbound direction (PM Peak) is on I-80 between Kidwell Road and US 50. The Project is expected to provide better travel time reliability in the toll lane during this period. Carpoolers, vanpoolers, and transit users are projected to have to plan for 64% less buffer time than those in the general purpose lanes. Additionally, travel time reliability will improve up to 80% for high-occupancy toll lane users when comparing the Phase 1 Build to the No-build alternative.
 - Reduced Peak Hour Bus Travel Time:
 - Eastbound Bus Route 42B (Mace Boulevard to Enterprise Boulevard, PM Peak) travel time is reduced from 25.7 minutes to 15 minutes
 - Eastbound Bus Route 138 (Old Davis Road to US 50 at Stockton Boulevard, PM Peak) travel time is reduced from 81 minutes to 23.6 minutes
 - Westbound Bus Route 138 (US 50 at Stockton Boulevard to Old Davis Road, AM Peak) travel time is reduced from 41.8 minutes to 19.0 minutes.

Additional enhancements to corridor performance expected from the Full Project are covered in detail in PART B.3.

1.B Proposed Toll Facility in Conforming Regional Transportation Plan

A requirement that the proposed toll facility is contained in the constrained portion of a conforming regional transportation plan prepared pursuant to Section 65080 of the Government Code.

The Project is in the constrained portion of the most recently adopted 2020 SACOG Metropolitan Transportation Plan Sustainable Community Strategy (MTP SCS) with the title “I-80 and US 50 Managed Lanes” as ID CAL21276. The scope is listed as follows:

“On I-80 just west of Davis in both directions from the Kidwell Rd IC in Solano County (D4) to the US 50/I-5 interchange and I-80/West El Camino interchange in Sacramento: Construct managed lanes, pedestrian/bicycle facilities and ITS elements (project description may change based on results from the Managed Lanes Study. Project is being evaluated for Expressed Toll Lanes, High Occupancy Toll Lanes, HOV lanes and reversible lanes). EA 3H900.”

The Project is also included in SACOG’s most recent Transportation Improvement Program (TIP), the 2023-2026 Metropolitan Transportation Improvement Program (MTIP), adopted on September 15, 2022,³ with the title, “I-80 and US 50 Managed Lanes,” as ID CAL21276. The scope is listed as follows:

“On I-80 just from the I-80/Kidwell Road interchange in Solano County, through Yolo County, and to the W. El Camino interchange; also on US 50 from the I80/US 50 interchange to the I-5/US 50 interchange in Sacramento County: Construct improvements consisting of managed lanes in each direction, pedestrian/bicycle facilities, park-n-ride, and Intelligent Transportation System (ITS) elements.”

³ [2023 mtip_ amenment_1_to_mtp-scs_adopted_9-15-22.pdf \(sacog.org\)](#)

For more detail on how the Project is consistent with the regional plans above, see PART B.6.A Consistency with Existing Plans.

1.C Cooperation between the Regional Transportation Agency and Caltrans

For projects involving the state highway system, evidence of cooperation between the applicable regional transportation agency and Caltrans. Examples of acceptable evidence of cooperation could be in the form of a completed cooperative agreement or a signed letter between the parties to demonstrate that the parties are working cooperatively on the development of the toll facility.

YoloTD, Caltrans, and SACOG have been regularly participating and contributing to meetings since June 2022 in recognition of the potential benefits of implementing a managed lane under this Project. Regular meetings have occurred throughout the preparation and writing of the Project Concept of Operations to review design, tolling operational characteristics, business rules, and various other topics relevant to the implementation and operations of the Project.

In 2024, Caltrans, YoloTD, and SACOG formed a joint partnership called CARTA through a joint powers authority agreement to implement and manage the Project. Project implementation and management will be accomplished in a collaborative and efficient manner through resource pooling, coordinating regional efforts, unifying management structure, sharing costs, and ensuring public accountability.

Caltrans District 3 fully supports this Project, as evidenced by their direct involvement in planning, environmental analysis, design, construction, and operations. As a member of CARTA, Caltrans will continue to be directly involved in management of the facility going forward.

1.D Requirements of Streets and Highways Code Section 149.7

A discussion of how the proposed toll facility meets the requirements of Streets and Highways Code Section 149.7.

In addition to requiring that applicants for toll authority meet the minimum requirements currently bring described in this section (PART B.1), various elements of SHC Section 149.7 provide additional requirements pertinent to the Project:

1. *That the regional transportation agency shall enter into an agreement with the California Highway Patrol (CHP) for enforcement services related to the toll facility and reimbursement to CHP for its costs.*

CARTA will execute all necessary enforcement agreements with the CHP for the provision of enforcement services and reimbursement of costs. CARTA intends to begin outreach and negotiation with the CHP following CTC's approval of toll authority and will ensure appropriate agreements with CHP are made prior to the testing and opening of the facility for tolling. CARTA intends to secure enforcement resources comparable to those of other similar tolled facilities in the region under this agreement. In addition, Caltrans has had initial discussions with CHP regarding enforcement areas and the most feasibly designed locations possible. These discussions will help shape the final design parameters and enforcement area locations.

2. *That the regional transportation agency shall enter into an agreement with Caltrans addressing "all matters related to design, construction, maintenance, and operation of the toll facility,*

including, but not limited to, liability, financing, repair, rehabilitation, and reconstruction” and reimbursement of Caltrans expenses by the regional transportation agency.

Caltrans has already executed significant work on Environmental and Design phases as a function of its active stake in the Project. Following the recent establishment of CARTA, cooperative agreements covering Right-of-Way and Construction are planned to be negotiated and executed following approval of tolling authority. Unlike other tolling projects in the state, Caltrans is a partner in the toll authority, and their roles and responsibilities will be established in the CARTA O&M agreement.

It is anticipated that in June 2025, a Facilities Operations and Maintenance Agreement and a Traffic Monitoring and Incident Response Service Agreement will be formulated and executed among JPA parties. This agreement is expected to resemble other Operations and Maintenance agreements for express lanes facilities in Northern California. For more information on maintenance plans, see PART B.4.E.

- 3. That the sponsoring agency shall be responsible for activities related to toll collection.*

CARTA will adopt a toll policy prior to the express lanes’ operations. It will consult with potential regional toll operators to ensure regionally consistent policies, enabling seamless travel in a future regional network.

Prior to Express Lanes Go-Live, CARTA will contract with an existing toll facility’s Financial Back Office (FBO) for the operations of the FBO and Customer Service Center (CSC). The FBO and CSC typically receive roadside transactions, post transactions to accounts or send out invoices, provide account management functions for account holders, perform transponder fulfillment, and provide customer service support. It is anticipated that a partnership with a California toll facility FBO and CSC would be entered into for management and operations of similar functions on behalf of CARTA, with agreements targeted for early 2026.

- 4. That the revenue generated by the tolls will be used to cover debt obligations of the toll facility and “development, maintenance, repair, rehabilitation, improvement, reconstruction, administration, and operation of the toll facility” and a reserve fund with all remaining funds used in the corridor pursuant to an expenditure plan developed by the sponsoring agency.*

CARTA is dedicated to managing toll revenue in strict conformance with California Streets and Highways Code Section 149.7 and United States Code Title 23 Section 129.3. Toll revenue will first be spent on development, maintenance, repair, rehabilitation, improvement, reconstruction, administration, and operation of the toll facility. Following this, multiple reserves will be established for various purposes beneficial to the facility and the traveling public. Finally, remaining funds will be expended in the Yolo I-80 Corridor as specified in a remaining revenue policy and expenditure plan for net excess revenues. A preliminary expenditure plan is planned to be presented to the CARTA board prior to the facility opening in late 2026. Please see PART B.5.B for a more detailed explanation of plans for toll revenue.

- 5. That “[f]or any project under this section involving the conversion of an existing high-occupancy vehicle lane to a high-occupancy toll lane, the sponsoring agency shall demonstrate that the*

project will, at a minimum, result in expanded efficiency of the corridor in terms of travel time reliability, passenger throughput, or other efficiency benefit.”

This requirement does not apply, as the Project does not include conversion of HOV to HOT. To avoid confusion, we note that the Full Project would connect to existing HOV lanes in Solano County and Sacramento County without converting them. A segment of the existing HOV2+ lanes west of the W El Camino Avenue interchange on I-80 in Solano County and the HOV2+ lanes under construction on US 50 between I-5 and SR 99 in Sacramento County will be used as transition zones to connect the managed lane to the existing HOV lane outside of the project limits. This will provide space for vehicles to safely merge into and out of the lane to meet occupancy or toll requirements.

6. *That the sponsoring agency will provide information to the Commission or Legislative Analyst upon request.*

CARTA recognizes that the Commission is obligated by Streets and Highways Code Section 149.7(h), as amended by AB 194, to report to the State Legislature annually the progress in the development and operation of each toll facility approved under that section. CARTA will provide information as requested in support of CTC reporting requirements for the toll facility such as:

- A progress report for the Project.
- A comparison of the Project baseline budget and the current or Projected budget.
- A comparison of the current or projected schedule and the baseline schedule.
- If construction is complete and operations have begun, a discussion of the operations of the facility and how actual performance compares to the Project’s original expected performance.
- A discussion of any other issues identified, and actions taken to address those issues.

7. *That a regional transportation agency may issue bonds to finance construction and construction-related expenditures but that the bond must not pledge the full faith and credit of the State of California.*

This requirement does not apply as the construction of the facility is planned to be funded by a combination of federal, state, and local funds. Please see PART B.5.A for more information on the funding plan.

8. *That a regional transportation agency will consult with local transportation authorities and congestion management agencies whose jurisdictions include the toll Facility.*

CARTA comprises an agreement between YoloTD, SACOG, and Caltrans. YoloTD is the designated congestion management agency for Yolo County. SACOG is the designated regional transportation planning agency and metropolitan planning organization for Yolo and Sacramento Counties, and the designated congestion management agency for Sacramento County. As such, all local transportation authorities, and congestion management agencies whose jurisdictions include the toll facility are members of CARTA with voting seats and directly contributed to the development of this application. To further ensure collaboration with neighboring local transportation authorities and congestion management agencies, Placer County Transportation Planning Agency, El Dorado County Transportation Commission, and Sacramento Transportation Authority have non-voting seats on CARTA and have been consulted

in the development of this application. CARTA additionally plans to conduct ongoing outreach with local authorities and agencies throughout the region as outlined in PART B.6 Regional Transportation Plan & Community Support.

9. *Additional supplementary information.*

Clean Air Vehicle Requirements

Sections 21655.9 and 5205.5 of the California Vehicle Code permit vehicles displaying DMV-issued stickers, which meet specific low and zero emissions standards, to utilize exclusive or preferential HOV lanes irrespective of vehicle occupancy.

Both sections are set to be repealed by September 30, 2025, per their respective provisions. Consequently, as the project is anticipated to be operational in 2028, these sections of the California Vehicle Code will be inapplicable, disallowing single-occupant vehicles, even those adhering to low and zero emissions standards, from accessing the HOV lanes.

In any case, as described in Section 4.C, CARTA may offer a toll discount based on CVC § 5205.5 as well as regional consistency with other express lane facilities in the Bay Area. However, the ultimate CAV toll policy will be set by the CARTA board as part of overall toll policy development.

Privacy of Personal Information

CARTA and its contractors shall process toll transactions for the Project in compliance with relevant state and federal statutes concerning privacy and the protection of personally identifiable information.

1.E Project Initiation Document

A complete project initiation document for the proposed toll facility.

The Project Initiation Document (PID) was completed on November 13, 2017. The PID is included as Attachment A.

1.F Complete Funding Plan

A complete funding plan for development and operation of the toll facility.

CARTA has developed a comprehensive funding plan for the design, construction, and operations of Phase 1 of the Project, comprised of federal, state, local, and toll-revenue funding (operations). The project meets these criteria, and this topic is covered in detail in PART B.5.A.

2. System Compatibility

If on the state system, has the applicant demonstrated that the project is consistent with State Highway System requirements? Does this project propose improvements that are compatible with the present and planned transportation system? Does the project provide continuity with existing and planned state and local facilities?

System Planning is the long-range transportation planning process for Caltrans. As owner/operator of the State Highway System (SHS) under Gov. Code §65086, Caltrans has a central role in planning, design,

construction, operations, and maintenance of the Project. In collaboration with SACOG and YoloTD, Caltrans District 3 has developed all associated plans and documents to adhere to state guidance, prioritizing goals of safety, efficiency, sustainability, system performance, and organizational excellence.

The Project demonstrates consistency with State Highway System requirements and compatibility and continuity with existing and planned state and local transportations by its inclusion in system plans such as the I-80 Comprehensive Multimodal Corridor Plan (CMCP), produced collaboratively by Caltrans Districts 3 and 4 in January 2023. CMCPs signify a collaborative commitment toward formulating a comprehensive corridor management vision for state-owned and operated facilities. The I-80 CMCP envisions high-occupancy toll (HOT) lanes, improvements to the parallel Capitol Corridor line, and transportation demand management (TDM) strategies, all of which are part of the Project.

Caltrans District 3 is also in the process of developing a managed lanes system plan (MLSP) for the Sacramento region that includes the Project.

The SACOG 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) regards priced managed lanes as a pivotal component of its regional strategy, designed to generate adequate revenue for the construction and maintenance of the region's transportation infrastructure, bolster resident mobility, dynamically manage traffic and congestion, and contribute to the achievement of state mandated GHG reduction targets. The Project is consistent with the 2020 MTP/SCS and in SACOG's current Metropolitan Transportation Improvement Program (MTIP).

Furthermore, the Project has been planned to effectively connect with future priced managed lanes in other counties within the SACOG and Metropolitan Transportation Commission regions, including the priced managed lanes currently under development on I-80 in Solano County. The Project contributes to the establishment of a continuous facility on I-80 from the Bay Bridge to Placer County, and on US 50 to El Dorado County. Where possible, CARTA will ratify a tolling policy designed to uphold consistency with the operations of other priced managed lanes in the Megaregion to provide commuters with a cohesive and seamless experience.

Please see PART B.6.A for more information on consistency with regional transportation plans.

3. Corridor Improvement

AB 194 specified the Legislature's intent that highway tolling should be employed for the purpose of optimizing the performance of the transportation system on a transportation corridor and should not be employed strictly as a revenue generating facility. Has the applicant provided compelling evidence that demonstrates that the proposed toll facility will significantly improve the corridor's performance?

In addition to the performance improvements expected for Phase 1 outlined in PART B.1.A above, Phase 1 is expected to contribute significantly to additional improvements expected at the Full Project level. It will do so by directly addressing key current challenges which include bottleneck formation, limited multi-modal options, and the lack of real-time traffic communication. These have resulted in recurring congestion, operational inefficiencies, and inefficient movement of goods and services.

In response to these challenges, the Project aims to improve freight movement, reduce congestion, increase person throughput, improve safety, enhance traffic flow, and improve overall transportation efficiency along I-80 and US 50. The implementation will support reliable transport, improve modality and travel time reliability, and provide expedited traveler information systems. The Project anticipates

significant benefits by the 2049 horizon year, including increased person throughput, reduced travel time, higher average speeds, and decreased congested vehicle miles and hours traveled. These enhancements are crucial for regional economic sustainability, addressing current traffic challenges, and ensuring smoother travel experiences for corridor users.

As noted in PART B.1.A, the preferred project alternative is Alternative 4B, described as adding a high-occupancy toll lane in each direction for free use by vehicles with three or more occupants (HOT 3+) and building an I-80 managed lane direct connector. Vehicles with fewer than three occupants would pay a fee for lane usage. To describe the project impacts of the project compared to existing conditions, we use results from analysis of Alternative 4A, which represent a conservative assessment of the impacts of 4B. See PART B.4.A for more information on alternatives.

Existing Conditions:

The Full Project, as defined in the traffic study, encompasses I-80 from west of the Solano/Yolo County line near Davis to west of West El Camino Avenue in Sacramento County, as well as US 50 from I-80 in West Sacramento to east of I-5 in Sacramento. The traffic study area extends further west and east to encompass changes in travel patterns on adjacent facilities.

Several bottlenecks cause delays for travelers during the AM and PM peak periods in the project area. The bottlenecks and their approximate duration of congestion include:

- *Eastbound I-80 at Mace Boulevard: 7:30-8:00 AM, 2:30-6:30 PM
- Eastbound I-80 at County Road 32B: 3:30-6:30 PM
- Eastbound I-80 at Reed Avenue: 4:15-6:15 PM
- Eastbound US 50 at I-5: 3:15-6:00 PM
- *Westbound I-80 at West Capitol Avenue: 6:30-10:00 AM⁴, 5:00-6:15 PM
- Westbound US 50 at Jefferson Boulevard: 5:15-6:15 PM

*Starred bottlenecks above also form on weekends at various times.

Bottlenecks also exist in both directions on I-80 at I-5 and on US 50 in downtown Sacramento between I-5 and SR 51/SR 99. The most severe congestion occurs eastbound during the PM peak hour from I-80 at Kidwell Road to US 50 at SR 51/SR 99, where average travel time approximately doubles travel time at free-flow speeds.

Opening Year 2029⁵ Conditions:

In the AM peak period, eastbound I-80 and US 50 will experience the same bottleneck locations as existing conditions. Under the no-build alternative, congestion in the project area will not change significantly from present conditions. However, during the AM peak period, the preferred alternative will eliminate 45 minutes of congestion and move 1,300 more people at Mace Boulevard compared to the no-build alternative.

⁴ Note that peak period traffic operations analysis for AM was 6-10 AM, so this bottleneck could last beyond 10 AM.

⁵ Note that when transportation analysis was originally performed, opening year was anticipated to be 2029. Since analysis was completed, the current expectation is that the Project will open in early 2028.

In the AM peak in the westbound direction, congestion on I-80 at the Yolo Causeway will increase under the no-build alternative. In terms of duration, it will extend outside the AM peak period, and in terms of geography, it will extend farther upstream to I-5 on both US 50 and I-80. In contrast, congestion under the preferred alternative will not extend as far upstream. This will result in a reduction of 2.5 miles of queuing as compared to the no-build alternative. Therefore, during the AM peak period on Westbound I-80, the preferred alternative will move 4,400 more people at the Yolo Causeway when compared to the no-build alternative.

