California Transportation Commission

Application for Toll Facility

US 101 Express Lane Project
San Mateo-Santa Clara County border
(approximately Matadero Creek) to Interstate 380
04 - SM - 101 - PM 0.0/21.8

Submitted by:

San Mateo County Express Lanes Joint Powers Authority

June 28, 2019

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Attached files in electronic media form with this application includes:

1. US 101 CSMP - Corridor System Management Plan
2. US 101 CSMP – Supplemental Corridor System Management Plan
3. US 101 South CCP – Comprehensive Corridor Plan
4. US 101 Project Initiation Document (Project Study Report/Project Development Support)
5. US 101 Supplemental Project Study Report/Project Development Support
6. US 101 Draft Community Outreach Summary
7. US 101 Final Environmental Impact Report/Environmental Impact Statement
8. US 101 Project Report
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10. US 101 Notice of Determination
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12. Caltrans letter of support for this application (June 28, 2019)
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Executive Summary

The San Mateo County Express Lanes Joint Powers Authority (JPA) is applying under Streets and Highways Code Section 149.7, as amended by Assembly Bill (AB) 194, to operate a high-occupancy toll facility (the US 101 Express Lanes Project (Project)) on National Highway System Route 101 (US 101) between Interstate 380 (I-380) and the Santa Clara/San Mateo County line (approximately Matadero Creek).

The San Mateo County Transportation Authority (SMCTA) and City/County Association of Governments of San Mateo County (C/CAG) are joint sponsors of the Project and have formed the JPA to exercise their shared powers to oversee the operations of the express lane operations contract. The JPA will own, administer, and manage the operations of the Project and will consider owning, administering, and managing the operations of any potential future express lanes within San Mateo County.

Specific duties of the JPA will include:

- Determining express lanes policies such as toll rates and toll discounts;
- Assuming liability for the express lanes, and ensuring sufficient funding for the routine maintenance, operation, rehabilitation and replacement of express lanes infrastructure (to be funded by toll revenues when possible);
- Working with other Bay Area toll system owners and operators toward regionally consistent policies that allow seamless travel;
- Consider development and implementation of equity program(s),
- Determining how to invest net toll revenues generated in the express lane corridor; and
- Set the terms and conditions governing the management, operation, financing and expenditure of revenues generated by the express lanes in San Mateo County.

While the JPA will own, administer and manage the express lanes, construction of the express lanes is managed and overseen by the California Department of Transportation (Caltrans), a project co-sponsor. Caltrans and the Federal Highway Administration (FHWA) have formed a partnership to advance the Project to completion. in partnership with the San Mateo County Transportation Authority (SMCTA) and the City/County Association of Governments of San Mateo County (C/CAG). The TA is the county's sales tax authority, while C/CAG is the county's congestion management agency. In addition, the Metropolitan Transportation Commission (MTC) also plays an important role in the delivery of the capital project and in the future, the operation of the express lanes.

The SMCTA and C/CAG are co-sponsors, as well as funders of the project. MTC is a funding partner, and one of MTC's joint exercise of powers agency, the Bay Area Infrastructure Financing Authority (BAIFA), will contract with the JPA to operate the express lanes once the construction of the express lanes is completed.

The Project also relies on a substantial financial contribution from the private sector ($53 million). Caltrans was the lead agency for preparing the Final Environmental Impact Report/Environmental Assessment (EIR/EA) in compliance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) for the Project. The EIR/EA, as well as a Notice of Determination, have been completed and published with Caltrans as the lead agency. Additionally, SMCTA, C/CAG and

Caltrans have executed several Cooperative Agreements establishing roles and responsibilities for all phases of Project.

In San Mateo County, the current Project will provide continuous express lanes in the northbound and southbound directions of US 101 in San Mateo County from the terminus of the Santa Clara County Express Lane at Matadero Creek (SCL PM 51.4 / SM PM 0.0) to north of I-380 (SM PM 20.8), a total of approximately twenty two (22) miles of Express Lanes in each direction.

The Project will implement traffic operational features from the San Mateo-Santa Clara County border (SCC PM 50.6) to Whipple Avenue in Redwood City (SMC PM 6.3), San Mateo County, including converting the existing single High Occupancy Vehicle (HOV) lanes in each direction to express lanes. In addition, one (1) new express lane in each direction from Whipple Avenue to approximately the I-380 interchange in South San Francisco, San Mateo County will be added. When combined with improvements being implemented in Santa Clara County (under separate Projects) the projects in the two counties will provide over thirty (30) lane-miles of continuous express lanes in each direction on US 101 between SR 237 and I-380, which will encourage HOV travel and the implementation of a regional express bus system on US 101. The future implementation of US 101 Express Lanes from SR 237 to SR 25 will increase US 101 corridor express lanes approximately by 30 miles in each direction. Additionally, PSR phase project development level work is underway for additional US 101 express lanes from I-380 to San Francisco County (approximately 5.5 lane-miles in each direction).

The Project limits include allowance for the installation of new overhead tolling system signage, beginning approximately one (1) mile in advance of the start of the express lane in each direction of US 101.The Project will implement a continuous access design such that the express lanes will be contiguous/non-separated from the general purpose lanes without designated ingress and egress locations. The Project consists of the following primary improvements:

- Conversion of existing HOV lanes to express lanes (7.25 miles in each direction).
- Addition of one (1) new express lanes in both directions (14.75 miles in each direction) while maintaining the current number of general purpose lanes.
- Establishment of toll zones that satisfy corridor operations.
- Restoration of auxiliary and acceleration lanes where operationally warranted.
- Three (3) replacement soundwalls.
- City frontage road reconstruction.
- Concrete barrier work.
- Ramp restripe and conform work.
- Express lane striping
- Installation of static and dynamic overhead signs, electronic tolling system equipment, a toll collection system, HOV enforcement beacons and closed-circuit television (CCTV) cameras.
- Addition of four (4) California Highway Patrol (CHP) observation areas.
- Installation of electrical power and communication conduits and power and communication service point connections.

The Project Express Lanes will be located in the number 1 lanes, the leftmost lanes of travel in each direction. Tolling hours are anticipated to be 5:00 AM to 8:00 PM, Monday through Friday.

The US 101 Corridor is a major south-north connector between Silicon Valley and San Francisco, providing an important spine of the Bay Area's significant economic centers. The corridor runs through Santa Clara, San Mateo, and San Francisco counties and is home to over three million people and some of the world's most innovative and fastest-growing companies that contribute to both the State and national economies. Businesses along the corridor account for 14 percent of California's Gross Domestic Product (GDP), 20 percent of the State's tax revenue, 54 percent of all patents in California, and provide 1.6 million jobs. Unfortunately, this corridor is also home to some of California's worst traffic congestion. According to the San Mateo County Economic Development Association, an estimated $5.4 billion in economic productivity is lost annually due to traffic congestion, and the average delay per person has reached sixty-seven (67) hours per year along the corridor. Traffic congestion on US 101 has steadily increased from 2012 and the intensity of the general purpose lane congestion is degrading operation of the existing HOV lanes in the southern part of San Mateo County, as HOVs are unable to move in and out of the HOV lanes.