In the PM peak period, congestion on eastbound I-80 at Mace Boulevard and County Road 32B will worsen under the no-build alternative, with queues lasting for longer time periods. The preferred alternative will increase throughput at Mace Boulevard and eliminate the County Road 32B bottleneck. As a result, during the PM peak period on Eastbound I-80, the preferred alternative will move 4,700 more people at Mace Boulevard when compared to the no-build alternative, representing roughly 16% more people than the no-build alternative.

In the PM peak period in the westbound direction, the preferred alternative will move 5,100 more people at the Yolo Causeway when compared to the no-build alternative, almost 18% more people than the no-build alternative.

We also note the following additional improvements:

- The Project reduces Daily Congested Vehicle Miles Traveled (VMT), corridor wide, over the no-build conditions for users in both the general purpose and express lanes. The Project will decrease Congested Vehicle Miles Traveled from about 496,900 vehicle-miles to 368,600 vehicle-miles.
- Decreased vehicle hours of delay (VHD): The Project reduces Vehicle Hours of Delay (VHD), corridor wide, over the no-build conditions for users in both the general purpose and express lanes. The Project will decrease Vehicle Hours of Delay from about 18,300 vehicle-hours to 13,500 vehicle-hours.
- Improved eastbound PM peak hour travel time travel time reliability by 18% for general-purpose lane users and 46% for high-occupancy toll lane users.
- Improved westbound AM peak hour travel time travel time reliability by 63% for general-purpose lane users and 66% for high-occupancy toll lane users.

Horizon Year 2049 Conditions:

In the AM peak period, congestion on eastbound I-80 at Mace Boulevard will grow to two-and-a-half hours under the no-build alternative. Congestion at the County Road 32B bottleneck will grow to about an hour. Additionally, eastbound US 50 congestion from the I-5 bottleneck will extend back to I-80. In contrast, the preferred alternative will eliminate congestion at Mace Boulevard and County Road 32B, with I-5 congestion extending only to Jefferson Boulevard. As a result, during the AM peak period on Eastbound I-80 the preferred alternative will move 2,400 more people at Mace Boulevard when compared to the no-build alternative.

In the AM peak in the westbound direction, congestion on I-80 at the Yolo Causeway will grow under the no-build alternative. It will extend outside the AM peak period and upstream to SR 51/SR 99 on US 50. Furthermore, it will merge with a bottleneck at West El Camino Avenue on I-80 to extend upstream beyond Northgate Boulevard. Under the preferred alternative, congestion at the Yolo Causeway bottleneck will reduce. The preferred alternative will move 3,900 more people at the Yolo Causeway

during the AM peak when compared to the no-build alternative, with a maximum reduction of up to 15 minutes average travel time. The addition of the managed lane connector shows a significant benefit in the AM peak period on Westbound I-80 as well. This connector limits the number of maneuvers westbound vehicles must make, which optimizes the throughput and reliability of the facility.

In the PM peak period in the eastbound direction, congestion on I-80 at Mace Boulevard, County Road 32B, and South River Road will expand to outside the PM peak period under the no-build alternative. Congestion at Mace Boulevard will extend upstream of Pedrick Road in Solano County by 4:00 PM. In contrast, under the preferred alternative, congestion at the County Road 32B and South River Road bottlenecks will be reduced. The preferred alternative will move 7,000 more people at Mace Boulevard during the PM peak period compared to the no-build, roughly 27% more people, with a maximum reduction of up to 69 minutes average travel time.

In the PM peak period in the westbound direction, a new bottleneck at the Jefferson Boulevard and I-80 off-ramps on US 50 will have one-and-a-half hours of congestion under the no-build alternative. Congestion on I-80 at the Yolo Causeway will last more than three hours and extend upstream to US 50. In contrast, under the preferred alternative, congestion at the Yolo Causeway will be reduced to two-and-a-half hours or less. Therefore, the preferred alternative will move 700 more people during the PM peak period at the Yolo Causeway and improve travel time and reliability.

We also note the following additional improvements:

- Reduced Daily Congested Vehicle Miles Traveled (VMT): The Project reduces Daily Congested Vehicle Miles Traveled (VMT), corridor wide, over the no-build conditions for users in both the general purpose and express lanes. The Project will decrease Congested Vehicle Miles Traveled from about 1,074,800 vehicle-miles to 655,000 vehicle-miles.
- Decreased vehicle hours of delay (VHD): The Project reduces Vehicle Hours of Delay (VHD), corridor wide, over the no-build conditions for users in both the general purpose and express lanes. The Project will decrease Vehicle Hours of Delay from about 44,300 vehicle-hours to 21,900 vehicle-hours.
- Reduced vehicle-hours traveled (VHT): The Project reduces Vehicle Hours Traveled (VHT), corridor wide, over the no-build conditions for users in both the general purpose and express lanes. The Project will decrease Vehicle Hours Traveled from about 117,000 vehicle-hours to 96,200 vehicle-hours.
- Improved eastbound PM peak hour travel time travel time reliability by 46% for general-purpose lane users and 80% for high-occupancy toll lane users.
- Improved westbound AM peak hour travel time travel time reliability by 54% for general-purpose lane users and 67% for high-occupancy toll lane users.

Safety Impacts:

In the five-year period from 2015 to 2019, the I-80 segment between the Solano County line and US 50 recorded 1,504 collisions, including 10 fatality-related incidents. The eastbound direction exhibits higher fatal and injury collision rates than the statewide average, while the westbound direction has a collision rate below the statewide average. Notable collision hotspots include Richards Boulevard and Mace Boulevard in the eastbound direction and the Enterprise Boulevard/West Capitol Avenue interchange in the westbound direction, a bottleneck location at the beginning of the Yolo Causeway.

Moving from US 50 to the start of the HOV lane on I-80, 75 percent of the 539 collisions occurred in the westbound direction, with three involving fatalities. The eastbound collision rate is below the statewide average, while the westbound collision rate surpasses it for all categories. Major collision sites include Reed Avenue and the downstream end of the Bryte Bend Bridge in the eastbound direction and the connector ramp merging with westbound US 50 in the westbound direction.

For the US 50 segment, 868 collisions were documented over the five-year period, evenly distributed between eastbound and westbound directions. The eastbound direction experienced four fatality-related collisions, and the westbound direction had eight. Both directions exhibited collision rates higher than the statewide average for all categories. Prominent collision locations include the Jefferson Boulevard off-ramp and the I-5 off-ramp in the eastbound direction, and collisions are frequent at US 50 in the westbound direction.

Under the no-build alternative, collision rates would likely be the same or higher than existing conditions. With the forecasted increase in traffic volumes, congestion and congestion-related collisions would increase. The freeway segments with higher-than-average collision rates would continue to experience the same collision rates, and segments with increased congestion would likely have an increased collision rate.

The preferred alternative would reduce congestion compared to the no-build alternative. Reducing congestion and increasing the average speed to or near the free-flow speed would reduce congestion-related collision types, such as rear-end collision, the most common type in the project area. The Highway Safety Manual (AASHTO, 2014) equations that predict the safety performance of freeways show that reducing congestion is associated with lower collision frequency per lane for the most frequent collision types within the project limits. As a result, the preferred alternative would be expected to lower the collision rate since this alternative adds a lane.

In addition, the preferred alternative makes several improvements which will lead to increased safety outcomes, including adding ramp meters, auxiliary lanes, ITS elements that improve incident response time, improved concrete median barrier, and added CCTVs and changeable message signs. Ramp meters will facilitate safer and easier merging and can reduce collisions by 14%, while auxiliary lanes improve weaving conflicts and can reduce collisions by 21%. ITS elements like CCTVs and CMS's assist in incident monitoring, identification, verification, and provide important traveler information, all of which help reduce incident response and clearance time while reducing secondary collisions.

The Project design complies with all state and federal guidance, and it is not anticipated to produce adverse safety impacts for travelers on the corridor. All nonstandard features are analyzed and documented in the Design Standard Decision Document (DSDD). The final DSDD for PA&ED will be completed upon approval of the Final Project Report (FPR).

Transit Impacts:

The traffic analysis points to improved transit rider experience for transit routes that utilize the I-80 corridor. Reductions in congestion will lead to better travel time and reliability for transit operators, enabling better service to be provided to users. For example, the traffic operations model was used to measure travel time savings for bus routes. It showed significant improvements to service for the Causeway Connection transit Route 138, which is run by SacRT between the University of California Davis main campus and the medical center in Sacramento. This route would have a PM peak hour travel time savings of about 57 minutes in the eastbound direction and an AM peak hour travel time savings of

about 22 minutes in the westbound direction under horizon year 2049 for the preferred alternative.

The preferred alternative also includes the construction of a mobility hub in the southeast quadrant of the I-80/Enterprise Boulevard interchange. The mobility hub would provide 300 parking spaces, e-scooter and e-bike parking, and a transit transfer station. The additional parking spaces would help to meet the park-and-ride demand for this location.

Bicycle and Pedestrian Impacts:

The preferred alternative includes improvements to the Class IV bicycle/pedestrian path on the Yolo Causeway. The pavement would be rehabilitated, and the height of the concrete barrier would be increased to meet current design standards, resulting in a safer and more pleasant experience for users. The Project will extend the existing bike path from western limits of the Yolo 80 Causeway structure to the west along the westbound I-80 off-ramp to County Road (CR) 32A, establishing a connection between the two existing paths. The new connection would provide a more direct link to County Road 32A and eliminate the need bicyclists and pedestrians to cross County Road 32A. Bicyclists could choose the existing connection along County Road 32A, sharing the lane with vehicles, or use the new connection adjacent to I-80, which is designed to safely accommodate bicyclists, pedestrians, and vehicles.

Freight Impacts:

I-80 and US 50 serve as important regional connections for freight distribution. They are designated National Network Surface Transportation Assistance Act (STAA) routes, national Primary Highway Freight System routes, and state-designated Priority Interregional Facilities. I-80 is the only all-weather crossing of the Sierra Nevada mountains, providing critical connection between the Port of Oakland and the continental US. Davis and West Sacramento have warehouse and manufacturing land uses adjacent to I-80 and US 50, including the Port of West Sacramento, which is accessed via the US 50/Harbor Boulevard interchange. Traffic congestion under the preferred alternative would affect trucks similarly to passenger vehicles in the GP lanes.

Caltrans' Project Programming Request included several performance indicators and measures related to freight. Compared to the no-build alternative, the preferred alternative allowed for 6% increase in truck volume, a reduction in daily truck hours of delay of 72%, and a reduction in total cargo transport time of 18%. The Reliability Index for Truck Travel Time also improved from 1.73 to 1.19 compared to the no-build alternative. The enhanced reliability facilitates a more streamlined flow of goods, contributing to a dynamic and expanding economy.

4. Technical Feasibility

4.A Project Definition

Has the applicant described the proposed facility in sufficient detail to determine the type and size of the project, the location, all proposed interconnections with other transportation facilities, the communities that may be affected, and alternatives (e.g., alignments) that may need to be evaluated?

Project Overview

Phase 1 is the segment under consideration for tolling authority under this application, shown in red in Figure 1. It is located in Solano County and Yolo County between Richards Boulevard and the I-80/I-50 interchange in the eastbound direction and between I-80/I-50 interchange and Mace Boulevard in the westbound direction. The total Phase 1 length is approximately 8.5 centerline miles.

The Full Project is in Solano, Yolo, and Sacramento Counties on the I-80 corridor between Kidwell Road in Solano County and West El Camino Avenue in Sacramento County. In addition, the project is located on the US 50 corridor between the I-80/I-50 interchange in Yolo County and the US 50/I-5 interchange in Sacramento County. The total Project length is approximately 17 centerline miles.

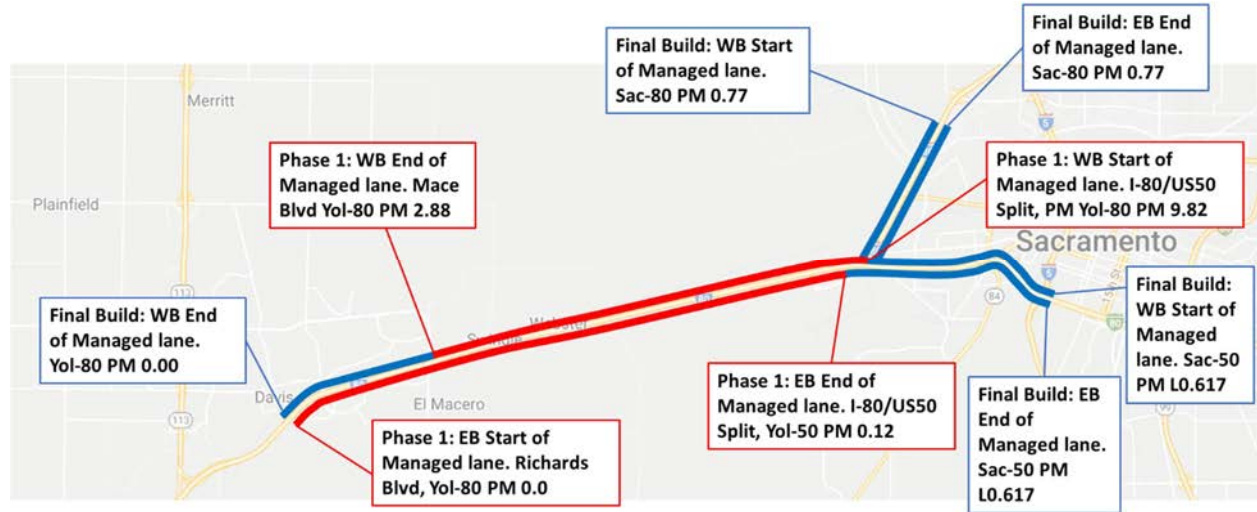


Figure 1: Start and End of Managed Lanes

We reiterate that this Application only seeks to secure tolling authority for Phase 1 of the Project. Additional tolling authority for future phases will be sought in future applications as funding is secured.

From a local perspective, within the Sacramento region, I-80 serves interregional, regional, and local commute traffic, recreational traffic to and from the Bay Area and the Lake Tahoe Basin and is a primary corridor for goods movement. The section of I-80 within the project limits also connects faculty, staff, and students commuting to either the University of California at Davis or Sacramento State University. Within the corridor, the Yolo Bypass Wildlife Area and floodplain limits east-west linkages. Without parallel alternatives, many modes and forms of transportation are funneled into the narrow I-80 corridor between the cities of Davis and West Sacramento.

From a regional perspective, I-80 is the critical and only link between the Sacramento region and the San Francisco Bay Area. The corridor serves as a primary connection for east-west travel in Solano, Yolo, and Sacramento Counties and is part of a major transportation route between the Tahoe regions to the east of the state capital and the San Francisco Bay Area to the west. The route also links the Bay Area with recreational destinations in the Sierra Nevada Mountains and other destinations in Northern California by using SR 113 to access I-5 in Yolo County and SR 99 in Sacramento County.

From a national perspective, I-80 is the primary freeway serving the movement of people and goods between Northern California and the eastern United States. I-80 and US 50 serve as important regional connections for freight distribution between warehouse, agricultural and manufacturing industries in the Central Valley, the Bay Area, and major ports (e.g., Oakland, Richmond, Stockton, West Sacramento). Both I-80 and US 50 are National Network Surface Transportation Assistance Act (STAA) routes. Freight trucks travel through and throughout the region 24 hours a day, seven days a week, transporting large quantities of goods. The tonnage of goods expected to travel via the I-80 corridor is expected to increase over time.

Freight trucks also access and transfer cargo from the port of West Sacramento, which is part of the Foreign Trade Zone and specializing in the import and export of bulk agricultural-and construction - related products. The port of West Sacramento is located south of I-80 off of Harbor Boulevard. The segment of I-80 within the project limits is a primary access route to the Sacramento International Airport and other large distribution centers.

Because of its designation as a primary east-west route, the corridor accommodates many transportation modes, including freight trucks, park-and-ride users, bicyclists, personal vehicles, Capital Corridor trains, and public transportation. There are almost no east-west alternatives in the project area.

Project Characteristics

In Solano County within the project limits, I-80 varies from three to four eastbound and westbound lanes with a standard shoulder, separated by a 20- to 35-foot-wide paved and/or unpaved center median with a guardrail or concrete barrier. In Yolo County within the project limits, I-80 is a six-lane freeway with three lanes each in the eastbound and westbound directions. I-80 has variable 10- to 15-foot-wide outside shoulders in each direction. The corridor travels through the cities of Davis and West Sacramento. County Road (CR) 32A is located north of I-80 and east of the Mace Boulevard interchange and acts as a frontage road to the Yolo Bypass where I-80 becomes a causeway. East Chiles Road connects via bypass to the eastern end of CR 32A, and similarly acts as a frontage road running parallel to I-80 on the southern side. East Chiles Road connects to Chiles Road, and together run parallel to I-80 for approximately 4 miles, continuing to Drummond Avenue in Davis.

In Sacramento County within the project limits, I-80 is a six-lane freeway with three eastbound and three westbound lanes separated by a variable 35- to 60-foot paved center median with concrete and/or guardrail center median barriers. Travel lanes are roughly 12 feet wide, and each direction of travel has variable 10- to 15-foot-wide paved outside shoulders. Primary providers of bus and rail transit include Amtrak, Fairfield/Suisun Transit, Solano Express Bus, Yolobus, Unitrans, Sacramento Regional Transit, and Greyhound Bus. Bicycle and pedestrian accessibility are provided via the surrounding arterial network.

Alternatives

After completion of the PID phase of the project, the PA/ED phase of the project was initiated on November 13, 2017, and thirteen near-term build alternatives were studied. The Project has considered multiple improvement alternatives for the I-80 corridor, including implementation of new high occupancy vehicle (HOV) lanes, high occupancy toll (HOT) lanes, transit only lanes, and conversion of existing general-purpose lane to HOV only.

“No-Build” Alternative 1 would maintain existing conditions and no work would be conducted to relieve current traffic congestion to improve traffic flow. Build Alternatives 2a, 3a, 4a, 5a, and 6a propose the same geometric footprint, but would incorporate different managed lane types. Build Alternatives 2b, 3b, 4b, 5b, and 6b propose the same geometric footprint, include an I-80 managed lane direct connector (to provide a direct connection of the HOV 2+ managed lane with managed lane direct connectors at the I-80/US 50 interchange) but would incorporate different managed lane types. Build Alternatives 7a and 7b would not construct new lanes but would repurpose an existing lane instead; however, Build Alternative 7b would include the I-80 managed lane direct connector.

- No-Build Alternative 1: Maintain existing conditions.
- Build Alternative 2a: Add a high-occupancy vehicle lane in each direction for use by vehicles with two or more occupants (HOV 2+).
- Build Alternative 2b: Add a high-occupancy vehicle lane in each direction for use by vehicles with two or more occupants (HOV 2+) and build an I-80 managed lane direct connector.
- Build Alternative 3a: Add a high-occupancy toll lane in each direction for free use by vehicles with two or more occupants (HOT 2+). Single-occupied vehicles would pay a fee for lane usage.
- Build Alternative 3b: Add a high-occupancy toll lane in each direction for free use by vehicles with two or more occupants (HOT 2+) and build an I-80 managed lane direct connector. Single-occupied vehicles would pay a fee for lane usage.
- Build Alternative 4a: Add a high-occupancy toll lane in each direction for free use by vehicles with three or more occupants (HOT 3+). Vehicles with fewer than three occupants would pay a fee for lane usage.
- Build Alternative 4b: Add a high-occupancy toll lane in each direction for free use by vehicles with three or more occupants (HOT 3+) and build an I-80 managed lane direct connector. Vehicles with fewer than three occupants would pay a fee for lane usage.
- Build Alternative 5a: Add an express lane in each direction (i.e., everyone would pay a fee to use the lane, regardless of the number of occupants).
- Build Alternative 5b: Add an express lane in each direction (i.e., everyone would pay a fee to use the lane, regardless of number of occupants) and build an I-80 managed lane direct connector.
- Build Alternative 6a: Add a transit-only lane in each direction.
- Build Alternative 6b: Add a transit-only lane in each direction and build an I-80 managed lane direct connector.
- Build Alternative 7a: Repurpose the current number one general-purpose lane for use by vehicles with two or more occupants (HOV 2+); no new lanes would be constructed.
- Build Alternative 7b: Repurpose the current number one general-purpose lane for use by vehicles with two or more occupants (HOV 2+); no new lanes would be constructed. Build an I-80 managed lane direct connector.

Table 3 describes access policies used for each alternative under study.

Table 3: Managed Lane Access by Alternative in Project Area

Alternative	SOV	Trucks (2-axle only)	HOV2	HOV3+	Transit
1	-	-	-	-	-
2	No	No	Yes	Yes	Yes
3	Toll	Double Toll	Yes	Yes	Yes
4	Toll	Double Toll	Half Toll	Yes	Yes
5	Toll	Double Toll	Toll	Toll	Yes
6	No	No	No	No	Yes
7	No	No	Yes	Yes	Yes

Preferred Alternative

The preferred alternative is Alternative 4B. The preferred alternative will provide improvements on I-80 and US 50 from Kidwell Road near the eastern Solano County boundary (near Dixon), through Yolo County, and to West El Camino Avenue on I-80 and on US 50 to I-5 in Sacramento County. The project would add managed lanes on I-80 and US 50 by a combination of median and shoulder reconstruction, lane conversion, and restriping. Drainage modifications would be required due to median reconstruction in the locations to which sheet flow currently drains. Existing ITS elements and infrastructure would be modified, and new ITS elements would be added, including ramp meters, fiber-optic conduit and cables, and overhead signs.

Project features include:

- **Managed Lanes:** Highway facilities, or a set of lanes, where operational strategies are implemented to manage overall traffic congestion or in response to changing conditions (FHWA 2008). Managed lanes can include pricing, vehicle eligibility, or access control concepts. The lanes have flexibility to be used by different types of vehicles, depending on the need, and can be actively managed to accommodate peak travel demands. Managed lanes would be distinguished from general purpose lanes using signage and striping.
- **Intelligent Transportation System/Transportation Management Systems:** Ramp meters and other ITS/Transportation Management Systems (TMS) such as CCTV and changeable message signs (CMS). Several maintenance vehicle pullouts are proposed adjacent to I-80 on-ramps to accommodate an electrical cabinet for proposed ramp meters or other ITS/TMS infrastructure.
- **Structure Modifications:** Improvements to existing structures to accommodate proposed managed lanes, including placing fiberoptic conduit and retaining wall construction
- **Ramp Modifications**
- **Bicycle/Pedestrian Facilities**
- **Mobility Hub**
- **Signage:** Roadside signs and overhead CMS
- **Street Lighting**
- **Utilities:** Up to four 115-kilovolt overhead utility towers may be relocated near the new I-80 managed lane direct connector
- **Fiberoptic Cable**
- **Drainage:** Extending existing culverts and adding new drainage inlets and culverts

4.B Proposed Project Timeline

Is the time frame for project completion clearly outlined? Is the proposed schedule reasonable given the scope and complexity of the project? Does the proposal contain adequate assurances that the project will be completed on time?

Table 4 provides the current schedule for Phase 1 of the Project, leading to the opening of the toll facility in 2028.

Table 4: Phase 1 Schedule

PROJECT ACTIVITIES	TIMELINE
PROJECT INITIATION	
PSR	September 24, 2019
ENVIRONMENTAL	
Begin Environmental	December 2018
Final PR	April 2024
Final Concept of Operations	April 2024
Final EIR	April 2024
Final EA	April 2024
FINANCIAL	
Final T&R	January 2024
Preliminary Finance Plan	January 2024
Final AB 194 Application for Tolling Authority	March 2024
SB-1 Cycle 4 Advance TCEP Allocation	May 2024
INFRA Obligation Deadline	September 30, 2024
DESIGN/CONSTRUCTION/PROCUREMENT	
Ready to List (RTL) for Advertisement	April 2024
Advertise	May 2024
Bid Opening	July 2024
Contract Award	September 2024
Begin Construction	October 2024
Substantial Construction Completion	October 2027
TOLLING IMPLEMENTATION	
CARTA Inaugural Meeting	February 15, 2024
Commission Approval of Tolling Authority	May 2024
Toll Ordinance	January 2025
Caltrans Facility O&M and Traffic Monitoring and Incident Response Service Agreements	June 2025
Third Party Financial Back Office and Customer Service Center Agreement(s)	June 2026
Preliminary Expenditure Plan Approved by CARTA Board	December 2026
Express Lanes Go-Live	March 2028

CARTA has taken several steps to ensure that the Project will be completed on schedule, including establishing formal and informal meeting schedules and enacting a plan for project controls.

The CARTA JPA Agreement (Attachment B) establishes the roles and responsibilities of the partner agencies and organizations to deliver the Yolo 80 Corridor Improvements Project. CARTA's Governing Board, made up of Directors appointed by YoloTD, SACOG, and Caltrans, will oversee the Authority.

The following four subsections describe a potential approach to project controls to be undertaken by CARTA. Note that these are subject to change pending the development of cooperative agreements following the inaugural meeting of CARTA.

Project Management and Reporting:

Periodic reports will be prepared to assess and track the Project's status, progress, costs, budgets, schedules, quality, environmental mitigation, safety, and labor compliance. These reports, which will cover periods ranging from one week to one year, include special reports prepared as necessary or requested. CARTA staff will ensure these reports are prepared by the Project Management Consultant, designer, civil contractor, Caltrans, and/or toll system integrator, as appropriate.

A formal cost, schedule, and status report will be reviewed quarterly with the CARTA Technical Advisory Committee (TAC), which will consist of executives from YoloTD, SACOG, Caltrans District 3, Sacramento Transportation Authority, Placer County Transportation Planning Agency, and El Dorado County Transportation Commission. These status reports will also be presented to the CARTA Board.

A Project Management Team (PMT) with representatives from YoloTD, SACOG, Caltrans District 3 will meet monthly. The project management structure will include the Integrated Project Development Team (IPDT), Design Management Team (DMT), Change Management Board (CMB), and Construction Team Meeting, each meeting weekly or monthly. The CMB, which will be established to control changes and claims, will operate under specific procedures that do not conflict with Caltrans Standards or Manuals requirements.

Status Meetings:

The PMT will hold regular status meetings to discuss costs, schedules, quality issues, compliance with federal and state requirements, and other status items. The meetings ensure all involved parties are fully aware of significant issues and actions planned to mitigate adverse impacts. Project managers will prepare a monthly status report for these meetings, which may change format as the Project progresses and new topics are identified. The report will include an Executive Summary, Activities and Deliverables, Risk Management, Action Items/Outstanding Issues, Schedule Adherence, Cost Adherence, Quality Adherence, and Safety Summary.

Weekly Progress Meetings:

Project delivery teams will hold weekly or monthly progress meetings to review schedules, provide ongoing dialogue, report construction status, identify and propose resolutions to problems, address safety issues, coordinate with utilities and others, and identify issues requiring immediate action or escalation. These meetings will also identify significant issues for discussion with the PMT and immediate communication of progress and issues to address adverse impacts promptly. Project stakeholders will be invited to attend regularly or as needed. A similar project delivery management team structure, with the required stakeholders, is proposed to be incorporated into the agreement with any public toll facility operator contracted to deliver the System Integrator component of the Project.

Risk Register:

Project risk management (PRM), as outlined in Caltrans Deputy Directive (PD-09), is applied throughout the project's various phases. PRM involves planning for, identifying, analyzing, communicating, managing, and responding to project risks throughout project delivery. A risk register, prepared for the Project and regularly updated by the Project delivery team, lists all identified risks, risk owners, and agreed-upon risk response strategies.

4.C Operation

Has the applicant presented a reasonable statement setting forth plans for operation of the facility?

CARTA has established a draft Concept of Operations, included as Attachment C, which outlines plans for operations of the facility. The most relevant sections of this plan have been included in this section below.

Access

The Project team has identified that restricting access on the I-80 corridor will not result in operational benefits, and instead may worsen conditions due to reduced lane width. Implementing larger stretches of open access will limit the need to reduce lane widths and shoulder space. Thus, the access configuration of the Project will be continuous access solution.

A continuous access solution provides the flexibility to implement access restrictions for future phases or areas that can be improved with buffer separation. Adding areas of access restriction to a continuous access facility is largely driven by traffic modeling and analysis to determine areas where access restrictions make sense and areas where unrestricted access is appropriate. Access restrictions are typically introduced around areas where there are recurring bottlenecks and heavy weaving. Sometimes access restrictions are implemented in the vicinity of major interchanges where there is heavy demand to enter or exit the freeway. This is done in a way that forces vehicles to exit the managed lane well in advance of a major interchange so weaving movements are spread out over a longer distance.

Start of Managed Lanes

The addition of an express lane will serve as an ingress point at the beginning of the managed lanes. In the west end of the project, the start of the express lanes will be just west of Richards Boulevard on I-80 (PM YOL 0.10). In the east end of the Project, the start of the express lanes will be located on US 50 upstream to the I-80/US 50 merge (PM YOL 0.17). Since access will be unrestricted, people traveling from I-80 and US 50 will both be able to enter the express lanes at the start.

End of Managed Lanes

In the eastbound direction, the managed lane will terminate by transitioning into an existing general-purpose lane. The eastbound termini will be just east of the I-80/US 50 split on US 50 (PM YOL 0.12). The westbound termini will be a lane drop, providing enough taper length to merge into the general-purpose lanes. The westbound termini will be located east of Mace Boulevard on I-80 (PM YOL 2.98).

Transit Access

Since the Project will be continuous access, existing and future transit routes will not be impacted and does not limit the option to enter or exit the express lanes.

Price Locking

Price locking ensures that toll-paying customers will be charged the rate displayed on the toll rate sign prior to entry into the Express Lane and is not subject to any price changes that may occur while traveling in the zone. Toll rate signs display up to two destinations, meaning customers are price locked in both destinations. The top destination will be end of the most immediate zone and the bottom destination will be the facility termini.

For example, customers who enter at the facility at Richards Boulevard going eastbound will be price locked for Mace Boulevard, E. Chiles Road, and US-50. This ensures that regardless of price changes during their trip, they will be charged the price they saw on the pricing sign before entering the toll lane.

Toll Zones

Yolo 80 Managed Lanes toll zones will be defined as the segments between major destinations or movements, such as off ramps. The proposed configuration for the first phase of the project includes three zones in the eastbound direction, and two zones in the westbound direction, as shown in Table 5 below.

A single toll applied over the entire corridor will not be able to manage demand efficiently since traffic conditions will inevitably vary along the Express Lane corridor. The concept of zone pricing allows the toll system to respond to bottlenecks by increasing the toll rate in the zone while avoiding unnecessary price increases for other zones with available capacity.

Table 5: Phase 1 Toll Zones

Zone	Beginning	End	Length (lane miles)	Number of Toll Points
EB 1	Richards Blvd	Mace Blvd	2.2	2
EB 2	Mace Blvd	E. Chiles Rd	3.0	2
EB 3	E. Chiles Rd	US-50/I-80 Split	4.3	3
WB 1	US-50/I-80 Merge	E. Chiles Rd	4.0	3
WB 2	E. Chiles Rd	Mace Blvd	2.9	3

Figure 2 shows the proposed toll zone map for Phase 1 of the Project. The figure identifies the locations of the pricing signs associated with each zone and major destinations. The pricing signs in the first phase of the Project will include overlays for future destinations that will be included in the final phase. As funds become available to construct the entirety of the project limits, additional zones will be created and the zone map will be updated. Depending on the alternative, the expanded limits and the direct connector will include tolling equipment and be treated as a new zone that can be priced separately to increase the ability to manage traffic demands.

Yolo 80 Managed Lanes Toll Zones

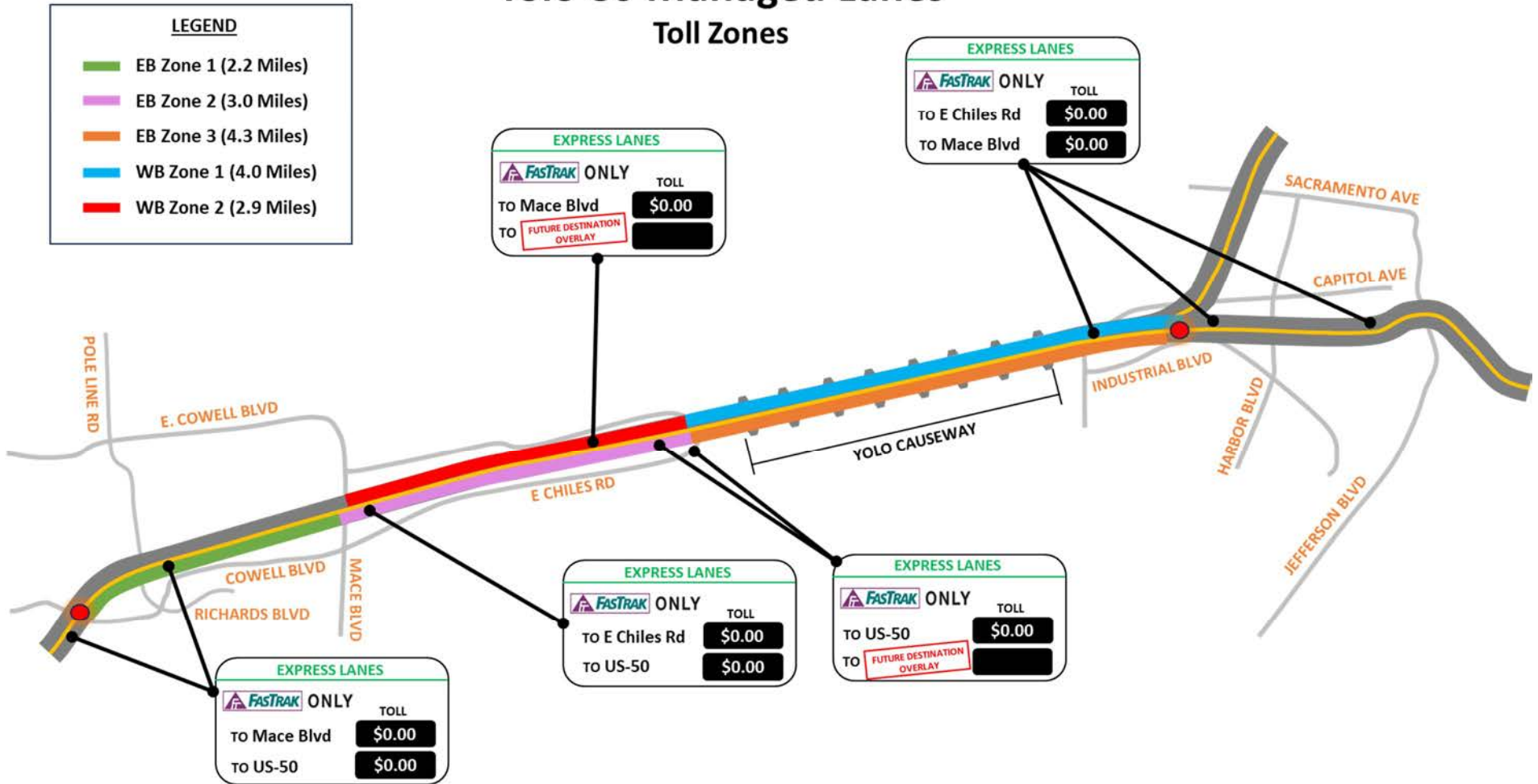


Figure 2: Phase 1 Toll Zone

Lane Separation

Please reference Section 5.5 of the Concept of Operations in Attachment C for information on lane separation.

Signage

Overhead and median mounted signs are used to display guidance and regulatory information to drivers about the use of managed lanes. Signs are used to designate access locations, display eligibility requirements and hours of operation, and for express lanes, to display toll rates and toll tag account requirements. The 2014 edition of the California Manual on Uniform Traffic Control Devices, Revision 6 (2014 CA MUTCD, Revision 7) provides specifications and guidance for the design and placement of managed lanes signs.

Start of Lane Signage

The CA MUTCD Express Lane requirements include the placement of prescriptive signing at the beginning and end of an Express Lane facility, as well as intermediate access locations. As drivers approach the Express Lanes, they will see a sequence of advanced overhead signs which include Changeable Message Signs (CMS), Pricing Signs, and Preferential Lane Entrance signs (CA MUTCD E8-2 and E8-3), beginning two miles before the entrance. The sequence of advanced signage will align with Figure 2G-21 from CA MUTCD, which designates example signing for the entrance to a priced managed lane. Examples of this signage are shown in Figure 3.