The benefits of the Project include reduced congestion and delay; express lane continuity; encouragement of mode shift to carpooling, vanpooling and transit use; increased vehicle and person throughput in the corridor; improvement of travel time and reliability for all vehicles including freight trucks; minimization of operational degradation of general purpose lanes; improved travel times for carpoolers; and application of technology and/or design features to help manage traffic.

The Project will be delivered with two major contracts. The civil construction will be performed using the Construction Manager/General Contractor (CMGC) delivery method through which a Contractor /Construction Manager consults for Caltrans during the design phase and acts as the General Contractor (for Caltrans) during the construction phase. The toll system equipment and software will be implemented by a Toll System Integrator through a contract with Bay Area Infrastructure Financing Authority (BAIFA) who will also oversee daily operations of the express lanes through a contract with the JPA. The civil construction work has been further split into two Projects: the conversion segment (southern segment) from Matadero Creek at the border with Santa Clara County to Whipple Avenue in San Mateo County, which includes the conversion of an existing HOV lane to express lanes in each direction, and the widening segment (northern segment) from Whipple Avenue to I-380 in San Mateo County, which includes the addition of one (1) express lane in each direction. The JPA will enter into a contract with BAIFA for toll collection related development, maintenance, repair, rehabilitation, improvement, reconstruction, administration, and operation of the toll facility.

The SMCTA has procured the services of a Project Management Consultant (PMC) with extensive experience managing large scale projects in California. The PMC has and will continue to assist the SMCTA, C/CAG and their JPA in management of the implementation of the Project. Project delivery stakeholders, including Caltrans, are fully integrated with delivery team structure that includes the Project Management Team, Executive Steering Committee, Integrated Project Development Team, Design Management Team, Change Management Board and Construction Team to deliver the Project.

The CMGC contractor is currently under contract with Caltrans constructing the Project. The CTC has allocated construction funding for the conversion of existing HOV lanes in the Southern Segment. This work is currently under construction and will complete in 2020.The Project design for the Northern Segment has reached the 65 percent level and is anticipated to be completed in September 2019 and construction to begin in January 2020. The Project construction schedule targets opening the Project to the public in 2022.

The Project is funded with a combination of federal, state, regional, local as well as an unprecedented amount of private funds. The escalated cost of the Project is estimated at $514.3 Million and will be funded with Local Sales Tax and Regional sources including regional tolls ($95M), Private Sector ($53M), SB-1 Solutions for Congested Corridors (SCCP) ($200M), SB-1 Local Partnership Program (competitive) ($20M), Local Partnership Program (Formula) (SB-1) ($1.8M), San Mateo C/CAG RTIP ($33.5M), San Mateo County TA Measure A ($30.5M), Caltrans ITIP ($18M), and Federal Earmark (repurposed) ($9.5M). Full funding of the Project is included in the 2019 MTC Transportation Improvement Program (TIP). The Project is included in the MTC Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), also referred to as Plan Bay Area.

The JPA has prepared this application for tolling authority consistent with the order of information identified in the application guidelines adopted by the Commission on March 16, 2016.

Part A. Minimum Eligibility Criteria

The Commission must find, at a minimum, that the criteria identified in AB 194 are met. Therefore, every application should clearly discuss how it meets the following minimum criteria:

1. 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.

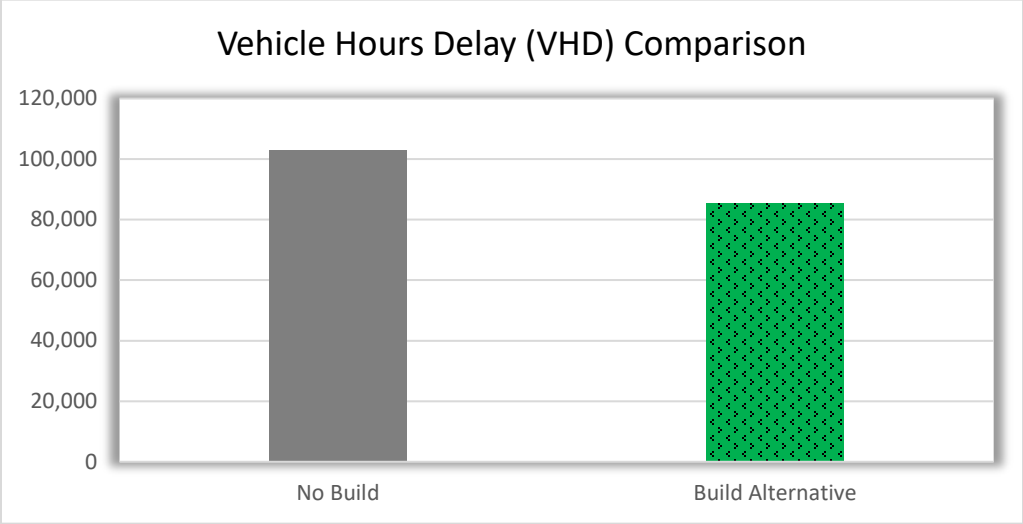
According to the Metropolitan Transportation Commission (MTC), congestion-related delays on the San Mateo 101 Corridor have increased nearly 80 percent since 2010 and impact more than a quarter million travelers each day. The Project will include dynamic tolling, updated in real-time during the commute times to respond to changing speed and traffic conditions, as measured at intervals along the express lanes in order to maintain acceptable operating conditions in the express lanes. Vehicles with three or more occupants will be able to use the express lanes without incurring a charge, consistent with the occupancy requirements on other similar express lane facilities in the region. A primary goal of the Project is to move as many people as possible within the corridor, with the Project benefits described below by direction and peak hour period.[1].

To assess and compare the corridor's performance between the conditions today and when the Project is built, the following measures of effectiveness (MOEs) were evaluated as part of the Project's environmental assessment:

- Vehicle Hours Delay (VHD): Total hourly delay of all vehicles in the study area;
- Vehicle Served or Person Throughput: Total number of vehicles or persons in the study area which have already reached their destination;
- Vehicle Miles Traveled (VMT): A measurement of miles traveled by vehicles in the study area;
- Vehicles Hours Traveled (VHT): Total travel time of vehicles traveling within the study area;