ENTRANCE TO CONTINUOUS ACCESS EXPRESS LANE

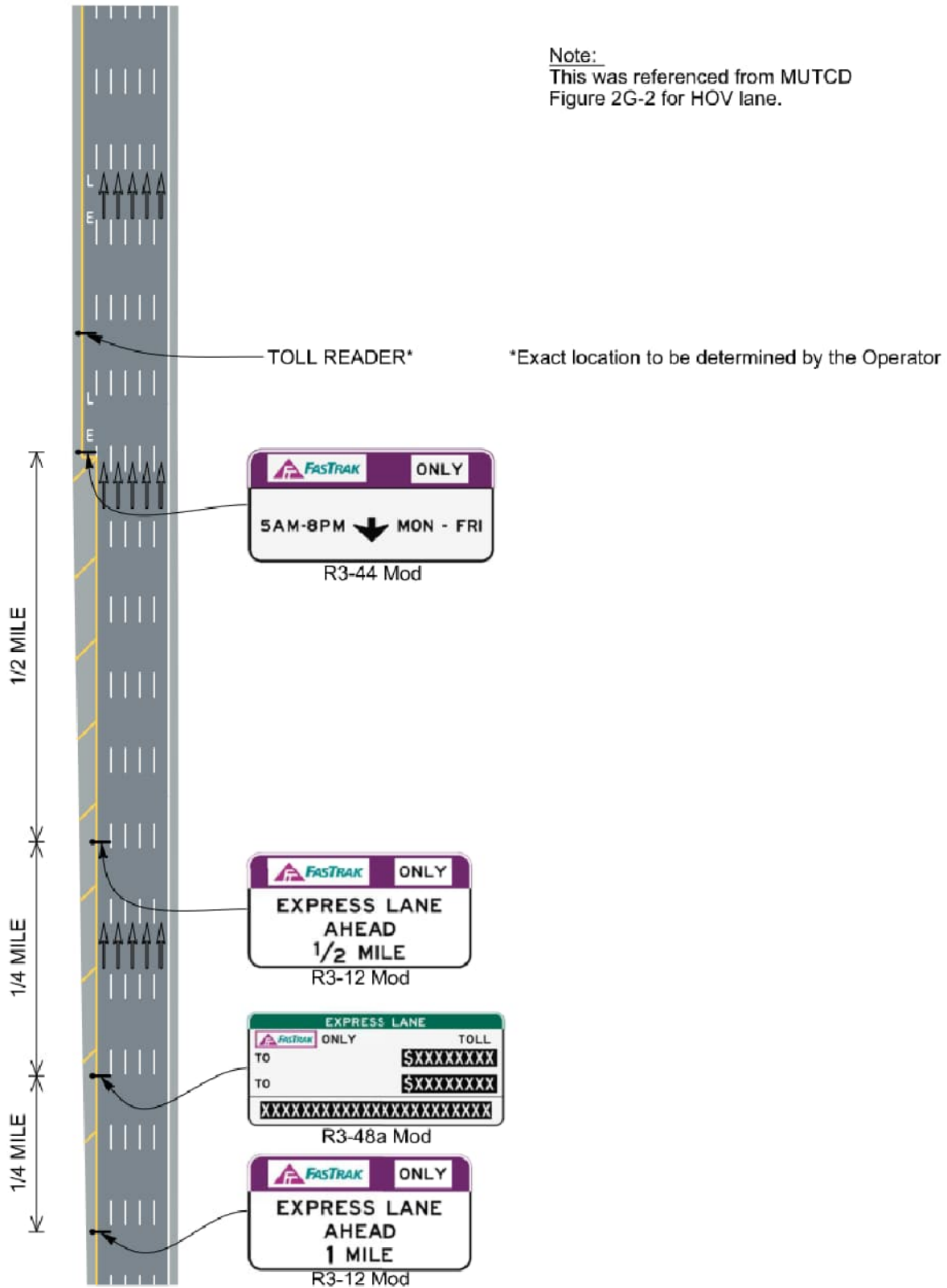


Figure 3: Example Start of Express Lane Signage

MUTCD provides recommended spacing between overhead signs upstream of the Express Lanes entrance. Signs will be placed for the Project in accordance with the recommended spacing with the below exceptions:

- Placing sign panels on existing sign structure at nearby stationing, if possible
- Avoiding the placement of signs on overpasses or the causeway structure
- Ensuring proposed signs are spaced 800 feet from existing signs
- Placing signs upstream of bridges to avoid sight obstruction

Intermediate Signage

Along segments where there are few or no access restrictions, overhead and median mounted regulatory signs will be located at regular intervals to clearly designate the express lane and display the HOV eligibility requirement, hours of operation and the FasTrak® account requirement for all vehicles in the lane. These signs may need to allow for easy modifications if the HOV eligibility requirement or the hours of operation change in the future.

Occupancy requirement to receive toll discount will be displayed on median mounted signs with FasTrak branding, see Figure 4 below.



Figure 4: Example FasTrak Occupancy Requirement Sign

Pricing Signage

As required by CA MUTCD, pricing signs will be placed before each point of entry to the Express Lanes to inform drivers of the toll before they make their decision to either enter the Express Lanes or remain in GP lanes.

Overhead pricing signs are installed to display the toll rates to travel to downstream destinations. These signs are installed in advance of access points for limited access facilities, or at regular intervals throughout the corridor for continuous access facilities. The CA MUTCD includes guidance for the types and number of destinations to be displayed on pricing signs. Current guidance suggests no more than two destinations be displayed, including the price to the end of the facility and an intermediate major destination. Exceptions have been made to allow more than two destinations, but it is preferable to keep the amount of information on Express Lane signs to a minimum to avoid driver confusion.

The pricing signs on the I-80 Express Lanes will consist of static panels with changeable message inserts for pricing. An example shown in Figure 5.



Figure 5: Example Pricing Sign – I-880 Express Lanes

End of Lane

A sequence of overhead signs beginning one-half mile upstream of the terminus of an express lane will be used in accordance with the CA MUTCD to indicate that the express lane is ending. See Figure 6 for example of advanced warning signs that will be installed.

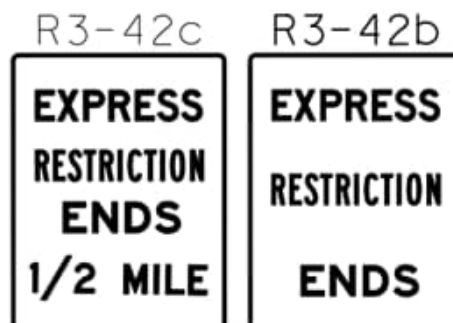


Figure 6: Termini Signage

Operational Policies

The Yolo 80 Managed Lanes will operate between 5am and 8pm, seven days a week. This tolling policy may be adjusted based on operations, traffic demand, and the policies of other regional express lane facilities. Policy consistency is important for minimizing driver confusion and help to maximize the efficiency of traffic operations and the overall performance of both Express Lanes and GP lanes.

Currently, MTC is analyzing weekend hours of operations for I-80 Express Lanes Project in Solano County. The policies of the Solano 80 Express Lanes may influence the final policies and business rules of the Yolo 80 Express Lanes.

Vehicle Eligibility

Vehicles eligible to use Yolo 80 Managed Lanes will be determined by Federal and State law, in addition to the business rules ultimately established for the facility. Vehicles eligible for Yolo 80 Managed Lanes access include two-axle vehicles, buses, and motorcycles. Other vehicles will be prohibited from accessing the Yolo 80 Managed Lanes per California law. Eligible vehicles with characteristics such as meeting established vehicle occupancy rates, transit vehicles, motorcycles, qualifying Clean Air Vehicles (CAV), emergency vehicles, and others may be able to travel in Yolo 80 Managed Lanes at either a reduced or no cost toll rate, as described in the following sections.

Toll Exempt/Discounted Vehicles

The pricing introduced by Express Lane facilities creates an opportunity to establish different payment classes based on overall goals of the facility. On Express Lanes, applied toll rates can vary for different users depending on policy priorities and the goals of the facility. For instance, policies can grant toll discounts or exceptions based on vehicle occupancy, vehicle type, vehicle classification, or other criteria. Express Lane facilities in California are currently required by law to offer discounts or exemptions to certain types of vehicles. Doing so can incentivize beneficial activities, such as carpooling, transit utilization, and the use of low-emission vehicles. However, they also have an impact on demand management capability, revenue, operations, customer service center systems, and enforcement. It is important to assess toll discounts or exemptions to evaluate the anticipated effects on the operational performance of the Express Lanes.

Given that CARTA has goals regarding performance measures, equity, regional consistency, VMT, and financial sustainability, protocols for changing or updating these payment classes periodically will be considered. This practice can better enable the facility to meet desired goals, and result in better performance over time. This is further underscored by Federal Law 23 U.S.C. § 166, which requires HOV lanes that allow access by non-HOVs (usually by paying a toll) to meet minimum traffic performance standards. Specifically, if an HOV lane is determined to be degraded, steps must be taken to mitigate the issue within 180 days by increasing HOV lane occupancy, varying tolls on non-HOVs, discontinuing non-HOV use, or increasing HOV lane capacity. An HOV facility becomes degraded if it fails to maintain a minimum average operating speed of 45 mph, 90 percent of the time over a consecutive 180-day period during morning or evening weekday peak hour periods.

California statute dictates the following vehicles to be eligible for toll discounts and exemptions on Express Lanes:

- Qualifying HOVs
- Transit
- Motorcycles
- Clean-Air Vehicles (current regulations set to expire 2025)

-
- Qualifying Emergency Response Vehicles

High-Occupancy Vehicles

Vehicles meeting established occupancy requirements are eligible for toll-free travel per California Streets and Highways Code Section 149 (SHC § 149) and Title 23 of the U.S. Code, Section 166 (23 U.S.C. § 166).

Caltrans has assessed vehicle occupancy requirements on Yolo 80 Managed Lanes. T&R and TAR results identify that an occupancy requirement of HOV3+ to receive full discount will result in greater operational performance. However, it should be noted that the ultimate occupancy requirements for toll-free or discounted travel on Yolo 80 Managed Lanes will be finalized later in the project development process. The T&R analysis provides insights on impact of various HOV occupancy requirements on potential net-revenue, HOV degradation, and corridor performance.

In addition to facility revenue and traffic performance, consideration will also be given to the HOV occupancy requirements of other regional Express Lane facilities to offer customers a level of consistency between corridors.

Transit Vehicles

One of the primary goals of priced managed lanes is to improve person throughput along the managed corridor. As such, public transit buses and paratransit vehicles as defined in California Vehicle Code Section 21655.5 (CVC § 21655.5) will be allowed free travel in Yolo 80 Managed Lanes at all times. 23 U.S.C. § 166 permits all over-the-road buses servicing the public to utilize toll facilities under the same rates, terms, and conditions as public transportation vehicles. Therefore, toll-free travel will be offered to all transit vehicles, whether publicly or privately operated. Future business rules will be established to determine whether buses will be recognized in the system through the use of non-revenue toll tags, or whether the tolling of transit vehicles would be preempted through some other back-office process.

Motorcycles

Motorcycles are eligible for toll-free travel in Express Lanes per CVC 21655.5(b) and 23 U.S.C. § 166. At the time of this writing, the Yolo 80 Managed Lanes plan to offer toll-free access to motorcycles, and motorcycles are anticipated to require transponders to receive a toll exemption.

Clean Air Vehicles

CVC § 21655.9 and CVC § 5205.5 allows California certified clean air vehicles (CAVs) with decals issued by the Department of Motor Vehicles (DMV) to use Express Lanes toll-free or at a reduced rate. However, the statute does not mandate the rate of reduction. The CAV decal program is subject to authorization by FHWA and therefore could end sooner than specified in California law, which is currently set to expire on September 30, 2025, prior to anticipated Yolo 80 Managed Lanes commencement date.

At the time of this writing, CARTA intends to offer a toll discount based on CVC § 5205.5 as well as regional consistency with other express lane facilities in the Bay Area. However, the ultimate CAV toll policy will be determined later in project development, pending vehicle code regulations at the time of tolling commencement.

Exempt Vehicles

CVC 23301.5 provides toll exemptions on Express Lanes for emergency response vehicles traveling to or from emergency calls. On the Yolo 80 Managed Lanes, Caltrans will need to establish agreements with the local emergency response agencies that will outline the protocols associated with toll free access. Pursuant to CVC 23301.5, an emergency vehicle is exempt from any requirement to pay a toll or other charge under the following circumstances:

- The authorized emergency vehicle is properly marked (i.e., California Highway Patrol (CHP), Sheriff, Fire, Police, Ambulance)
- The vehicle is responding to an “urgent” or emergency call that does not include any personal, commuting, training, or administrative use
- The driver of the vehicle determines that use of the Express Lane will likely improve availability, response, and arrival time to the emergency.

Many agencies also allow toll-free Express Lane access to vehicles associated with the exempt account of a public safety agency, mass-transit agency, or maintenance provider that serves the Express Lanes. Maintenance vehicles could include those utilized by Caltrans or their contractors performing maintenance activities on Yolo 80 Managed Lanes. These vehicles may be required to carry a transponder linked to a non-revenue account, or tolls could be screened out through some other back-office function.

Toll Payment and Declaration

Toll payments for the Yolo 80 Managed Lanes will be facilitated in part by electronic toll transponders. Transponder-based toll collection is a proven, accurate solution with relatively low transaction costs. Transponders used for the Yolo 80 Managed Lanes will need to comply with California interoperability standards for toll collection. Title 21 of the California Code of Regulations specifies the protocol for the exchange of transponder information for toll facilities in California. These transponders are branded as FasTrak® and can be used on any of the California toll facilities. The California Toll Operators Committee (CTOC) maintains toll interoperability throughout the state and has transitioned from the current Title-21 tolling protocol to the International Organization for Standardization (ISO) 18000-63 (known as 6C) protocol. The 6C protocol offers significantly lower transponder costs and is an established standard in the toll industry. 6C transponders come in a variety of forms including a transportable hard case form that allows for occupancy declaration and a non-removable sticker form (Figure 7). It is envisioned that the transition from the legacy Title 21 protocol to the new 6C protocol will be fully completed by the time the Yolo 80 Managed Lanes are implemented.



Figure 7: FasTrak® Sticker Transponder

Consistent with the BAIFA, Alameda CTC, SMCEL JPA, and VTA Express Lanes, it is anticipated that the Yolo 80 Managed Lanes will require vehicles eligible for an occupancy-based toll exemption or discount

to have a switchable transponder (Figure 8). Switchable transponders provide the benefit of allowing drivers to self-declare their vehicle occupancy rate, thereby eliminating the need to provide declaration lanes for qualified HOV vehicles such as the 91 Express Lanes facility. Vehicles traveling with a switchable transponder set in a high-occupancy setting will be detected by the toll system and the appropriate toll discount will be applied.

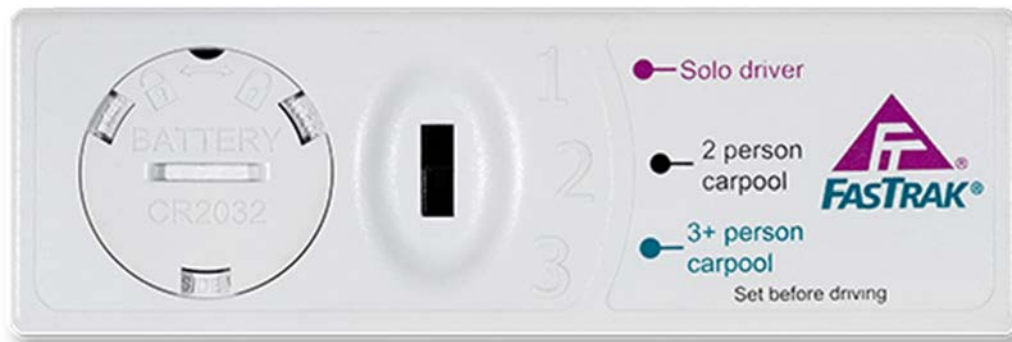


Figure 8: Switchable Transponder

Public outreach and coordination with other regional operators will be required to ensure that holders of “legacy” FasTrak® electronic transponders without the occupancy declaration switch are well informed about the requirement for a switchable transponder for free/discounted access to the Yolo 80 Managed Lanes.

Future business rules will define how discounts are applied in unique situations, such as if users switch their occupancy declaration mid-trip, or if multiple transponders are detected. For example, if a customer is read as a single occupant vehicle (SOV) at one toll point, then HOV3 at another toll point within the same trip, the business rules will determine which tag setting holds priority. In the scenario where more than one transponder is read in a single vehicle, business rules will define the hierarchy to be used for payment or the application of discounts.

Vehicles using the Express Lanes without a transponder will be detected by license plate recognition (LPR) cameras. If there is no account associated with the license plate, then the license plate will be matched to the address of the vehicle’s registered owner for issuance of a license plate toll bill to collect the toll payment. In practice, an additional fee or surcharge may be applied to license plate tolls to account for the required license plate image review, vehicle registration review, and billing functions. Yolo 80 Managed Lanes policies concerning potential surcharges for license plate tolling, and toll violations for non-payment will be defined by future business rules of the facility.

License plate tolling will make the Express Lanes available to more users, but it increases the risk of potential congestion and higher tolls on the Express Lanes, revenue leakage due to unidentifiable plates or registered owners, and longer periods of time to collect toll revenue.

The option for vehicles to access Express Lanes and pay a toll via LPR image capture, without the use of a transponder, is used on several facilities throughout the country. Due to the additional costs associated with image review and payment processing, this toll payment option typically includes a license plate surcharge in addition to the base toll rate applied to the vehicle. This option is currently being implemented by LA Metro as part of the “Pay-as-You-Go” program on the I-10 and I-110 Express Lanes.

The system will bill the registered vehicle owners without transponders for their toll plus an additional \$8.00 administrative fee. Vehicles using the pay-by-plate tolling would not be eligible for any toll exemptions or discounts.

Other toll payment and declaration options should be monitored as the Yolo 80 Managed Lanes advances further in project development. Smartphone applications are used by multiple agencies throughout the country outside of California to declare vehicle occupancy. Using these tools, a vehicle preregisters for a qualifying HOV trip on an application linked to a preexisting account. There are various ways to verify occupancy status using these tools, including user submitted time-stamped photos of the vehicle interior, or the proximity of multiple smart phones with activated smart phone applications within the same vehicle. These emerging technologies may be integrated into future California Express Lane operations.

Pricing and Toll Rates

The Project plans to use a preferred pricing model to maintain traffic performance thresholds. Adhering to federal regulations (23 U.S.C. § 166), the project aims to sustain a 45-mph average operating speed for 90 percent of peak hours.

Regarding the pricing model, two primary approaches are explored: time-of-day pricing and dynamic pricing. Time-of-day pricing follows a predetermined schedule, adjusting toll rates based on expected congestion levels. This model, exemplified by the 91 Express Lanes, provides price certainty and predictability, most effective for facilities with low traffic variability. Toll variations can be contingent on direction, day, and hour. In contrast, dynamic pricing responds to real-time traffic conditions, offering flexibility for toll adjustments. Widely employed, including in northern California express lanes, it actively manages demand during non-recurring congestion but requires extensive staffing and monitoring due to proprietary algorithms.

Within these frameworks, minimum and maximum toll rates are used for various reasons to exert more control over pricing. Minimum tolls cover operational costs during low traffic demand, maintaining a specified service level for Express Lane customers. Maximum tolls act as a price cap, preventing rates from triggering public or political challenges. Periodic evaluations are performed to adjust maximum toll rates based on changes in demand, with considerations for consistency or variation based on length and zone value.

Toll revenues from the Yolo 80 Managed Lanes are earmarked for reinvestment in the corridor. Initially, these funds are directed toward operations, maintenance, administration, toll collection, enforcement, and service patrol. A T&R study informs the development of an expenditure plan, which encompasses debt repayment, corridor improvements, transit services, equity-based toll programs, VMT growth mitigation, and other revenue priorities.

For more details on Pricing and Toll Rates, please reference Section 9.4 of the Concept of Operations (Attachment C).

Equity Considerations

Equity is one CARTA's highest priorities as it embarks on implementing a tolled facility. Critically, CARTA is committed to developing its equity program *with* communities, not *for* them. This commitment to equity in process rejects the notion that the agency staff writing this application are best suited to deciding what would make this toll facility and its benefits accessible to all residents and therefore

insists that the exact equity benefits should not be determined prior to conducting a thorough study in partnership with the most-affected communities.

CARTA and its partner transportation agencies in the region will develop an equity program that seeks to maximize benefits and minimize the burdens of the project for those who experience high transportation burdens and other disparities. Details of the framework and program are as follows:

- Framework
 - Equity trainings for all project staff and consultants
 - Briefings for decisionmakers, staff and consultants on the historical and present-day disparities that exist in the project area and how they relate to the project
 - Engaging experts in transportation equity to participate in drafting and/or review draft work products
 - Soliciting input from equity experts as well as those with lived experience in the local area on scopes of work, proposed analyses and sources of data that would best illuminate potential disparities, benefits, and burdens.
- Program
 - Establish an Equity Program Advisory Committee comprised of local stakeholders with lived experience of transportation burdens, state and national experts in transportation equity and other key stakeholders that meets regularly to shape the Equity Program.
 - Leverage work from equity framework development and gather available data to establish a baseline/existing conditions for transportation equity in the project area.
 - Work with trusted Non-Governmental Organizations (NGOs) and community-serving organizations to survey targeted populations/communities about their transportation options and needs, awareness and impressions of tolled lanes and suggestions for needed transportation improvements.
 - Review existing transportation equity programs, particularly tolling equity programs, and conduct literature review to identify best practices.
 - Develop potential options for transportation equity program including options for “in-lane” programs (such as tolling discounts and transit improvements that utilize the lane) and “out of lane” programs (such as traffic calming in neighborhoods adjacent to the freeway).
 - Solicit input from advisory committee, community-serving organizations, partners and key stakeholders on equity program options and evaluation criteria.
 - Conduct final evaluation and prepare draft final Equity Program.

Additionally, the Project supports the Climate Action Plan for Transportation Infrastructure (CAPTI) “guiding principles” by:

- 1) Strengthening the commitment to social and racial equity by reducing public health and economic harms (i.e., decreasing carbon monoxide (CO), nitric oxide (NOx), and volatile organic compounds (VOC) emissions compared to the No-Build alternative; and improving accessibility to transit and medical centers for residents in the project area, including disadvantaged communities);
- 2) Making safety improvements to support the reduction of fatalities and severe injuries

-
- 3) Building toward an integrated, statewide rail and transit network through enhanced rail and transit frequency via the Project's VMT mitigation plan; and
 - 4) Investing in a network of safe and accessible bicycle and pedestrian infrastructure. In addition, CAPTI also refers to the California Transportation Plan goals, which include supporting a vibrant and resilient economy. Supporting the economy is also a Sustainable Freight Action Plan goal. The freight improvements that will be realized through the use of managed lanes will support the economy by creating jobs and by improving goods movement, which in turn supports businesses and helps to keep the cost of goods stable.

Concept of Operations Report

A Draft Concept of Operations document for the Project has been prepared. CARTA has engaged with FHWA to review the Concept of Operations, which includes substantial detail regarding all the systems necessary to construct, operate, and maintain the I-80 Express Lanes.

4.D Federal Involvement

Is the project outside the purview of federal oversight, or will it require some level of federal involvement due to its location on the National Highway System or Federal Interstate System or because federal permits are required? If so, has the applicant provided a reasonable plan for addressing all federal responsibilities?

FHWA approval is necessary for Major Project deliverables and other FHWA-required documents, including the review and approval of a Modified Access Report (MAR), which is triggered by the Connector Ramp in the previously described "B" alternatives. Please note that the Connector Ramp is not included in Phase 1 of the Project, for which authority is sought in this Application. A MAR will be needed for future phases only.

CARTA also plans to execute a Memorandum of Understanding with the FHWA to confirm understanding of requirements for how excess net toll revenue will be used. Please see PART B.5.B for more information on plans for the expenditure of excess net toll revenue.

Additionally, the FHWA will oversee the project through various means, including inspections, data reviews, audits, independent testing, and oversight related to the use of INFRA funding. The United States Department of Transportation Office of Inspector General may also conduct audits of costs and other financial data as required.

4.E Maintenance

Is there a process in place to clearly define assumptions and responsibilities during the operational phase including law enforcement, toll collection, and maintenance?

As described earlier in PART B.1.D and PART B.4.B, CARTA has recently formed, and plans to negotiate and execute agreements related to law enforcement, toll collection, and maintenance at various times as appropriate following the approval of toll authority and before the opening of the facility. This section expands upon some of the assumptions and expected outcomes of these negotiations.

CARTA is tasked with implementing and maintaining the toll system, including the toll collection system and administration of the toll schedule. CARTA's responsibilities encompass:

- Operating and maintaining devices exclusively needed for the system.
- Formulating the toll schedule, business rules, and account policies.
- Collecting tolls as per the established business rules and account policies.
- Executing marketing and public outreach for the Toll Facility.

CARTA currently plans to engage an existing operator for back-office and customer service center services to enhance efficiency by leveraging existing facilities and systems. The future contracted CSC provider’s responsibilities include, but are not limited to:

- Managing FasTrak® customer accounts, safeguarding Personal Identifiable Information (PII), and providing general customer service.
- Collecting tolls from FasTrak® customer accounts based on trip transaction records from express lane operators.
- Issuing toll violation notices and collecting toll violation penalties.
- Offering a payment plan per AB 2594 (Ting) requirements.
- Tracking, inventorying, and distributing FasTrak® toll tags to customer service outlets.
- Managing FasTrak® back-office operations (e.g., trip records, revenue, account information).
- Marketing the toll facility and FasTrak®.
- Administering and distributing toll revenue.
- Facilitating interfaces with credit/debit card processing and banking services.
- Establishing an interface with DMV for processing license plate reads and matching with registered vehicle owners.

Additionally, the toll facility’s maintenance will be determined by cooperative agreement among CARTA members and/or contracting with outside vendors for maintenance services. This includes Facility O&M Traffic Monitoring and Incident Response Service Agreements (anticipated June 2025), as well as a Roadside Toll System Integrator O&M Agreement once an Integrator is selected and in advance of tolling operations. Other cooperative agreements which may emerge based on need include construction, right of way, liability, financing, repair, rehabilitation, and reconstruction.

5. Financial Feasibility

5.A Funding Plan

Is the funding plan built on a reasonable basis for funding project development and operations? For example, are the assumptions on which the plan is based well defined and reasonable in nature? Are the plan’s risk factors identified and dealt with sufficiently? Are the planned sources of funding and financing realistic? Has the applicant demonstrated evidence of its ability to obtain the necessary financing? Does the applicant have the ability to fund shortfalls if revenues do not meet projections?

Capital and Funding

Phase 1 of the project is to construct managed lanes in the median with revised project limits. The scope of Phase 1 includes:

- 8.5 centerline miles/17 lane miles of HOT lanes. Build standard inside shoulder and 10’ outside shoulder between Solano/Yolo County line and Causeway
 - Eastbound: between YOL-80-PM-0.00 and YOL-80-PM 9.51
 - Westbound: between YOL-80-PM-2.93 and YOL-80-PM 9.51

- ITS and Electrical elements, such as: Fiber Optic, Vehicle Detection Systems, Changeable Message Signs (CMS), Closed Circuit Television (CCTV), Ramp Metering
- Class I Bike/Ped Path from WB 80 off ramp to Chiles Rd
- Enhance existing Causeway bike path surface pavement at both approaches of Causeway.

The cost to complete Phase 1 of the project is estimated at approximately \$200 million. The funding plan for Phase 1, detailed in Table 6, includes both committed and uncommitted funds. Note that the \$9 million estimated cost in the PA&ED phase is for the entire project (including Phase 1), as all components are designed and evaluated as a whole. The \$3 million estimated PS&E cost is dedicated to Phase 1. The total construction and right of way related cost for Phase 1 is estimated at \$188 million, breaking down into \$140 million for construction, \$20 million for construction support, \$28 million for VMT mitigation, and a small portion for Right-of-Way (\$160,000).

This cost, dedicated to Phase 1, is fully identified and partially committed, with a mix of federal, state, and local funds, including a \$82.9 million INFRA grant and a \$105 million TCEP grant being pursued by Caltrans. With the advance Cycle 4 TCEP State and Regional request, Phase 1 of the Project will be fully funded for support, right-of-way, and construction. The TCEP application package has been submitted to CTC and is expected to be presented at the March 2024 CTC meeting.

Table 6: Phase 1 Project Cost and Identified Funding Sources

Fund Status	F/S/L	Source	Project Component (\$1000)					Total	
			PA&ED*	PS&E	ROW Sup	CON Sup	ROW Cap		CON Cap**
Committed	L	SACOG Regional Surface Transportation Grant Program (RSTP)	\$1,000						\$1,000
	L	Congestion Mitigation and Air Quality (CMAQ)	\$4,000				\$60		\$4,060
	S	COVID Relief Fund--STIP	\$4,000						\$4,000
	F	INFRA Grant Program		\$3,000				\$82,900	\$85,900
Total Committed			\$9,000	\$3,000			\$60	\$82,900	\$94,960
Uncommitted	S	Trade Corridor Enhancement Program (TCEP)			\$100	\$20,000		\$84,900	\$105,000
Total Uncommitted					\$100	\$20,000		\$84,900	\$105,000
Additional Need			\$0	\$0	\$0	\$0	\$0	\$0	\$0
Project Total			\$9,000*	\$3,000	\$100	\$20,000	\$60	\$167,800**	\$199,960

* The PA&ED cost covers the cost for the entire Project, including Phase 1 and future phases

**The construction capital cost includes \$28 million for VMT mitigation for Phase 1

The identified funding resources are programmed according to the following:

- The SACOG Congestion Mitigation and Air Quality (CMAQ) grant awarded the Project \$4 million to complete preliminary engineering and environmental documentation (PA&ED) in the 2021 program.
- The SACOG Congestion Mitigation and Air Quality (CMAQ) grant awarded the Project an additional \$60,000 for Right-of-Way Capital in the 2022 program.

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- California State Transportation Improvement Program (STIP) Covid Relief Fund awarded the Project \$4 million to complete the PA&ED in the 2022 program.
 - SACOG Regional Funding awarded the Project \$1 million in the 2023 Regional Surface Transportation Program (RSTP) to be used for PA&ED phases.
 - The Federal Department of Transportation Infrastructure for Rebuilding America (INFRA) grant awarded the Project \$85.9 million in June 2021. This is to be utilized for Phase 1 PS&E (\$3 million) and Construction Capital (\$82.9 million).
 - Caltrans is pursuing a \$105 million SB-1 Cycle 4 Advance Trade Corridor Enhancement Program (TCEP) fund, of which \$20 million is for construction support, \$57 million is for construction capital, and \$28 million for VMT mitigation. The TCEP application package has been submitted to CTC and is expected to be presented on the March 2024 CTC meeting.

Toll Revenue, Operation and Maintenance

A Traffic and Revenue Report was completed for the priced managed lane alternatives (Alternative 3, 4, and 5). The objective of the analysis was to estimate the potential gross revenue to be generated and its capability to cover the operation and other related costs.

The operation assumptions for the preferred alternative (Alternative 4, HOT 3+) listed in the Traffic and Revenue Report are summarized below:

- HOV 3+ will use the managed lanes for free;
- HOV 2 will be charged half-price;
- SOV will be charged at full price;
- Two-axle commercial vehicles may use the managed lanes at double the SOV tolls and medium and heavy trucks are prohibited from using the managed lanes;
- The toll lanes will operate from 7 AM to 8 PM, 7 days a week. All vehicles can use the toll lanes for free outside the tolled time window;
- The minimum toll is \$0.05 per mile while the maximum toll is \$5.00 per mile;
- No discounts for the Clean Air Vehicles (CAV);
- Toll rates will set dynamically; and
- The tolled lanes will provide continuous or near-continuous access for the length of the corridors.

Please see the Traffic and Revenue Report included as Attachment D for more information. Note that the Traffic and Revenue Report relies on specific assumptions and projected traffic figure. Therefore, CARTA may adjust policies governing the tolling facility's operation to maintain satisfactory service levels for the tolling facility.

The operation and maintenance (O&M) cost was benchmarked to the Caltrans D4 existing facilities (average unit O&M cost for existing facilities including I-680 and I-580). The base O&M lane-mile operation cost for the Yolo 80 managed lane facility was estimated to be \$231,000 in 2021 dollars, however the overall O&M cost also depends on the number of transactions projected. Besides the O&M cost, revenue leakage, referring to a reduction in toll revenue due to transactions where no revenue is collected, or revenue is not fully collected, is estimated to be 10% of the gross revenue. The leakage tends to decline over time as users become more familiar with tolled operations.

The net revenue projection discussed below is for the Phase 1 only, though the Traffic and Revenue Report contains the projection for the full buildout project as well. Phase 1 of the Project involves constructing a single lane managed lane spanning from Richard Boulevard to the I-80/US 50 Split in the eastbound direction and from the I-80/US 50 Split to Mace Boulevard in the westbound direction.

For the preferred alternative (Alternative 4, HOT 3+), Phase 1 generates about 80% of the full buildout gross revenue under both the 2029⁶ and 2049 conditions, as it covers the most congested section of the Project on the Yolo Causeway. The O&M cost for Phase 1, which is partially proportional to the project length, is estimated at about 54% of the full buildout cost. Phase 1 has a higher net revenue margin compared to the full buildout Project.

According to the net revenue projection, Phase 1 of the Yolo 80 managed lane facility will generate enough revenue to cover the operation cost and revenue leakage. Table 7 outlines the operations breakdowns. In 2029, Phase 1 of the Project would operate at a positive net revenue of \$5.1 million (2021 dollars) for Alternative 4 (Add HOT3+). In 2049, Phase 1 of the Project would operate at a positive net revenue of \$9.8 million (2021 dollars) for Alternative 4 (Add HOT3+). Note that the Traffic and Revenue Report used 2021 real dollars, as this was the most recent data available at the time that the study was conducted. Both inflation and cost escalation were used to project future gross revenue, cost, and net revenue to reflect the nominal amount. For demonstration purposes, real 2021 dollars are used for this section.

Table 7: Estimated Phase 1 Annual Net Operating Toll Revenue (Year 2021 Dollars, \$1,000,000) ¹

Operations Summary	Year 2029 Alt 4 (Add HOT 3+)	Year 2049 Alt 4 (Add HOT 3+)
Annual Gross Revenue	\$10.9	\$16.3
Estimated Revenue Leakage ²	\$1.1	\$1.6
Average Annual O&M Cost	\$4.7	\$4.9 ³
Net Operating Toll Revenue	\$5.1	\$9.8

¹Sources: Interstate 80/U.S. Highway 50 Managed Lanes Traffic and Revenue Report

²Revenue leakage is estimated to be 10% of the gross revenue.

³5% increase in O&M cost from 2029 to 2049 due to variable cost increase result from higher transactions in 2049

Under the currently assumed operation policy, the revenue projection for the Phase 1 indicates that the gross toll revenue generated in the initial years, which typically assumes a 15-20% reduction in revenue compared to the 2029 projection due to a ramp-up phase, will cover the operation cost. However, to secure a non-interruptive operation, the initial operation fund (known as “Initial reserve account”), before sufficient toll revenue collection, will be secured by CARTA partners YoloTD, SACOG, and Caltrans. Additional funding needed prior to sufficient toll revenue collection will be sought by the CARTA. It is anticipated that future toll revenues from the managed lanes will be used to repay funding advances. The reimbursement schedule will be determined through negotiations among the parties.

CARTA will be responsible for setting up and managing the initial reserve account, which contains the initial operation fund as well as funds set aside to cover unforeseen expenses, potential revenue shortfalls, or specific costs associated with the tolling facility. CARTA will determine the reserve size based on the needs and risk of the project, typically one year of the O&M cost. CARTA is responsible to ensure the initial reserve account setup complies with all laws and regulations.