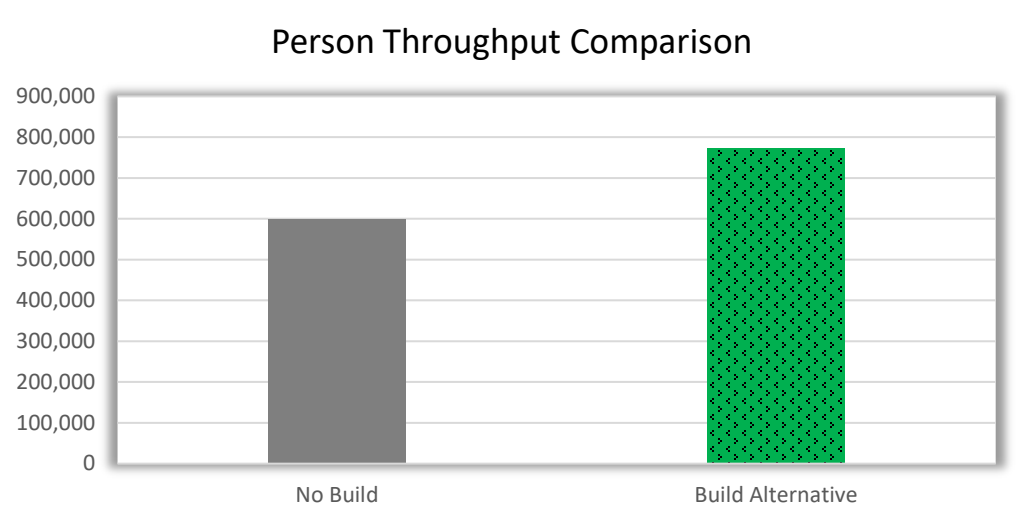
[1] US 101 Traffic Operations Analysis Report

Exhibit 1: Vehicle Hours Delay (2020)



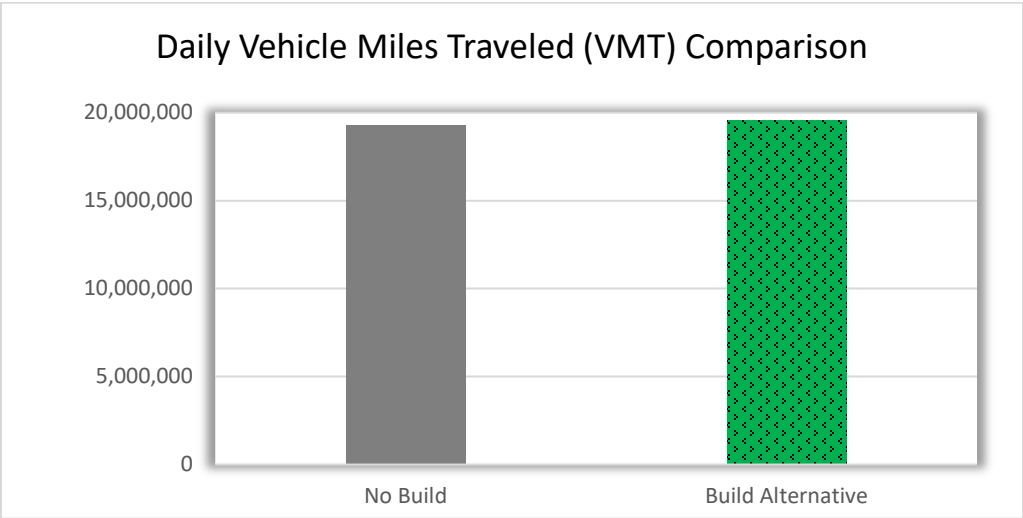
The Project is projected to provide corridor wide Vehicle Hour Delay (VHD) travel time savings over the No Build conditions for users in both the general purpose and express lanes. The Project will reduce vehicle hour delay from about 103,000 hours to about 85,000 hours (peak periods).

Exhibit 2: Person Throughput (2020)



The Project is projected to provide corridor wide Person Throughput improvement over the No Build conditions for users in both the general purpose and express lanes. The Project will increase Person Throughout from about 589,000 persons to 772,000 persons (peak periods).

Exhibit 3: Vehicle Miles Traveled (2020)

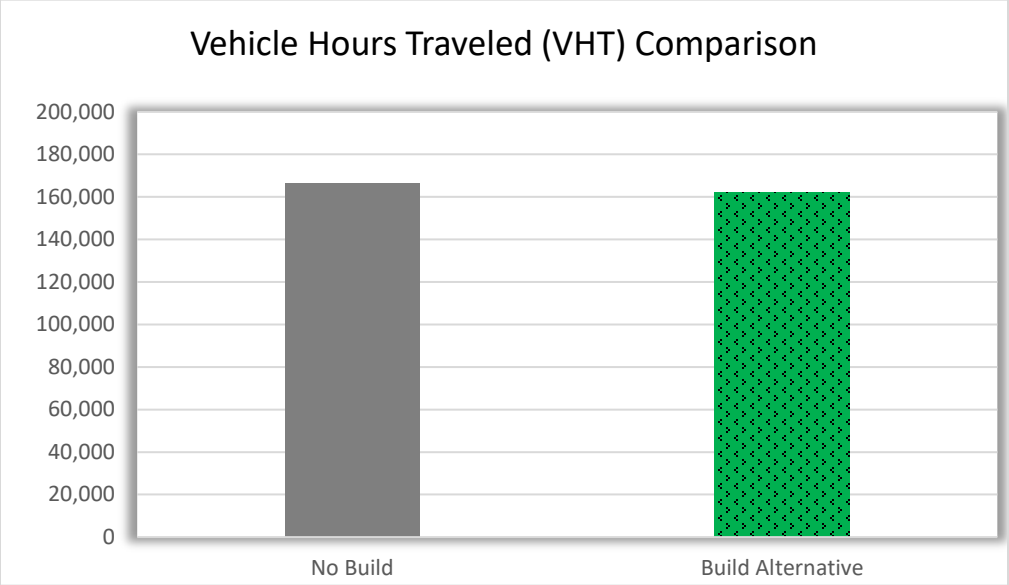


Through the project development process, travel modeling was conducted to project Vehicle Miles Traveled (VMT) on two levels, with modeling that focused on how the specific US 101 facility will operate as well as how all trips will occur across the entire transportation network in the area (i.e. US 101 as well as all other facilities including I-280 and El Camino Real). When modeling the US 101 facility on a stand-alone basis, VMT for the Project reflects an increase, based on the specific improvements that the Project will construct that will facilitate a higher volume of vehicles on the US 101 facility. One result of the Project is that it will reduce the level of travel on other parallel facility routes that are being used today to avoid travel on US 101. When considering the Travel Demand Modeling that accounts for all trips along the Peninsula in the Project area, the VMT is essentially equivalent to whether the area is in build or no-build condition (within 1%). The VMT reflected in Exhibit 3 reflects the Daily VMT projected through the Travel Demand Modeling. The analysis also projects that the Project will improve conditions on local arterial facilities that will no longer be used to attempt to avoid congestion points. [2][3]

[2] US 101 Travel Forecasting Memorandum, dated August 21, 2017

[3] US 101 Managed Lanes Project, Alternatives Screening Memorandum Final, dated November 17, 2017

Exhibit 4: Vehicle Hours Traveled (2020)



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 166,000 hours to 162,000 hours (peak periods).

The Project provides travel time savings over the No Build conditions for users in both the general purpose and express lanes, as shown in Exhibit 4. During the peak periods (AM peak period 6:00 AM – 10:00 AM and PM peak period: 3:00 PM – 7:00 PM), over the length of the entire corridor, the Project is projected to offer up to 27 minutes of travel time savings within the general purpose lanes and up to 38 minutes travel time savings in the HOV/express lane compared to No Build conditions (in 2020).