⁶ Note that when revenue analysis was originally performed, opening year was anticipated to be 2029. Since analysis was completed, the current expectation is that the Project will open in early 2028

In preparation for the commencement of Phase 1 of the Yolo 80 Project, CARTA will assume the responsibility of formalizing multiple Operation and Maintenance (O&M) agreements. These agreements are crucial to ensure the continuous functionality, safety, and sustained maintenance of the infrastructure. The critical O&M agreements include:

- Financial Back Office (FBO) and Customer Service Center (CSC) Service Agreement
- Traffic Monitoring and Incident Response Service Agreement
- Roadside Toll System Integrator (RTSI) O&M Agreement
- Facility O&M Agreement
- 3rd Party O&M Agreement

It is anticipated that CARTA will enter into the Facility O&M agreement and the Traffic Monitoring and Incident Response Service Agreement with Caltrans in the June 2025 timeframe. The Facility O&M Agreement with Caltrans will inform as to whether any additional Third-Party O&M agreements are necessary based on the scope of work covered with Caltrans. The FBO and CSC agreements are anticipated to be entered into with a partnering California toll facility operator with the capacity to provide services in early 2026, and the timing of this agreement will be well in advance of any testing required with the Roadside Toll System Integrator (RTSI). The timing of the RTSI procurement and subsequent O&M agreement will be determined by the CARTA Board but will also be executed with enough time to design, test, and deploy the system before the anticipated launch date in 2028.

5.B Expenditure Plan for Excess Revenues

If an expenditure plan for excess revenues has not yet been adopted by the appropriate governing entity, has the applicant included a discussion of its intentions for revenues collected beyond those necessary for any debt service, operations, and reserved as defined in AB 194?

Title 23 USC Section 129 governs Federal participation in funding and constructing toll facilities, encompassing highways, bridges, tunnels, and approaches. It addresses aspects such as initial construction, toll-free facility conversion, reconstruction, and high occupancy vehicle lane conversion to toll facilities. This section sets limits on toll revenue use, conditions for federal reimbursement, and mandates annual audits.

According to 23 USC Section 129.a.3, a public authority overseeing a publicly funded toll facility must ensure toll revenues are solely used for:

- i. Debt service for authorized projects, including reserves and refinancing debt service;
- ii. A reasonable return on investment of any private person financing the project, as determined by the State or interstate compact of States concerned;
- iii. Costs for facility improvement, operation, maintenance, reconstruction, resurfacing, restoration, and rehabilitation;
- iv. If the toll facility is subject to a public-private partnership agreement, payments that the party holding the right to toll revenues owes to the other party under the public-private partnership agreement; and
- v. Other purposes certified annually, provided the facility is adequately maintained.

For the purposes of the Project, CARTA considers only subsections i., iii., and v. to be pertinent to this

Application as subsections ii. and iv. are not relevant to the Project as planned.

CARTA plans to utilize toll revenues in concordance with Assembly Bill 194, which specifies that highway tolling should be employed for the purpose of optimizing the performance of the transportation system on a transportation corridor and should not be employed strictly as a revenue generating facility. With this in mind, CARTA plans to determine toll revenue uses in a “waterfall” structure which determines a hierarchy of toll revenue allocation. In this system, gross revenues are used for debt service, operations and maintenance, rehabilitation and replacement, VMT mitigation projects, and the establishment of reserve funds. Planned reserves must be utilized for the tolled facility, and include but are not limited to:

- Operations and Maintenance: While regular operations and maintenance costs are covered by revenue outside of the use of excess reserves, an Operations and Maintenance Reserve is intended to cover operations and maintenance costs in the event of a possible future significant downturn in revenue, e.g. resulting from a natural disaster, pandemic, or similar severe and sustained disruption. The value of the reserve will be determined as part of the Remaining Revenue Policy and is likely to include approximately one year of O&M costs. Eligible items may include routine maintenance, infrastructure repairs, equipment maintenance and replacement, personnel costs, utilities, and insurance.
- Emergency: Reserve funds designated to address unforeseen and urgent situations that threaten the normal operation or safety of the facility, including immediate repairs, disaster response, security measures, public communication, temporary facilities, emergency response personnel, equipment replacement, vandalism, and contingency planning.
- Highway Resilience: Reserve funds to address potential and continuous improvement and optimization of a free and safe traffic flow within the project area including traffic flow optimization, signage and markings, safety barriers, lighting enhancements, public awareness campaigns, technology upgrades, road surface improvements, emergency response preparedness, accessibility enhancements, and monitoring and evaluation.

Followed thereafter, excess net revenues may be used toward various programs and capital projects within the corridor and may include investments outside of the specific toll facility. Under 23 USC, federal funds allocated to a state can be used for various highway and transportation projects. Therefore, the following categories all represent groupings of eligible uses for which excess net toll revenue may be used:

- Civil Infrastructure Development and Asset Management
- Technology, Infrastructure Development, and Intelligent Transportation Systems (ITS)
- Transportation Planning and Performance Management
- Environmental and Resilience
- Transit Investments
- Access, Equity, and Alternative Transportation
- Safety and Emergency Response
- Research, Development, and Education

Expenditure of excess revenue generated on the Yolo 80 Express Lanes will be subject to a Remaining Revenue Policy and Expenditure Plan developed by CARTA. CARTA intends to develop its Remaining Revenue Policy as part of its initial actions following formation. This policy will describe its intentions for

revenues necessary for operations, debt service, and reserves, as well as plans for the eventual development of an Expenditure Plan for net toll revenue in excess of those amounts. The Expenditure Plan will be developed at a future date closer to such a time when excess net toll revenue is projected to be available following the opening of the facility. CARTA anticipates that the Expenditure Plan will contain projects and programs that represent a mix of the categories listed above, depending upon the priorities that emerge as the Project develops by the time excess net toll revenue is available.

6. Regional Transportation Plan & Community Support

6.A Consistency with Existing Plans

Is the project consistent with the regional transportation plan and affected city and county comprehensive plans? If not, does the applicant discuss strategies that may help achieve consistency with such plans when possible or practicable?

The segments of the I-80/US 50 corridor in the project area traverse multiple jurisdictions and are subject to policies from several plans and programs guiding development and transportation within the Land Use Study Area. In addition to the Project's inclusion in the SACOG plans described in PART B.1.B, more detail on conformance with these plans is included below. Additionally, the Project's consistency with several other plans is described below, including the Solano County General Plan, City of Davis General Plan, Yolo County Revised Draft 2030 Countywide General Plan, City of West Sacramento General Plan, City of Sacramento 2035 General Plan, and Sacramento County 2030 General Plan. The following tables describe how the Project is consistent with each of these plans.

SACOG's 2020 MTP/SCS is a comprehensive transportation and land use strategy for the SACOG Planning Area, focusing on improving access to jobs, transportation options, and affordable housing, enhancing air quality, preserving open spaces, and reducing greenhouse gas (GHG) emissions. The plan acknowledges Caltrans managed lane projects as vital for transportation revenue and pricing, with pricing mechanisms deemed essential for funding, mobility benefits, traffic management, and meeting GHG reduction targets. (Caltrans 2023a).

Table 8: Consistency with Sacramento Area Council of Governments (SACOG) 2020 Metropolitan Transportation Plan (MTP)/Sustainable Communities Strategy (SCS)

Policy	Consistency
Policy 12: Take steps to implement tolling or pricing of specific lanes on major facilities, such as freeways, to improve traffic management, reliability, and operations of those facilities and to help raise funding for the cost of building and maintaining large capital investments.	Consistent. Project would implement tolling or pricing strategies.
Policy 13: All new major expansion projects on the region's freeways and expressways should be planned for eventual deployment of pricing options to both manage demand and provide a financing mechanism for capital costs. Any pricing strategy pursued should be sensitive to changes in roadway demand during different parts of the day (peak/off-peak) with the objective of managing demand and providing travel choice.	Consistent. Project would implement tolling or pricing strategies.

<p>Policy 14: Revenues generated from facility-based pricing should be used to build and maintain a regional network of paid express lanes and, where surplus revenue is available, on strategic transit services (e.g., express buses) or other mobility solutions that can reduce vehicle miles traveled and provide multiple travel options along priced corridors</p>	<p>Consistent. Project would implement tolling or pricing strategies.</p>
<p>Policy 16: When implementing pricing strategies, both paid express lanes and mileage-based fees/PayGo, the region should make every effort to avoid negatively impacting lower-income and rural households. For regional implementation of PayGo, explore innovative options for setting fees, such as including offsetting incentives for non-vehicular travel, offsets to fees for disadvantaged households, and keying fee rates to maintenance and fix-it-first goals.</p>	<p>Partially consistent. Project would implement tolling or pricing strategies. It would benefit all travelers using the I-80/US 50 corridor, including environmental justice communities. While they would not negatively affect lower-income or rural households, these alternatives may have proportionally smaller benefits to lower-income and rural households who may be less able to pay fees for the use of managed lanes. CARTA will develop an equity program that seeks to maximize benefits and minimize the burdens of the project for those who experience high transportation burdens and other disparities. CARTA's equity approach is described in 4.C above.</p>
<p>Policy 18: System expansion investments that are not directly paid for by new development should be focused on fixing major bottlenecks that exist today, and/or incentivize development opportunities in infill areas</p>	<p>Consistent. Project would address key existing bottleneck locations on I-80/US 50 in the project area.</p>
<p>Policy 22: Invest in bicycle and pedestrian infrastructure to encourage healthy, active transportation trips and provide recreational opportunities for residents and visitors</p>	<p>Consistent. Project would extend the westernmost limit of the existing Class I bicycle pathway along I-80 at the Yolo Causeway to connect to CR-32A.</p>
<p>Policy 23: Prioritize and incentivize transportation investments that benefit environmental justice communities</p>	<p>Partially consistent. Project would benefit all travelers using the I-80/US 50 corridor, including environmental justice communities. However, this alternative may have proportionally smaller benefits to environmental justice communities who may be less able to pay fees for use of HOT or express lanes.</p>
<p>Policy 24: Invest in transportation improvements that improve access to major economic assets and job centers.</p>	<p>Consistent. Project would improve circulation on I-80/US 50 in the project area, which would improve access to major economic assets and job centers</p>

A small part of the project area is located within unincorporated Solano County. The Solano County General Plan's Transportation and Circulation chapter outlines policies for circulation in the county.

The 2017 Solano County Regional Transportation Plan (RTP), managed by the Solano County Metropolitan Transportation Commission, does not include managed lanes between Kidwell Road and the Yolo County line. Although not part of the current RTP update, Caltrans will discuss including this section of the project in the RTP update with Caltrans District 4 and the Solano County Transportation Authority.

Table 9: Consistency with Solano County General Plan

Policy	Consistency
Policy TC.P-1: Maintain and improve current transportation systems to remedy safety and congestion issues and establish specific actions to address these issues when they occur.	Consistent. Project would include managed lanes to improve traffic operations on I-80/US 50 in the project area
Policy TC.P-8: Actively participate with Caltrans, Solano Transportation Authority, cities, and other agencies to plan for any proposed future realignments of current interregional routes.	Consistent. The project would include managed lanes to improve traffic operations on I-80/US 50 in the project area and this is being coordinated with other transportation planning agencies.
Policy TC.P-18: Encourage the development of transit facilities and operations along major corridors to connect the county with surrounding activity centers and regional destinations.	Consistent. Project would include managed lanes to improve traffic operations on I-80/US 50 in the project area and development of a new Mobility Hub

The City of Davis General Plan (Amended 2007) features a transportation element guiding the evolution of the city's transportation system to 2035.

Table 10: Consistency with City of Davis General Plan

Policy	Consistency
Policy 1.2: Transportation access, accommodations, and circulation should contribute to creating a supportive environment for economic development in the downtown for both residents and visitors	Consistent. Project would improve traffic operations on I-80/US 50 in the project area, limiting cut through traffic in Davis.
Policy 6.3: <ul style="list-style-type: none"> • Address Davis' transportation needs as a major regional destination. • Regularly coordinate with SACOG to ensure Davis transportation needs and priorities are appropriately considered. • Coordinate with Yolo County, Solano County, and UC Davis to improve multi-modal access and connectivity between major intercity destinations. • Coordinate with Yolobus, SACOG, UC Davis, and other relevant entities to provide direct public transportation service from Davis to Sacramento International Airport. 	Consistent. Project would improve traffic operations on I-80/US 50 in the project area.

<ul style="list-style-type: none"> • Coordinate with Caltrans regarding highway corridor planning for segments that are within or may affect those within the Davis city limits related to: <ul style="list-style-type: none"> ○ Highway lane widenings ○ HOV lanes ○ HOT lanes ○ Interchange improvements or additions ○ Bicycle connectivity 	
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The UC Davis LRDP (2018) presents growth policies for the Davis campus and Russell Ranch research lands in Yolo and Solano counties.

Table 11: Consistency with University of California, Davis 2018 Long-Range Development Plan

Policy	Consistency
Preserve and Enhance the Bicycle and Pedestrian Infrastructure: Preserve, enhance, and expand bicycle and pedestrian infrastructure; expand bicycle pathways and increase bicycle parking areas throughout the campus; improve bicycle safety through educational programs; reduce bicycle and pedestrian conflicts; provide more designated areas for pedestrians; provide safe and gracious walkways for pedestrians throughout campus.	Partially consistent. Project would extend the westernmost limit of the existing Class I bicycle pathway along I-80 at the Yolo Causeway to connect to CR-32A.
Foster A Healthier Transportation Ecosystem: Enhance and expand travel services and programs to meet the daily mobility needs of the campus community and create a healthier transportation ecosystem; promote more sustainable travel choices to improve health of the individual, the environment, and the institution.	Consistent. Project would include managed lanes to promote multi-modal transportation options and improve traffic operations on I-80/US 50 in the project area.
Enhance Transit Service: Preserve and enhance transit service; continue to prioritize and improve transit access to the core campus area; consider improvements to the Hutchison Drive corridor for Unitrans buses and for safely mixing buses, bikes, and pedestrians.	Consistent. Project would include managed lanes to promote multi-modal transportation options and improve traffic operations on I-80/US 50 in the project area
Promote Ride Sharing: Promote carpools and vanpools as viable transportation options that reduce parking demand for the campus community; monitor the utilization of ride-hailing services and proactively manage campus circulation network to promote walking, biking, and busing as preferred travel modes.	Partially consistent. The managed lanes under the Project would incentivize increased vehicle occupancy, ride sharing, and/or transit use

Single Occupancy Vehicle Reduction: Per the University of California Policy on Sustainable Practices, strive to reduce the percentage of employees and students commuting by single occupancy vehicles (SOV) in 2025 by 10 percent relative to 2015-16 SOV commute rate. By 2050, strive to have no more than 40 percent of employees and no more than 30 percent of all employees and students commuting by SOV.	Partially consistent. The managed lanes under the Project would incentivize increased vehicle occupancy and/or transit use, thereby reducing SOV
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Yolo County’s Revised Draft 2030 Countywide General Plan (Yolo County 2009) outlines land use planning for unincorporated areas, emphasizing multi-modal travel and non-vehicular trips.

Table 12: Consistency with Yolo County Revised Draft 2030 Countywide General Plan

Policy	Consistency
Policy CI-1.4: Continue to work with Caltrans, SACOG, cities, and other regional agencies to achieve timely construction of freeway, interchange, highway, and County Road improvements that are consistent with this General Plan. The County shall assist Caltrans in implementing improvements to State Highway facilities that are required due to new growth and are consistent with this General Plan	Consistent. Project would include managed lanes to improve traffic operations on I-80/US 50 in the project area
Policy CI-1.10: Coordinate with appropriate entities to maintain the following as primary routes for emergency evacuation from Yolo County: I-80 – East into Sacramento and west toward Solano County and the San Francisco Bay Area	Consistent. Project would include managed lanes to improve traffic operations on I-80/US 50 in the project area.
Policy CI-2.1: When constructing or modifying roadways, plan for use of the roadway space by all users, including automobiles, trucks, alternative energy vehicles, agricultural equipment, transit, bicyclists, and pedestrians, as appropriate to the road classification and surrounding land uses.	Partially consistent. Project would incentivize increased vehicle occupancy and/or transit use. They would also extend the westernmost limit of the existing Class I bicycle pathway along I-80 at the Yolo Causeway to connect to CR-32A.
Policy CI-2.3: Ensure that, wherever feasible, public transit and alternative mode choices are a viable and attractive alternative to the use of single occupant motor vehicles.	Partially consistent. The managed lanes under the Project would incentivize increased vehicle occupancy and/or transit use.
Policy CI-3.1: Maintain Level of Service (LOS) C or better for roadways and intersections in the unincorporated county. In no case shall land use be approved that would either result in worse than LOS C conditions or require additional improvements to maintain the required level of	Consistent. Project would improve traffic operations on I-80/US 50 in the project area. The “B” alternatives would further improve operations with managed lane direct connectors at the I-80/US 50 interchange.

<p>service, except as specified below. The intent of this policy is to consider level of service as a limit on the planned capacity of the County’s roadways.</p> <p>I-80 (Davis City Limit to West Sacramento City Limit) – LOS F is acceptable to the County. LOS F is anticipated by Caltrans according to the Interstate 80 and Capital City Freeway Corridor System Management Plan (Caltrans 2009, as cited in Yolo County 2009).</p>	
<p>Policy CI-3.3: CEQA review for subsequent projects will analyze project traffic and circulation impacts using both the Yolo County General Plan policies and Caltrans policies as applicable.</p> <p>A. Consider the following objectives, following consultation with Caltrans, when making decisions to expand or modify the State highway system in Yolo County:</p> <ol style="list-style-type: none"> 1. Minimize impacts to the environment. 2. Minimize increases in GHGs and air pollutants. 3. Minimize increases in VMT. 4. Minimize long-distance commute trips. 5. Fully utilize existing capacity while maintaining stable flows and speeds. 6. Provide facilities for all users including pedestrians, bicyclists, carpool users, and transit riders. 	<p>Partially consistent. Project would incentivize increased vehicle occupancy and/or transit use, which could minimize increases in VMT and would provide facilities for carpool users and transit riders. Project would also improve an existing facility for bicyclists by extending the westernmost limit of the existing Class I bicycle pathway along I-80 at the Yolo Causeway to connect to CR-32A</p>
<p>Policy CI-1.14: Encourage inter- and intra-regional traffic to use State and federal interstates and highways. The primary role of County Roads is to serve local and agricultural traffic.</p>	<p>Consistent. Project would include managed lanes to improve traffic operations on I-80/US 50 in the project area, which could encourage inter- and intra-regional traffic to use these routes, rather than county roads.</p>
<p>Policy CI-4.3: Reduce dependence upon fossil fuels through:</p> <p>Reduction of vehicle trips and VMT by requiring compact, infill and mixed-use development.</p> <p>Use of alternatives to the drive-alone automobile, including walking, bicycling, and public transit.</p> <p>Promotion of ride sharing and car sharing programs.</p>	<p>Partially consistent. Project would incentivize increased vehicle occupancy and/or transit use, which could promote the use of alternatives to the drive-alone automobile. They would also improve an existing facility for bicyclists.</p>

The City of West Sacramento’s General Plan 2035 details city development, land use, transportation, and public infrastructure (City of West Sacramento 2016).