Once complete, the express lanes are designed so that vehicles can maintain speeds greater than or equal to 45 mph, meeting FHWA operations standards and requirements. This provides the ability to achieve increased person throughput and decreased vehicle delay and helps users reach their destination within a reliable travel time.

In coordination with other agencies including Caltrans and MTC, SMCTA and C/CAG and other corridor stakeholders have been working to implement a comprehensive approach to improving travel in the US 101 corridor. A Corridor System Management Plan (CSMP) was approved in 2010 that addresses a multipronged approach for travel in the corridor. Stakeholders along the US 101 Corridor have made investments in transportation projects within the Corridor. Examples of efforts that are either recently completed or currently underway include the following:

- Interchange improvements including: US 101/Broadway, US 101/Willow Road, both of which include dedicated bicycle/ pedestrian dedicated facilities.
- Phase 1 of the Transbay Terminal and Caltrain Downtown Extension
- Caltrain Electrification
- Studies to address the bottleneck at the US 101/ SR 92 interchange

- US 101 Smart Corridor implementation and ramp metering activation at all US 101 interchanges in San Mateo County
- Bicycle/pedestrian overcrossings at Holly Street and Clarke Avenue
- Various travel demand management (TDM) measures in all three counties (San Mateo, San Francisco, and Santa Clara) along the Corridor

The Comprehensive Corridor Plan (CCP) for the US 101 South Corridor is an update to the 2010 CSMP and identifies multimodal transportation strategies that will help achieve the corridor goals established by the multi-agency team. The current Project is part of a comprehensive multimodal effort to improve travel times and reliability. Examples of other recommended strategies in the CCP include:

- SamTrans Regional Express Bus project.
    - This project will examine the potential for re-introduction of an express bus network along the US 101 Corridor, making use of the travel time savings and reliability improvements offered by the Project as well as other planned projects. The Express Bus network would be a robust network of high-frequency express bus routes that focus on areas not currently served by long-haul transit services. The Express Bus Project will contribute to increasing person-throughput within the Corridor. SamTrans has been awarded Transit Intercity Rail Capital Program (TIRCP) funds to help fund the procurement of all-electric buses for up to four initial routes.
- Caltrain Station and Service Enhancements.
    - This project will improve Caltrain service, system performance and stations including full electric multiple unit (EMU) conversion, longer vehicles, longer platforms, level boarding, parking improvements, bike facilities, transit connectivity, other station enhancements and track reconfigurations. Caltrain has been awarded TIRCP funds to procure additional all-electric rail vehicles to help address ever increasing ridership.
- US 101 Express Lanes from SR 237 to SR 25.
    - This project has the PA&ED phase completed with Santa Clara Valley Transportation Authority (VTA) local funding and is seeking RTIP funds for Design. This project would extend the express lane facilities on the US 101 Corridor 30 miles to the south of the US 101/ SR 237 IC.
- HOV/HOT lanes on US 101 and I-280 in San Francisco.
    - This project has secured County sales tax measure funding approval from both San Mateo and San Francisco counties for portions of the pre-construction phases.
- Interchange improvement projects in Santa Clara County such as 101/Woodside Road, US 101/University Avenue; and SR 237/Mathilda Avenue and US 101/Mathilda Avenue, US 101/Mabury Road/Taylor Street and US 101/Blossom Hill Road interchanges. These projects have secured and/or are seeking approval for funding from a combination of local and State sources.
- El Camino Real Rapid Transit Project in Santa Clara County.
    - PA&ED was completed with VTA local funding.
- Northern extension of the Smart Corridor limits to include additional parallel arterials.
    - The two extension projects have been approved for STIP and local funding for various phases through construction.
- Various active transportation projects such as:
    - Bicycle/pedestrian overcrossing at US 101/Millbrae Avenue,

- Bike lanes and pedestrian improvements along Cesar Chavez Street from I-280 to US 101 in San Francisco, and
- Bike lanes and pedestrian improvements along Alemany Boulevard from Bayshore Boulevard to Rousseau Street in San Francisco.

2. 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 included in the Metropolitan Transportation Commission (MTC) Plan Bay Area 2040 (Regional Transportation Plan, RTP ID 17-06-0007) adopted on July 26, 2017[4].

3. 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.

The local/regional agencies along the US 101 Corridor have a long and productive history of cooperation to improve transportation in the Bay Area. Caltrans District 4 in coordination with the MTC, the Santa Clara Valley Transportation Authority (VTA), the City/County Association of Governments of San Mateo County (C/CAG), the San Mateo County Transportation Authority (SMCTA), the San Mateo County Transit District (SamTrans), and the San Francisco County Transportation Authority (SFCTA) collaborated to develop and update a Comprehensive Corridor Plan (CCP) for the US 101 Corridor (Corridor) which included the development of an express lane on the Corridor. The update of this plan was completed in February 2018[5].

Caltrans, SMCTA and C/CAG entered into a Charter Agreement at the beginning of the development phase to create an Integrated Project Development Team, with each party accepting defined responsibilities required to be completed to successfully delivery the Project. Project development tasks were completed utilizing both Caltrans and SMCTA consultant support. MTC, Caltrans, SMCTA, C/CAG, VTA, and CTC have also executed a SB 1 Baseline agreement that defines Project scope cost and schedule. Additionally, an Executive Steering Committee formed, including representation by MTC, SFCTA, VTA, Caltrans, C/CAG, SMCTA and private sector, to support project delivery.

Caltrans fully supports this Project as evidenced by the Caltrans District 4's involvement in the integrated design team and the Director's approval of and signature on the Final Environmental Impact Report/Environmental Assessment with Finding of No Significant Impact (FONSI), approved on October 30, 2018 and Caltrans' approval of the Final Project Report (dated October 31, 2018). Both the Final EIR/EA and Final Project Report were provided to the California Transportation Commission. The California Transportation Commission approved resolution E-18-166 for future consideration of funding the Project in December 2018. The Notice of Decision has been published in the Federal Register (October 31, 2018). The Final EIR/EA, and the Notice of Determination is included in electronic media form with this application.

[4] http://projects.planbayarea.org/
[5] http://www.dot.ca.gov/d4/systemplanning/docs/us-101-south-ccp.pdf

Caltrans has also shown its support to the Project by contracting for the civil construction work and being a co-applicant with the MTC in applying for the first cycle of the SB1 Solutions for Congested Corridors Program (SCCP).

Caltrans has also provided a letter of support for this application (attachment #12).

Under the Integrated Project Delivery Team, the SMCTA, C/CAG and Caltrans are developing and implementing the Project in a partnership. Numerous agreements are in place or under development for this Project including:

11/27/2013	C/CAG entered into a MOU with the SMCTA for PID development.
12/3/2013	SMCTA and Caltrans entered into cooperative agreement (04-2407) to complete the C/CAG sponsored PSR/PDS.
4/4/2014	Executed Project charter for HOV Lanes (before express lane alternative).
8/4/2016	Executed Project charter for Managed Lanes Project (added express lane alternative).
6/22/2016	Executed PA/ED Cooperative Agreement between SMCTA and Caltrans.
4/20/2017	Executed Amended PA/ED Cooperative Agreement between SMCTA and Caltrans and C/CAG.
7/11/2018	Executed PSE and ROW coop between SMCTA and Caltrans and C/CAG.
9/17/2018	Executed Project Oversight Agreement with FHWA, Caltrans, SMCTA, and C/CAG.
6/29/2018	Executed SB 1 Baseline agreement with MTC, Caltrans, SMCTA, C/CAG, VTA, and CTC.
7/11/2018	Executed Cooperative amendment for PSE and ROW.
6/6/2019	Executed Cooperative agreement for Construction and Construction Support of the southern segment.
Summer 2019	Execute Cooperative agreement for Construction and Construction Support of the northern segment.

Caltrans has also shown support through programming recommendations including $18 million of ITIP funds.

The JPA is also coordinating with MTC on the implementation of the Project. The JPA will contract with BAIFA (a joint exercise of powers agency that includes MTC as a member agency) to implement the toll collection and operate the US 101 Express Lanes (through a contractual agreement).

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

This topic is presented in Part B Section 1.

5. A complete project initiation document for the proposed toll facility.

A Project Study Report/Project Development Support (PSR/PDS) that evaluated HOV lanes in the US 101 Corridor was completed by C/CAG and signed by Caltrans on May 4, 2015. After the approval of the original PSR-PDS on May 4, 2015, both SMCTA and C/CAG determined that there was a need to evaluate express lanes as an additional alternative. In June 2015, SMCTA, C/CAG, and Caltrans held a series of meetings to discuss the addition of an express lane alternative from the San Mateo/Santa Clara County line to I-380 for the Project Approval and Environmental Document (PA&ED) phase. In January 2016, as an outcome of these meetings all parties agreed to prepare a Supplemental PSR-PDS. The Supplemental PSR-PDS was approved on June 3, 2016. The PSR/PDS serves as the Project Initiation Document for the Project. A copy is included in electronic media form with this application

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

The Project will be funded as described in Part B Section 5.A.

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 JPA is applying to the Commission to develop and operate high-occupancy toll lanes under Streets and Highways Code Section 149.7 as amended by AB 194, which became effective on January 1, 2016. As amended, Section 149.7(a) permits "a regional transportation agency … to apply to the commission to develop and operate high-occupancy toll lanes or other toll facilities, including the administration and operation of a value pricing program…."

Section 149.7(k)(4) defines a joint exercise of powers authority established pursuant to Chapter 5 (commencing with Section 6500) of Division 7 of Title 1 of the Government Code, with the consent of a transportation planning agency or a county transportation commission for the jurisdiction in which the transportation project will be developed as an eligible applicant agency.

The San Mateo Express Lanes Joint Powers Authority (JPA) exercises the powers of its member agencies the SMCTA and C/CAG as authorized by California Government Code Section 6500 et seq. The SMCTA is a County Transportation Authority pursuant to California Public Utilities Code Section 131000, et seq., and C/CAG is a County Transportation Commission per California Government Code Section 65089, et seq., consistent with the requirements of Section 149.7(k)(4).

Section 149.7(c) requires that guidelines established by the Commission for approval include the following, each of which is addressed in this application as indicated.

(1) 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.

This topic is covered in Part B Section 3.

(2) A requirement that the proposed toll facility is contained in the constrained portion of a conforming RTP prepared pursuant to Section 65080 of the Government Code.

The Project is included in the Metropolitan Transportation Commission (MTC) Plan Bay Area 2040 (Regional Transportation Plan, RTP ID 17-06-0007).

(3) Evidence of cooperation between the applicable regional transportation agency and the Caltrans.

This topic is covered in Part A Section 3.

(4) A discussion of how the proposed toll facility meets the requirements of this section (under Streets and Highways Code Section 149.7).

This topic is covered below in this section.

(5) A requirement that a Project initiation document has been completed for the proposed toll facility.

This topic is discussed in Part A Section 5.

(6) A demonstration that a complete funding plan has been prepared.

This topic is covered in Part B Section 5A.

Section 149.7(e) provides the additional requirements pertinent to the US 101 Express Lanes including:

a. 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.

The JPA will enter into a contract with BAIFA for the Project operations before the Express Lanes are open to traffic. BAIFA currently operates other express lanes in the region, with those operations including agreements with the CHP for enforcement. Either BAIFA or the JPA will enter into an agreement with CHP to include CHP enforcement resources similar to other express lanes in the region.

b. 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.

These items will be included in an Operations and Maintenance Agreement between the JPA and Caltrans, which will be developed and executed before the US 101 Express Lanes are open to traffic. The agreement is anticipated to model similar Operations and Maintenance agreements for other express lanes facilities in the region. The cooperative agreements for Environmental, Design, Right-of-Way and Construction has been executed and is discussed in Part A, Section 3.

c. That the sponsoring agency shall be responsible for activities related to toll collection.

The JPA will be adopting a toll policy prior to the operations of the express lanes. The JPA will consider and work with other Bay Area toll operators toward regionally-consistent policies that allow seamless travel in the region. The JPA will enter into a contract with BAIFA for the toll collection related development, maintenance, repair, rehabilitation, improvement, reconstruction, administration, and operation of the toll facility, before the US 101 Express Lanes are open to traffic. BAIFA currently operates the I-680 Express Lanes and will operate the I-880 and I-80 Express Lanes in the future, in the region.

d. 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.

JPA is committed to managing the revenue generated by the tolls in strict accordance with the requirements of Streets and Highways Code Section 149.7 and will expend remaining funds in the US 101 Corridor as defined in the expenditure plan for net excess revenues. The disposition of net toll revenue is covered in Part B Section 5B.

e. 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."

The southern portion of the Project (comprised of 6.0 miles of US 101) converts existing high-occupancy vehicle lanes to high-occupancy toll lanes. The Project provides travel time savings over the No-Build Conditions for users in both the general purpose and express lanes.

The Build Alternative will produce 17 percent reduction in average delay (VHD), 23 percent increase in person throughput, 18 percent increase in vehicle miles traveled (VMT), and 3 percent reduction in vehicle hours traveled (VHT).

Discussion of the anticipated improvements is also located in Part A Section 1 and in Part B Section 3.

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

JPA will provide information as requested in support of CTC reporting requirements, as noted in Part B Section 7.

g. 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.

The construction of the current facility is mostly funded by grants. A portion of the funding (~$50M) needed for the project will be advanced by SMCTA, and no bonds are intended to be issued for the Project.

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

The JPA is an agreement between the two county transportation agencies in San Mateo, SMCTA and C/CAG. C/CAG is the designated congestion management agency for San Mateo County. The SMCTA is the designated sales tax authority (pursuant to California PUC Section 131000, et seq.) for San Mateo County.

The JPA will adopt a toll policy, working with other Bay Area toll system owners and operators toward regionally-consistent policies that allow seamless travel in the region.