Table 13: Consistency with City of West Sacramento General Plan

Policy	Consistency
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<p>Policy M-1.1: Connectivity. The City shall strive to develop a comprehensive, safe, and fully integrated multimodal transportation system that connects residents, visitors, and employees to the city and region through all available modes including connected vehicles, car/bikeshare, and autonomous modes.</p>	<p>Consistent. Project would improve traffic operations on I-80/US 50 in the project area with managed lane direct connectors at the I-80/US 50 interchange.</p>
<p>Policy M-1.2: Multi-modal Corridors. The City shall establish multi-modal corridors and hubs within and between urban centers and along major corridors.</p>	<p>Consistent. Project would improve traffic operations and multi-modal opportunities on I-80/US 50 in the project area and include a new Mobility Hub in West Sacramento.</p>
<p>Policy M-1.3: Reduce Vehicle Miles Traveled. The City shall endeavor to reduce VMT and dependence on fossil fuels by continuing to develop a comprehensive multi-modal transportation system and compact, mixed-use development that includes more transit, bicycle, and pedestrian routes</p>	<p>Partially consistent. Project would incentivize increased vehicle occupancy and/or transit use. However, reduction in travel time with these alternatives would induce demand and increase VMT compared to the No-Build Alternative. Project would also extend the westernmost limit of the existing Class I bicycle pathway along I-80 at the Yolo Causeway to connect to CR-32A</p>
<p>Policy M-1.4: Public Involvement. The City shall continue to involve the public, especially those traditionally underserved by transportation services, and seek public input on transportation issues, projects, and processes from the early stage of the planning process.</p>	<p>Consistent. Caltrans and other stakeholders have coordinated extensive public feedback on the Project.</p>
<p>Policy M-2.2: Connecting and Balance. The City shall preserve and continue to develop a comprehensive, integrated, and connected network of streets that balance walking and bicycling with public transit, automobiles, and trucks.</p>	<p>Consistent. Project would improve traffic operations and multi-modal opportunities on I-80/US 50 in the project area.</p>
<p>Policy M-2.5: Street Amenities. The City shall require public transit, bicycle, and pedestrian amenities in street design to promote the walking, bicycling, and public transit use and complement the context of nearby centers, corridors, and neighborhoods.</p>	<p>Partially consistent. Project would incentivize increased vehicle occupancy and/or transit use. It would also extend the westernmost limit of the existing Class I bicycle pathway along I-80 at the Yolo Causeway to connect to CR-32A</p>
<p>Policy M-3.4: Multi-modal Roadway Level of Service. The City shall develop, maintain, and implement multi-modal LOS roadway standards to measure trade-offs among modes and/or create a more balanced transportation system. The City shall endeavor to achieve levels of service for bikeways, pedestrian ways, and public transit that are at least as efficient as the automobile LOS.</p>	<p>Partially consistent. The managed lanes under the Project may improve the public transit LOS. They may also improve LOS for bikeways by extending the westernmost limit of the existing Class I bicycle pathway along I-80 at the Yolo Causeway to connect to CR-32A</p>
<p>Policy M-3.13: Emergency Service Coordination.</p>	<p>Consistent. Project would implement a TMP</p>

The City shall coordinate development and maintenance of all transportation facilities with emergency service providers to ensure continued emergency service operation and service levels.	during construction to maintain emergency service operations and response times. Improved peak-hour traffic operations on I-80/US 50 in the project area would improve long-term emergency service operation.
Policy M-4.1: Access to Public Transit. The City shall strive to ensure that all residents have access to adequate and safe public transit options that reduce dependence on fossil fuels and increase physical activity	Partially consistent. The managed lanes under the Project would incentivize increased vehicle occupancy and/or transit use.
Policy M-4.2: Affordable Public Transit. The City shall work with the Yolo County Transit District (Yolobus) to provide adequate and affordable public transit choices, including expanded bus routes and service.	Partially consistent. The managed lanes under the Project would incentivize increased vehicle occupancy and/or transit use.
Policy M-4.3: Transit Priority. The City shall consider the use of transit preferential measures, such as signal priority, bypass lanes, and queue jumps, to improve transit service reliability.	Partially consistent. The managed lanes under the Project could improve transit service reliability.
Policy M-4.14: Park and Ride. The City shall cooperate with Caltrans and Yolobus in the development of Park-and-Ride facilities near major transportation corridors.	Consistent. Project would include construction of a Mobility Hub in West Sacramento.

The City of Sacramento 2035 General Plan articulates the city’s vision, themes, and organizational framework, offering guidance for future development and resource preservation. The plan includes a Mobility Element within the Citywide Goals and Policies section, outlining Sacramento’s transportation-related goals and policies.

Furthermore, the City of Sacramento is in the process of updating its general plan and is set to adopt the 2040 General Plan in 2023. The 2040 General Plan Draft Land Use Map, along with proposed changes to roadways and other strategic initiatives, was presented to the Sacramento City Council on January 19, 2021. Notably, the draft plan introduces substantial changes in policy, including the allowance of diverse housing types in single-unit neighborhoods, such as duplexes, triplexes, and fourplexes. This change aims to foster denser development in areas traditionally designated for single-family residences. The goals and policies for the draft 2040 General Plan are currently under community review until August 2023 and are expected to be adopted in early 2024. It is important to note that the proposed Build Alternatives are in alignment and will not conflict with the forthcoming housing and climate change policies outlined in the draft 2040 General Plan.

Table 14: Consistency with City of Sacramento 2035 General Plan

Policy	Consistency
M.1.2.1. The City shall develop an integrated, multimodal transportation system that improves the attractiveness of walking, bicycling, and riding transit over time to increase travel choices and aid in achieving a more balanced transportation	Partially consistent. Project would incentivize increased vehicle occupancy and/or transit use. They would also extend the westernmost limit of the existing Class I bicycle pathway along I-80 at the Yolo Causeway to connect to CR-32A. Project

system and reducing air pollution and GHG emissions	would further improve operations with managed lane direct connectors at the I-80/US 50 interchange.
M.1.3.6. The City shall work with adjacent jurisdictions and SACOG to identify existing and future transportation corridors that should be linked across jurisdictional boundaries to provide desired upstream and downstream traffic operations and to preserve sufficient right-of-way.	Consistent. Project would improve traffic operations on I-80/US 50 in the project area. Project would further improve operations with managed lane direct connectors at the I-80/US 50 interchange.
M.1.4.1. The City shall work with a broad range of agencies (e.g., SACOG, SMAQMD, SacRT, Caltrans) to encourage and support programs that increase regional average vehicle occupancy, including the provision of traveler information, shuttles, preferential parking for carpools/vanpools, transit pass subsidies, road and parking pricing, and other methods.	Consistent. The types of managed lanes under the Project would incentivize increased vehicle occupancy and/or transit use.
M.1.5.6. The City shall support State highway improvement projects and management plans consistent with the MTP/SCS.	Consistent. Project would improve traffic operations on I-80/US 50 in the project area consistent with the MTP/SCS. Project would further improve operations with managed lane direct connectors at the I-80/US 50 interchange.

The Sacramento County 2030 General Plan serves as a comprehensive framework guiding growth and development within unincorporated Sacramento County. The plan emphasizes economic expansion and environmental sustainability, addressing the needs and issues of existing communities while establishing a foundation for the development of new communities. Key components of the Sacramento County General Plan include an updated growth management strategy, a reinforced focus on existing communities and the revitalization of aging commercial corridors, the introduction of a new economic development element, and strategies to decrease greenhouse gas (GHG) emissions in compliance with state regulations.

On October 6, 2020, the Circulation Element of the Sacramento County General Plan was amended. Sacramento County endorses the development of a regional network of Bus/Carpool lanes, extending to both I-80 and US 50 within the project area.

Table 15: Consistency with Sacramento County 2030 General Plan

Policy	Consistency
Policy CI-2. Promote continued mobility for individuals whose access to automobile transportation is limited by age, illness, income, desire, or disability.	Partially consistent. Although the Project does not explicitly include improvements that benefit individuals whose access to automobile transportation is limited by age, illness, income, desire, or disability, the Project includes ITS, a Mobility Hub, and auxiliary lane improvements that would help facilitate circulation between I-80 and the surrounding surface streets,

	benefiting environmental justice community members using bus and transit service.
Policy CI-3. Travel modes shall be interconnected to form an integrated, coordinated, and balanced multi-modal transportation system, planned and developed consistent with the land uses to be served	Partially consistent. Project would improve operations and safety on I-80/US 50 in the project area, incentivize increased vehicle occupancy and/or transit use, and are consistent with the land uses to be served. Project includes bicycle and pedestrian infrastructure improvements that would promote non-motorized travel modes throughout the project area.
Policy CI-4. Provide multiple transportation choices to link housing, recreational, employment, commercial, educational, and social services	Partially consistent. Project would not provide multiple transportation choices and would incentivize increased vehicle occupancy.
Policy CI-11. To preserve public mobility, freeways and thoroughfares should have limited access and maintain functional characteristics that predominantly accommodate through-traffic.	Consistent. Project would improve traffic operations on I-80/US 50 in the project area. Project would further improve operations with managed lane direct connectors at the I-80/US 50 interchange.
Policy CI-13: Collaborate with regional transportation planning agencies and neighboring jurisdictions to provide cross-jurisdictional mobility	Consistent. Project would improve traffic operations on I-80/US 50 in the project area, improving cross-jurisdictional mobility. Project would further improve operations with managed lane direct connectors at the I-80/US 50 interchange.
Policy CI-19. Collaborate with transit service providers to provide transit services within the County that are responsive to existing and future transit demand.	Partially consistent. Although there would not be an exclusive transit lane under the Project, transit use of managed lanes may result in reduced travel times for transit users.
Policy CI-20. Promote transit services in appropriate commercial corridors and where population and employment densities are sufficient or could be increased to support those transit services.	Partially consistent. Although there would not be an exclusive transit lane under the Project, transit use of managed lanes may result in reduced travel times for transit users.
Policy CI-23. Consider the transit needs of senior, disabled, low-income, and transit-dependent persons in making recommendations regarding transit services.	Partially consistent. Although there would not be an exclusive transit lane under the Project, transit use of managed lanes may result in reduced travel times for transit users.
Policy CI-41. Consider Transportation System Management programs that increase the average occupancy of vehicles and divert automobile commute trips to transit, walking, and bicycling.	Consistent. The types of managed lanes under the Project would incentivize increased vehicle occupancy and/or transit use.
Policy CI-42. Collaborate with other agencies to develop measures to provide for more efficient traffic flow, reduce vehicular travel demand and meet air quality goals.	Consistent. To varying degrees, Project would improve traffic operations on I-80/US 50 in the project area, improving traffic flow. Project would further improve operations with managed

	lane direct connectors at the I-80/US 50 interchange.
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Comprehensive Multimodal Corridor Plan

The project is consistent with the I-80 Comprehensive Multimodal Corridor Plan (CMCP) completed in 2022 that covered the I-80 corridor in Solano, Yolo, and portions of Sacramento County. The CMCP included alternatives that analyzed tolling alternatives for the I-80 corridor consistent with the project. The CMCP was developed and approved in partnership with both Caltrans Districts, regional MPOs and RTPAs, and other city, county, and regional partners.

6.B Consideration of Impacts

Does the applicant explicitly consider the potential diversions of vehicles onto adjacent routes that could lead to congestion, safety problems, and infrastructure damage due to the imposition of tolls on particular facilities?

Potential impacts due to diversion were evaluated at the Full Project level during environmental analysis. These impacts are described using increase in VMT on the corridor compared to the regional level to determine level of diversion. For example, a greater increase in VMT on the regional level in proportion to the corridor would signify a high level of diversion.

Because of congested conditions on I-80 EB in its current state, drivers often divert their trips from the freeway to cut-through routes through the cities of Dixon and Davis, and even up to the City of Woodland via SR 113 and I-5. This has been exacerbated through the proliferation of navigation apps like Waze and Google Maps. In turn, local streets such as Mace Boulevard experience high levels of traffic and congestion during peak periods due to trips diverting away for I-80. Because of the large number of recreational trips on the corridor, this occurs on both weekdays and weekends. The diversion would worsen under Horizon Year No Build conditions as congestion continues to grow on I-80. The No Build alternative would have the highest regional VMT by 2049 as travelers shift to longer routes to reduce their overall travel time.

Alternative 4 would alleviate these conditions by providing more capacity on the freeway, which would allow more drivers to remain on I-80 instead of diverting to cut-through routes. Additionally, allowing SOVs into the managed lane would improve conditions in the GP lanes. During the 2049 weekday PM peak hour, the travel time on I-80 EB between Kidwell Rd and US 50 would reduce from 74 minutes under No Build conditions to 38 minutes in the GP lanes and 15 minutes in the managed lane with the preferred alternative. Since there is an option for non-tolled travel on the corridor in the GP lanes, the tolled lane would not result in diversion of vehicles on to adjacent routes.

VMT Growth Mitigation Strategies

As mentioned above and documented in Section 7 of the Concept of Operations report, a VMT analysis for the proposed project alternatives indicates that adding capacity, for both tolled alternatives and non-tolled alternatives would result in some level of net VMT growth over time from the induced demand. However, the traffic operation analysis concludes that the addition of managed capacity contributes to the bottleneck relief, increase in throughput, corridor travel time reduction, and deficiency operation reduction. To mitigate the VMT growth, the following strategies will be considered:

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- Carpool and vanpool incentives, plus enhanced Mobility Hubs to encourage travelers to increase vehicle occupancy (Alternatives 2, 3, 4 and 5)
 - Dynamic pricing strategy to control the Express Lane usage to reduce the overall travel demand on the corridor (Alternatives 3, 4 and 5)

Specific efforts that are being incorporated in the Project or under consideration as VMT mitigation efforts with the local agencies that align with CAPTI include:

- Voluntary Trip Reduction Program in Yolo County (Expand current program provided by Yolo Commute, to include features such as community-based travel planning, ridesharing, transit pass subsidies, and pay-per-mile auto insurance.)
- Expand Capitol Corridor Frequency between Oakland and Sacramento
- Microtransit in Yolo County (Expand transit service to add flexible route buses with more frequent service and/or longer service hours.)
- Subsidize Monthly Transit Passes in Yolo County
- Reduce Transit Fares (Reduce the monthly bus fare for Yolobus and Capitol Corridor)
- Expand Causeway Connection Route 138
- Expand Unitrans
- Build Overcrossing at Future Nishi Student Housing Development Site

The identified VMT reduction strategies and mitigation measures summarized above are intended to be implemented within the Yolo I-80 Project corridor, where applicable, or to be included in future improvements within the corridor. Please note that potential mitigation measures associated with the Build Alternatives are preliminary at this time as the true extent of required mitigation has not yet been confirmed. Future agreements and/or further design engineering refinements may also change the mitigation measures recommended for implementation along with the Yolo I-80 Express Lanes.

6.C Fulfilling Policies and Goals

In what ways does the proposed project help achieve performance, safety, mobility, economic, or transportation demand management goals?

The Project will achieve significant performance, mobility, economic, and transportation management improvements. Quantitative improvements are described in detail in PART B.1.A and PART B.3. To summarize:

- The project would add managed lanes on I-80 and US 50 by a combination of restriping and shoulder and median reconstruction with a concrete barrier. Drainage modifications would be required due to median reconstruction in the locations to which sheet flow currently drains. The existing Intelligent Transportation System, (ITS) elements and infrastructure would be expanded and modified and would include ramp meters, fiber-optic conduit and cables, and overhead signs.
- The Project reduces congestion at key locations such as Mace Boulevard and County Road 32B during both AM and PM peak periods.
- The Project reduces congestion at other bottlenecks like the Yolo Causeway, resulting in improved traffic flow and reduced travel times.

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- Safety Impacts: Project would reduce congestion and likely lower collision rates, particularly rear-end collisions.
 - Transit Impacts: Project would increase transit ridership over the no build alternative and save significant travel time for Route 138. It also includes the construction of a mobility hub with parking spaces and a transit transfer station.
 - Bicycle and Pedestrian Impacts: Project includes improvements to the Class IV bicycle/pedestrian path on the Yolo Causeway, including pavement rehabilitation, raised barriers, and a new connection at County Road 32A.
 - Freight Impacts: Project would benefit freight distribution by reducing traffic congestion, leading to a reduction of 72% in daily truck hours of delay for trucks and an improvement in the Reliability Index for Truck Travel Time from 1.73 to 1.19 compared to the no-build alternative. For more on the Project's significance to local, regional, and national freight, see PART B.3 and PART B.4.A.

6.D Environmental Considerations

Is the proposed project consistent with applicable state and federal environmental statutes and regulations? Does the proposal adequately address or improve air quality and other environmental concerns?

The Project is consistent with applicable state and federal environmental statutes and regulations. With Caltrans as the lead agency, both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) processes are expected to be completed in April 2024 with the anticipated approval of the joint CEQA/NEPA document (Final EIR/EA). Following approval, the Notice of Determination (NOD), the Finding of No significant Impact (FONSI) Notice of Availability (NOA), and the 3 volumes of the Final EIR/EA will be available at <https://dot.ca.gov/caltrans-near-me/district-3/d3-projects/d3-i80-corridor-improvements>.

The Final EIR/EA thoroughly evaluates the potential environmental impacts of this Project, including air quality concerns (see Part B.6.E of this Application for more information on air quality). It finds that the Full Project will not result in significant adverse impacts and adequately addresses environmental concerns through mitigation measures outlined in the document, with the exception of VMT impacts. With respect to VMT, although the current Project (Phase 1) does not have adequate funding to fully mitigate VMT impacts, the Full Project is part of SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy. The Plan/Strategy is the Sacramento region's approach to manage regional VMT in order to meet the state's greenhouse gas emissions reduction goals for 2035 established by the California Air Resources Board. Future phases of the project also will seek increased funding in order to further mitigate VMT impacts.