In implementing the US 101 Express Lanes, JPA will abide by all appropriate state and federal statutes. AB 2250 (codified in the California Government Code Section 14106) requires that the revenues generated by the US 101 Express Lanes be spent within the Project corridor. The JPA will develop an expenditure plan for net revenues in the Project corridor. The expenditure plan will detail how the JPA will invest any net toll revenues generated in the express lane corridor t for items that could include programs, projects and equity programs (within the parameters defined in Section 149.7 of the Streets and Highways Code and California Government Code Section 14106) This topic is also covered in Part B Section 5B.

Sections 21655.9 and 5205.5 of the California Vehicle Code provide for use of exclusive or preferential HOV lanes to vehicles displaying stickers issued by the Department of Motor Vehicles for vehicles meeting specified low and zero emissions standard regardless of vehicle occupancy. The JPA toll policy for the 101 Express Lanes will be consistent with these provisions as well as regional policies.

The Project's civil infrastructure will be constructed using a construction manager/general contractor (CMGC) delivery method. The integrated Caltrans, SMCTA, and C/CAG Project team selected in April 2018, with the approval of FHWA, a CMGC Contractor through a competitive procurement process. Caltrans is the construction implementing agency and is administering the construction contract. SMCTA consultants and Caltrans staff will provide design support during the construction phase. State and federal requirements, including federal authorization to issue RFPs or other procurement solicitations

and contract provisions such as non-discrimination and equal employment opportunity, payment of prevailing wage and the avoidance of conflicts of interest, have been included when applicable.

The JPA will enter into an agreement with BAIFA to design, implement, and operate the toll system; oversight of daily operations of the express lanes; maintenance of toll equipment; monitoring and reporting of express lane performance; providing enforcement tools to the CHP; coordinated outreach, marketing and public education and protection of personal identifiable information (PII). Toll program accounting and associated services such as the customer service center (existing) are provided by the Bay Area Toll Authority (BATA). Toll transactions initiated through the BAIFA operated express lane will be processed by BATA (through an agreement with BAIFA). Toll policy to be considered by the JPA for the Project will involve working with other Bay Area toll system owners and operators toward regionally-consistent policies that allow seamless travel, including BAIFA policies used for other express lanes in the region. Privacy of personal account information for the US 101 Express Lanes will be strictly maintained and will comply with all applicable state and federal statutes, rules, and regulations.

Right-of-Way acquisitions and utility relocations needed for the Project will be undertaken in compliance with applicable federal and state laws, regulations, and procedures. All property rights and program implementation shall be under the authority and guidance of local, state, and federal law, policies, and procedures. At the federal level, compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (the Uniform Act) and the Code of Federal Regulations (CFR) Section 49, Part 24, shall be adhered to. With respect to the Project, FHWA will retain responsibility for oversight of the Project's adherence to the Uniform Act. The property acquisition process shall be guided by the Caltrans Right-of-Way Manual. In the instances where legal proceedings are required to retain possession and property rights, the governing body of law shall include all relevant state and federal statutes and case law, including but not limited to the California Code of Civil Procedure §§1230.010-1273.050 (Eminent Domain Law). Caltrans is the implementing agency for the Project ROW phase and will be responsible for developing the Right-of-Way Certification.

The Project is subject to the design standards in the Caltrans Highway Design Manual (HDM) and FHWA's 13 controlling criteria. For exceptions to the advisory and mandatory standards included in the HDM, Fact Sheets are required to explain and justify the design exceptions. Fact Sheets must be approved by Caltrans. Through the integrated team, Caltrans is the design lead on civil components of the Project and is responsible for design exceptions. SMCTA consultant staff, in coordination with Caltrans structural, traffic, and design staff, is the lead designer of the toll equipment.

There are permits and approvals required for the Project from federal, state, and local agencies. These are identified in the Project Management Plan (anticipated to be completed in August 2019) and included in the Project schedule. This Project has a Caltrans Project manager and a consultant Project manager who work in close coordination to ensure that federal, state, and local approvals and permit processes are followed.

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?

The Project is consistent with Caltrans District 4's December 21, 2010 Corridor System Management Plan (CSMP) (with a February 14, 2011 supplemental document) and the US 101 South Comprehensive Corridor Plan, adopted in February 2018, which define how the corridor will be managed. The CSMPs focuses on operational strategies in addition to the already funded expansion Projects with the goal of increasing the efficiency of the existing system and maintaining or improving corridor performance. With the Project, the number of express and GP lanes along the Project corridor will meet or exceed the strategies considered in the CSMP.

As noted in Part B Section 1, the Project is subject to the design standards in the Caltrans HDM. Design exceptions are detailed in the Project Report (approved October 31, 2018). Both Mandatory and Advisory Fact Sheets for the Project have been prepared and approved by Caltrans.

The Project is included in the Metropolitan Transportation Commission (MTC) Plan Bay Area 2040 (adopted July 2017)[6](Regional Transportation Plan, RTP ID 17-06-0007). The Project is also part of the Bay Area Express Lanes Network (formerly called the Regional Express Lane Network), initially adopted in the Transportation 2035 Plan RTP (April 2013)[7].

The Integrated Project Delivery Team has been jointly developing and implementing the Project to ensure that the Project is consistent with all State Highway System requirements.

In addition, the Project has been designed in coordination with the Express Lane facilities that are being developed in Santa Clara County, directly to the south of the Project. The result of the San Mateo and Santa Clara improvements will provide a continuous facility between SR 237 and I-380 on US 101 Corridor. Santa Clara Project staff have been participating in the Project PDT team meetings. The segments will be coordinated regarding implementation of infrastructure such as signs, electrical work and communication systems so that the operations of express lanes across both segments will appear seamless to the commuter. The JPA will approve a tolling policy that provides for consistency with the operations of the other Express Lanes in the region, including the Santa Clara County facilities.

Consistency with existing plans is also discussed in Part B Section 6A.

[6] http://2040.planbayarea.org/cdn/farfuture/u_7TKELkH2s3AAiOhCyh9Q9QlWEZIdYcJzi2QDCZuIs/1510696833/sites/default/files/2017-11/Final_Plan_Bay_Area_2040.pdf

[7] https://mtc.ca.gov/our-work/plans-projects/plan-bay-area-2040/transportation-2035

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?

The Project is being pursued is to address the current deficiencies of US 101 in San Mateo County between the county line on the south and approximately the I-380 Interchange in the north.

Up to 235,000 vehicles daily traverse the southern portion of the Project area, from San Antonio Road in Santa Clara County to Whipple Avenue in Redwood City, daily and up to 268,000 vehicles daily traverse the northern portion of the Project area, from Whipple Avenue to approximately the I-380 Interchange, daily. High demand in several segments of the corridor causes substantial congestion and reduced speeds in both the general purpose and HOV lanes in the corridor resulting in travel that is substantially below the posted speed limit. With this congestion and reduced speeds comes unreliable travel times. Controlled or managed use of a freeway lane will allow travelers using the US 101Express Lanes to maintain higher speeds and provide travelers with more reliability in their travel times.

Growth in travel demand on US 101 is expected to result in longer periods of travel time during both the morning and evening peak periods. Congestion will increase in both the general purpose lanes and HOV lanes. As a result, users of the existing HOV lanes will experience delays and will no longer benefit from the travel time savings intended for the facility. Delay in the HOV lanes is expected to diminish the public's incentive to carpool or use public transit in the US 101 HOV lanes.

The purpose of the Project is to provide continuous traffic management in each direction on US 101 from the terminus of the Santa Clara Valley Transportation Authority (VTA) proposed express lanes in Santa Clara County to I-380 in northern San Mateo County by:

- Encourage carpooling and transit use;
- Improve travel time reliability for HOV/express lane users;
- Increase person throughput (the number of people moved);
- Apply technology and/or design features to help manage traffic;
- Reduce congestion in the corridor; and
- Minimize operational degradation of the general purpose lanes.

Based on information provided in the Final EIR/EA, a copy of which is included in electronic media form with this application, the benefits of the Project will:

- Increase person throughput in the Project corridor from 8 percent to 20 percent depending upon direction and peak period within the corridor;
- Increase trip travel time reliability in the corridor US 101 Express Lanes for HOVs and others using the express lane;

- Increase efficient use of the transportation system by encouraging transit and carpools; Reduce GP lane travel times up to 59 minutes depending upon direction and peak period within the corridor;
- Reduce US 101 Express Lanes travel time up to sixty-seven (67) minutes, depending upon direction and peak period within the corridor
- Through the adoption of toll policies, eliminate HOV lane degradation per Federal requirements as defined in the federal Moving Ahead for Progress in the 21st Century Act (MAP-21);
- Corridor improvements will allow US-101 to reduce congestion in the corridor, minimize operational degradation of the general purpose lanes, increase person throughput (the number of people moved), and apply technology and/or design features to help manage traffic;
- Enhance quality of life for Project corridor communities by reducing cut through traffic on local streets; and

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?*

The Project will improve the reliability and operational efficiency of the US 101 Corridor in San Mateo County from the southern border of San Mateo County to approximately the I-380 interchange and construct improvements along twenty-two (22) miles of one of the most heavily traveled freeway corridors in the Bay Area. Exhibit 5 shows the location of the Project. The Project will add one (1) Express Lane in each direction between the southern border of San Mateo County to approximately the I-380 interchange that will be managed as the US 101 Express Lanes. Additional information with diagrams showing highway lane configuration for the Project is included in electronic media form with this application.

Exhibit 5. Project Location

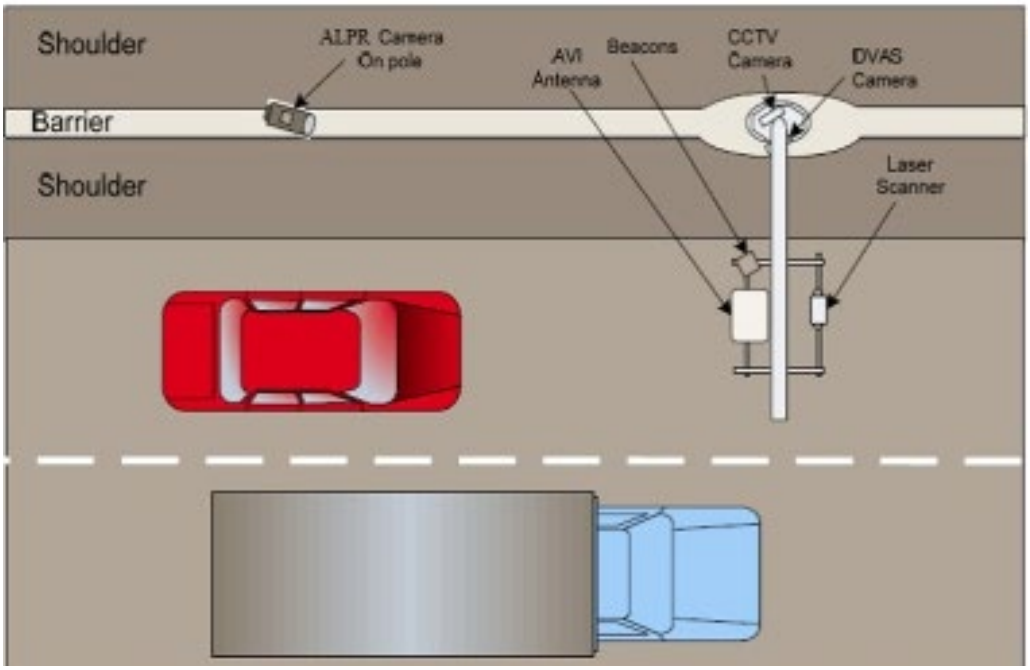
From the southern border of San Mateo County to Whipple Avenue in Redwood City, San Mateo County, the existing single High Occupancy Vehicle (HOV) lanes in each direction will be converted to express lanes. In addition, one (1) new express lane will be added in each direction from Whipple Avenue to approximately the I-380 interchange in South San Francisco. The Project will install tolling equipment features to create twenty-two (22) miles of express lanes in each direction of US-101. The Project limits include allowances for the installation of advance notification signage, beginning approximately one (1) mile in advance of the start of the express lane in each direction of US Highway101. There is one (1) area where city frontage roads in San Mateo that will be narrowed to provide room for mainline lane additions. All other improvements proposed will be within existing State right of way except for spot locations where tolling equipment including cabinets and pull boxes, and power and communication connections will need to reside in adjacent local agency right of way. Three replacement soundwalls will be rebuilt at locations where existing barriers will be removed as part of the Project.

To accommodate the additional lanes proposed to be added in the northern segment, the existing auxiliary lanes will be converted to continuous general purpose lanes by connecting the auxiliary lanes through the interchanges. Auxiliary lanes will also be restored through widening (within existing state right of way) between key interchanges. In some locations, a deceleration lane or acceleration lane will be constructed to replace an existing auxiliary lane. The Project will utilize a continuous access design

such that the express lanes will be contiguous/non-separated from the general purpose lanes without designated ingress and egress locations.

Equipment required for the US 101 Express lane facility includes the Electronic Toll System (ETS), a combination of electronic toll collection equipment for detection of traffic in the express and mixed-flow lanes, video enforcement system, and enhanced CHP enforcement (addition of four observation areas). Overhead gantries to be installed in the center median of US 101 will have electronic detection controller equipment capable of communicating with a transponder mounted to the windshields of vehicles.

Exhibit 6. Read Point Equipment Configuration



Toll rates will be adjusted based on the level of congestion in the express lanes and adjacent mixed flow lanes as determined by these vehicle detection stations. Toll rates will increase as congestion increases in the express lane to regulate the number of vehicles so that traffic will remain free-flowing. Conversely, the toll rate will decrease with decreasing levels of congestion in the express lane to allow more toll paying motorists to “buy in” to use the additional capacity of the express lane.

The primary goal of pricing will be to ensure efficient operations and to meet State and federal performance requirements. Federal requirements mandate maintaining a minimum speed of 45 mph in the express lanes 90 percent of the time over a consecutive 180-day period.