An Environmental Commitment Record for the Project is included in the Final EIR/EA and lists mitigations to be implemented as identified during the NEPA/CEQA process (Appendix C of the Final EIR/EA). To supplement these findings, this Application also describes the Project's planned VMT mitigation efforts in Part B.6.B. Additionally, while this Application presents a detailed equity plan in Part B.4.C, section 2.17 of the Final EIR/EA covers environmental justice topics and finds that the Build Alternative will not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of EO 12898, and that no further environmental justice analysis is required. Therefore, this Project should adequately address and mitigate air quality and other

environmental concerns.

Air Quality

The Project is included in the adopted MTP SCS and meets regional Air Quality Conformity. The Air Quality Conformity Report will be submitted to FHWA after selection of the preferred alternative. FHWA will make a conformity determination prior to final approval of the Final EIR/EA.

Yolo County is in attainment of all National Ambient Air Quality Standards (NAAQS). Sacramento County is designated as Maintenance (Moderate) for PM10 and Nonattainment (Moderate) for PM2.5. For the more stringent California Ambient Air Quality Standards (CAAQS), both Sacramento County and Yolo County are designated Nonattainment for O3 and PM10 and are in attainment of all other State standards.

Table 16: Total Daily Emissions with and without Preferred Alternative

Measure	Metric	Build (2049)	Future No Build (2049)	Change (%)	Increase/Decrease
Air Quality and Greenhouse Gases	Particulate Matter (PM 10) (lb./day)	764.4	746.3	3.0	Increase
	Particulate Matter (PM 2.5) (lb./day)	146.8	145.4	1.0	Increase
	Carbon Dioxide (CO2) (lb./day)	993.4	1,031.4	-3.7	Decrease
	Volatile Organic Compounds (VOC) (lb./day)	186.8	249.3	-25.1	Decrease
	Carbon Monoxide (CO) (lb./day)	3403.2	3719.5	-8.5	Decrease
	Nitrogen Oxides (NOx) (lb./day)	414.0	533.4	-22.4	Decrease

6.E Community/Stakeholder Support

What is the extent of support or opposition for the project? Does the project proposal demonstrate an understanding of the national and regional transportation issues and needs, as well as the impacts this project may have on those needs? Is there a demonstrated ability to work with the affected communities?

The environmental process for the Full Project is characterized by early and continuing coordination with the general public and relevant public agencies. This coordination is essential for determining the scope of environmental documentation, the level of analysis, potential impacts, mitigation measures, and associated environmental requirements. The California Department of Transportation (Caltrans) has employed various formal and informal methods, including project development team meetings, interagency coordination meetings, and correspondence with other stakeholders, to achieve agency consultation and public participation.

Public Scoping and Participation

The public scoping and participation phase commenced with the filing of a Notice of Preparation (NOP) memorandum with the State Clearinghouse on June 6, 2021. The NOP was revised on August 17, 2021, to reschedule the scoping meeting, and again on October 17, 2022, to clarify proposed managed lane strategies and build alternatives. Caltrans accepted comments until September 24, 2021. Public awareness about the scoping phase was raised through newspaper advertisements, social media platforms, and Caltrans' project website. The community and media were also notified via email.

Two virtual public scoping meetings were held on August 25, 2021, through WebEx, with the aim of discussing the scope of the Environmental Impact Report/Environmental Assessment (EIR/EA) and the potential effects of the project. The meetings featured presentations on the project and the environmental review process, and attendees were encouraged to submit comments during the meeting or to Caltrans staff via mail or email.

Comments received from the public during the meetings covered various topics, including proposed bicycle facilities, project funding, nearby projects, project timing, lane configurations, sound wall locations, and work within the Yolo causeway. Additionally, written comment letters raised concerns about potential air quality effects on sensitive receptors, increased flood risks, potential fish passage impacts, Native American Tribal consultation, and utility relocation.

Public Review and Comment

The Draft Environmental Document (DED) was circulated for public review starting November 13, 2023. Caltrans held public hearings on the DED on November 28, 2023, in West Sacramento and December 13, 2023, in Davis. The public comment period ended on January 12, 2024.

Stakeholder Meetings

In addition to public scoping, Caltrans established a steering committee for the project, comprising local stakeholders such as the Cities of Davis and West Sacramento, Yolo County, the Sacramento Area Council of Governments (SACOG), the Yolo County Transportation District, UC Davis, and the Bicycle Coalition. The steering committee conducted several public meetings in Davis, Sacramento, and West Sacramento between 2018 and 2021 to discuss the project and gather community input. The meetings occurred as follows:

- June 6, 2018, Davis Senior Center, 646 A Street, Davis, CA 95616, 6:00 p.m.–7:30 p.m.
- June 14, 2018, West Sacramento City Hall, 1110 West Capitol Avenue, West Sacramento, CA 95691, 6:00 p.m.–7:30 p.m.
- June 21, 2018, Sacramento City Hall, 915 I Street, Sacramento, CA 95814, 6 p.m.–7:30 p.m.
- November 21, 2019, Mary L. Stephens Davis Library Blanchard Room, 315 East 14th Street, Davis, CA 95616, 6:30 p.m.–7:30 p.m.
- February 27, 2020, West Sacramento City Hall, 1110 West Capitol Avenue, West Sacramento, CA 95691, 6:30 p.m.–7:30 p.m.
- August 25, 2021, Virtual (via WebEx), 6:00 p.m. and 7:00 p.m.

The meetings facilitated discussions about potential project activities and provided a platform for answering questions from the public. Comments received from attendees covered topics such as bicycle improvements, potential toll lane pricing, sound wall locations, design alternatives, construction impacts on bat species, and other project design elements.

Stakeholders were additionally engaged in advance of DED circulation according to Table 17.

Table 17: Pre-Environmental Stakeholder Outreach and Formal Presentations (Spring 2023)

Task Name	Start
UC Davis Briefing	Wed 2/15/23
Davis Chamber of Commerce Briefing	Mon 2/27/23
Yolo County Priority Projects Tour	Fri 3/17/23
Cool Davis	Wed 3/15/23
Davis Sunrise Rotary	Fri 3/24/23
Project Message & Video to Phase 1 Recipients (150)	Fri 4/21/23
Yolo Commute	Tue 5/2/23
Sacramento Regional Transit	Tue 5/16/23
Sacramento ITE Presentation	Wed 5/17/23
Bike Davis	Wed 5/17/23
Solano Transportation Authority	Mon 5/22/23
Shores of Hope	Tue 5/23/23
Sacramento Central Labor Council	Wed 5/24/23
Breathe California, Sacramento Region	Wed 5/24/23
Capitol Corridor	Fri 5/26/23
SMAQMD	Wed 5/31/23
City of Davis City Council	Thu 6/8/23
City of Davis BTSSC	Thu 6/8/23
Yolo Farm Bureau	Tue 6/13/23

Participants will continue to be engaged by CARTA as the project progresses, and tolling policy decisions will be made in partnership with these agencies and the community.

MTC, SACOG, SJCOG Megaregion Working Group

The Project is among the MTC, SACOG, SJCOG Megaregion Working Group northern California "Megaregion Dozen" projects.

Project Development Team (PDT) Meetings

The PDT meetings have been instrumental in facilitating coordination, issue resolution, and information exchange between Caltrans and other stakeholders, including SACOG, the Cities of West Sacramento and Davis, Yolo County, UC Davis, and the Yolo County Transportation District. These monthly meetings began in October 2017 and will continue throughout the environmental and project approval process.

The PDT, comprised of experts in various fields such as design, environmental review, traffic operations, right-of-way, and project management, convenes to review project status, address emerging issues, and provide overall direction throughout the project development process.

Consultation and Coordination with Public Agencies

CARTA will include several letters of support as supporting materials to this application.

Federal Agencies

Caltrans engaged with federal agencies by obtaining lists of federally listed anadromous fish species and federally listed species with the potential to occur in the Biological Study Area (BSA) from the National

Marine Fisheries Service (NMFS) and the Sacramento US Fish and Wildlife Service (USFWS) Office, respectively. A Biological Assessment (BA) is being prepared for submission to USFWS for Section 7 consultation under the Endangered Species Act (ESA).

Furthermore, a site visit was conducted by a biologist from the USFWS Sacramento Office to review key habitat areas within the project footprint and discuss potential effects and avoidance measures for each species.

State Agencies

Caltrans, as the state transportation agency, is a critical member of CARTA. Caltrans has therefore established approval of the project and is involved in continued coordination.

Caltrans is coordinating with the California Department of Fish and Wildlife (CDFW) to explore options for obtaining a consistency determination (CD) for the project. If a CD is deemed inappropriate, Caltrans will proceed with obtaining an Incidental Take Permit (ITP) for the giant garter snake. Additionally, Caltrans evaluated built environment resources and determined that they were not eligible for inclusion in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR). Concurrence on the ineligibility of the seven built environment resources was received from the State Historic Preservation Office (SHPO) on September 30, 2021.

Native American Tribal Consultation

The Native American Heritage Commission (NAHC) was contacted on May 14, 2020, to request a search of the Sacred Land Files and a list of Native American tribes or individuals with potential interests, concerns, and/or knowledge regarding cultural resources or traditional cultural properties that may be affected by the project. Of the 11 tribes originally identified by the NAHC, all responded and requested to continue consultation, except for four tribes.

Formal consultation began on June 4, 2020, and was followed up by phone calls and/or emails to the Native American contacts identified by the NAHC. Most tribes expressed interest in ongoing consultation, while some reviewed the project and requested notifications of cultural resource findings. Consultations involved discussions about areas of concern, testing activities, and potential effects on tribal cultural resources. Joint meetings and ongoing communication facilitated collaboration and understanding between Caltrans and the tribes.

The Yocha Dehe Wintun Nation provided a monitor for the XPI trenching, and the United Auburn Indian Community (UAIC) monitored the geotechnical work at Bryte Bend bridge. Following negative results from surveys and subsurface testing, no additional concerns were raised about the potential to affect tribal cultural resources within the project limits.

Consultation with Stakeholders for Vehicle Miles Traveled (VMT) Mitigation

Caltrans aims to minimize induced VMT, thereby reducing the need for mitigation. However, when State Highway System (SHS) projects do generate VMT, mitigation strategies are employed per the California Environmental Quality Act (CEQA) requirements. According to the Caltrans VMT Program Bulletin 21-01, projects or programs must demonstrate a negative effect on VMT and be relatively likely to come to fruition to qualify as feasible mitigation.

Caltrans and YoloTD put out a survey in Summer 2022 to all local partner agencies in the Yolo and Sacramento County regions. The purpose of the survey was to solicit potential VMT-reducing projects

with which the Yolo 80 Managed Lanes project could partner and/or provide financial contribution. Once the survey period concluded in Fall 2022, Caltrans and YoloTD, in consultation with their traffic analysis consultant Fehr and Peers, selected a group of projects that would provide the most VMT reduction at a reasonable and feasible cost to implement.

This list of mitigation projects was formalized as a VMT Mitigation Plan. Caltrans and YoloTD held multiple meetings between January 2023 and Summer 2023 with each implementing agency for the mitigation projects to discuss the Yolo 80 Managed Lanes project, the available funding to provide for mitigation, and the necessary steps to memorialize for Draft EIR and Final EIR. The VMT Mitigation Plan was also shared at the two public meetings noted in the Public Review and Comment subsection, above, during the circulation of the DED. Each implementing agency from the selected mitigation measures for the VMT Mitigation Plan provided a Letter of Intent to express their support and partnership with the Yolo 80 Managed Lanes project and to document that support in the Draft EIR.

Stakeholder-Specific Actions – Equitable Outreach

Please see PART B.4.C above for more on the overall Project approach to equity.

Caltrans is additionally committed to meaningful engagement with communities most impacted by structural racism. The agency seeks to create transparent, inclusive, and ongoing consultation processes that treat all individuals with dignity and justice. Public service announcements, social media posts, participation in local government meetings, and additional public meetings in underserved communities aim to increase public interest and participation in the outreach process. Caltrans also plans to conduct a Health Risk Assessment focusing on air quality effects on communities of color and underserved communities and will send an invitation to participate in a Willingness to Pay or Ride Share Survey for related projects.

7. Supplementary Topics

This section provides supplementary information not specifically requested in the Commission's "Guidelines for Toll Facility Applications." The first supplementary item covers the section of the guidelines under the heading "Report to the Legislature." The second item expands upon the first by indicating that BAIFA will collect performance data on the toll facility, as reporting on performance is required in the Commission's report to the Legislature. Additional items in this section provide the Commission with a more robust understanding of the Project.

7.A Commission Annual Report to the Legislature

Please see PART B.1.D.6 for information on CARTA's commitment to providing information or data requested by the Commission or Legislative Analyst.

7.B Performance Assessment

CARTA will define and monitor the performance measures in a comprehensive manner consistent with regional and state requirements. The performance measures will provide criteria for evaluating the Project and the effects of pricing, eligibility, and congestion management in achieving the adopted goals.

Performance reporting requirements will be defined further as the Project develops. CARTA plans to contract with an existing operator for the operations of the Yolo 80 Express Lane. As existing operators are expected to be currently reporting on performance of the other Express Lanes operated in California, that reporting will serve as a model for Yolo 80 Express Lane reporting. Reporting will be

consistent with the requirements for annual and other periodic reports required by the Commission pursuant to Section 149.7(h), as amended.

Performance measures currently collected for other similar express lanes include:

- Number of express lane trips
- Express lane trip types
- Traffic speeds
- Tolls generated
- Trip length and distribution
- CHP enforcement activity

7.C Procurement Approach

The project team is evaluating the implementation methods for delivery and potential to mitigate design and construction risks, including schedule and cost. Roadway design and construction activities have already begun, with Caltrans' Ready to List (RTL) date for these elements slated for April 2024, and an award in September 2024.

CARTA will explore options to procure the roadside toll system. The roadside toll system includes all tolling equipment installed on the right of way to record toll transactions, capture images related to tolling, and aggregate and send data to the Financial Back Office for billing and account posting. CARTA has multiple options for this system procurement, including issuing a Request for Proposal to solicit bids from qualified vendors, or working with a partner agency that has the ability to add the Yolo 80 corridor as an "add-on" to an existing contract, with that agency potentially responsible for O&M. CARTA may also enter into a joint procurement with other regional toll operators who may procure roadside toll systems at the same time.

Since CARTA is potentially contracting with another toll operator for FBO and CSC services of the Yolo 80 Express Lane, CARTA may utilize that toll operator's roadside toll system integrator (RTSI) to perform toll system integration for the Project. During negotiations with the partner agency, operational and performance expectations as well as cost sharing and future upgrades will be discussed. Note that CARTA could also enter into partnership for either FBO or CSC services instead of having both provided by a single partner. Multiple partnerships (one for FBO and one for CSC) are also possible and would require separate agreements.

Should CARTA opt not to contract with another toll operator for FBO and CSC services, CARTA would need to issue a procurement for a single vendor offering both FBO and CSC, or multiple procurements (one for FBO services, and another for CSC). If this option is selected, staff will reevaluate operations and maintenance responsibilities and related costs.

7.D Cost Estimates

Is the estimated cost of the facility reasonable in relation to the cost of similar projects?

We are unaware of any express lane projects with a similar mix of improvements and existing conditions for a direct "apples-to-apples" cost comparison. To assess cost reasonableness, we have provided life cycle and benefit-cost information. The summary results of a benefit-cost analysis with a 4% discount rate are provided in Figure 9, demonstrating that the project's throughput and efficiency benefits represent a cost-effective investment. With a benefit-cost ratio of 2.9, the project's benefits significantly

exceed its costs. Please note that this analysis was performed for the entire planned project, including subsequent phases for which tolling authority is not being requested in this application.

INVESTMENT ANALYSIS SUMMARY RESULTS				
Life-Cycle Costs (mil. \$)		\$203.0		
Life-Cycle Benefits (mil. \$)		\$595.4		
Net Present Value (mil. \$)		\$392.4		
Benefit / Cost Ratio:		2.9		
Rate of Return on Investment:		16.8%		
Payback Period:		9 years		
ITEMIZED BENEFITS (mil. \$)				
	Passenger Benefits	Freight Benefits	Total Over 20 Years	Average Annual
Travel Time Savings	\$426.6	\$72.8	\$499.4	\$25.0
Travel Time Reliability Benefits	\$253.3	\$53.5	\$306.8	\$15.3
Veh. Op. Cost Savings	-\$281.9	-\$25.4	-\$307.4	-\$15.4
Accident Cost Savings	\$106.9	\$9.7	\$116.6	\$5.8
Emission Cost Savings	-\$17.8	-\$2.2	-\$20.0	-\$1.0
TOTAL BENEFITS	\$487.1	\$108.3	\$595.4	\$29.8
Person-Hours of Time Saved			44,058,907	2,202,945
<i>Should benefit-cost results include:</i>				
1) Induced Travel? (y/n)	<input type="checkbox"/> Y	Default = Y		
2) Travel Time Reliability? (y/n)	<input type="checkbox"/> Y	Default = Y		
3) Vehicle Operating Costs? (y/n)	<input type="checkbox"/> Y	Default = Y		
4) Accident Costs? (y/n)	<input type="checkbox"/> Y	Default = Y		
5) Vehicle Emissions? (y/n)	<input type="checkbox"/> Y	Default = Y		
includes value for CO ₂ e				
EMISSIONS REDUCTION				
	Tons		Value (mil. \$)	
	Total Over 20 Years	Average Annual	Total Over 20 Years	Average Annual
CO Emissions Saved	-129	-6	-\$0.0	-\$0.0
CO ₂ Emissions Saved	-451,463	-22,573	-\$18.0	-\$0.9
NO _x Emissions Saved	-72	-4	-\$1.3	-\$0.1
PM ₁₀ Emissions Saved	-3	0	-\$0.4	-\$0.0
PM _{2.5} Emissions Saved	-3	0		
SO _x Emissions Saved	-5	0	-\$0.3	-\$0.0
VOC Emissions Saved	-29	-1	-\$0.0	-\$0.0

Figure 9: Benefit-Cost Ratio and Monetary Benefits of the Project

PART C. Attachments

Attachment A - Project Initiation Document

Attachment B - CARTA JPA Agreement

Attachment C - Concept of Operations

Attachment D - Traffic and Revenue Report