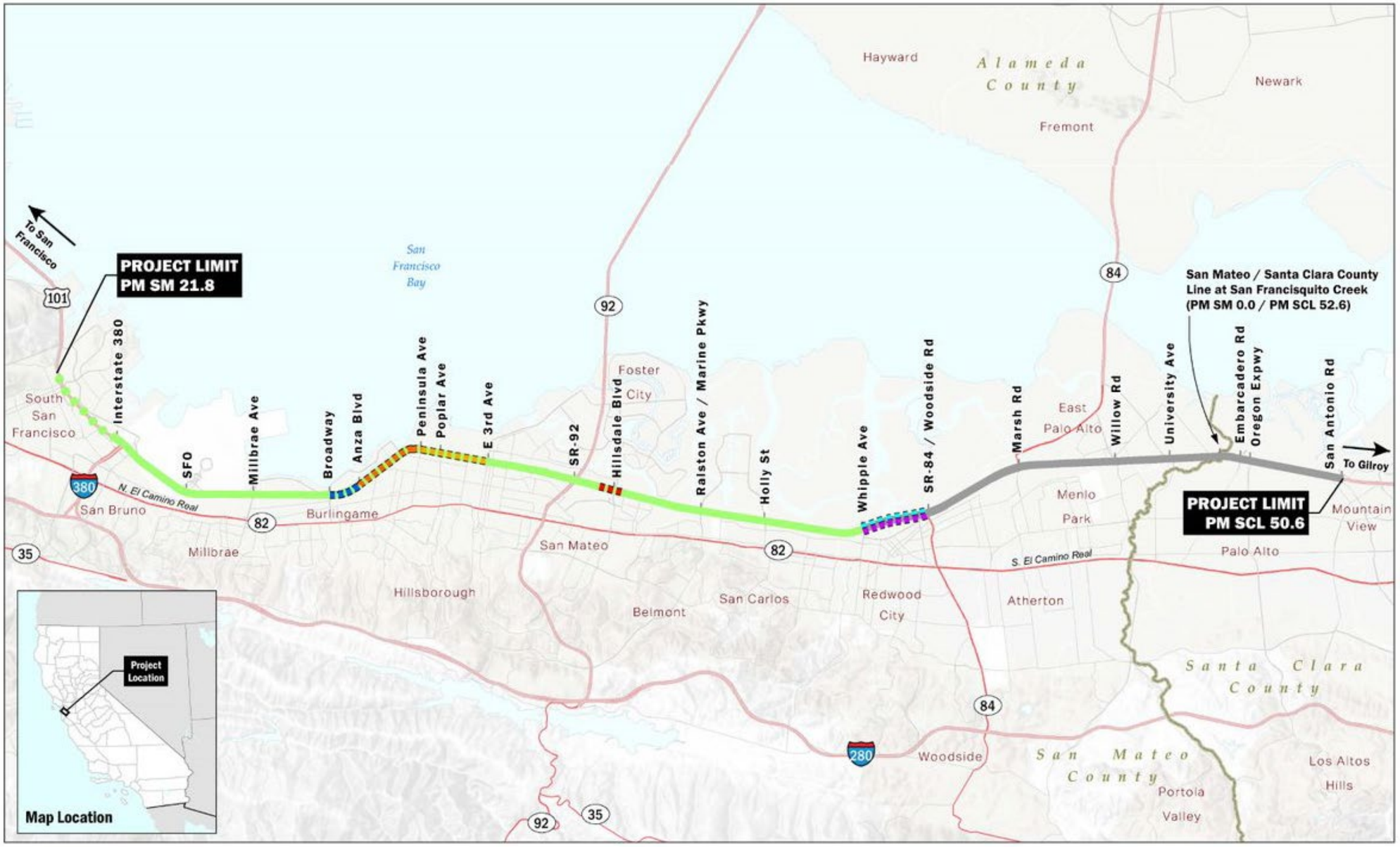
Because the improvements to be constructed within existing State right of way do not impact any ramp termini, no bike facility or ADA pedestrian access improvements are required in the Project. City sidewalk and bicycle facilities will remain unchanged.

The 22-mile Project is located within the cities of South San Francisco, Millbrae, Burlingame, San Mateo, Foster City, Belmont, San Carlos, Redwood City, Menlo Park, East Palo Alto, unincorporated San Mateo County and Palo Alto (Santa Clara County). Within the Project limits, the US 101 Corridor includes intersections with SR-84, SR-92, SR-114 and I-380.

An "Alternatives Screening Memorandum" was completed November 17, 2017 and was included in the July 2018 recirculation of the draft environmental document. The Alternative Screening Memorandum included an operational evaluation of several Project alternatives along the existing corridor. These alternatives were evaluated but eliminated from further consideration in the draft and Final EIR/EA (October 30, 2018).

Eliminated alternatives did not meet the Project purpose and need and would have generally greater environmental impacts. Reversable lanes were considered, but eliminated from further consideration due to ongoing operations costs, and adverse and unacceptable impacts to traffic in the opposite direction of travel. A HOV 2+ Lane Add option was considered but eliminated due to inability to manage traffic flow within the HOV lanes, inefficient transitions, unreliable travel time for HOV lane users and lack of applied technology or design features to help manage traffic. Finally, a HOV 3+ Lane Conversion option was considered and rejected due to required legislative approvals beyond the control of Caltrans or the local transportation authorities, expected shift of traffic to local roads, and expected increases in congestion, bottlenecks and queuing.

Additional detail about the Project can be found in the Final EIR/EA, a copy of which is included in electronic media form with this application.



SM 101 Managed Lanes
San Mateo County

0 2 Miles
1:100,000

County Boundary
Shoreline
Express Lane Added
Express Lane Signs Only (northbound)
Existing HOV Lane Converted to Express Lane
Acceleration Lane Added (southbound)
Auxiliary Lane Added (southbound)
Auxiliary Lane Conversion to Through Lane
Auxiliary Lane Removed (both lanes)
Auxiliary Lane Removed (southbound)
General Purpose Lane Added (southbound)

Proposed Lane Changes

Exhibit 7. North and Southbound Highway Schematic Showing Project Improvements

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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?*

The civil construction utilizes the Construction Manager/General Contractor (CMGC) delivery method through which a Contractor /Construction Manager consults for Caltrans during the design phase and can act as the General Contractor during the construction phase. Through the CMGC procurement process, the design of the Project receives additional input from the CMGC contractor regarding design and schedule. The Project is being delivered with two construction contracts.

The civil construction work is split into two segments: Conversion segment (southern segment) from Matadero Creek at the border with Santa Clara County to Whipple Avenue in San Mateo County and the widening segment (northern segment) from Whipple Avenue to I-380 in San Mateo County. The Southern Segment has been designed and construction began in March 2019. The Project design for the Northern Segment has reached the 65% level (April 2019) and is anticipated to be begin construction in January 2020.

The toll system equipment and software will be implemented by a Toll System Integrator through a contract with Bay Area Infrastructure Financing Authority (BAIFA) who will also oversee daily operations of the express lanes through a contract with the JPA.

Exhibit 8 provides the current schedule leading to the opening of the southern six (6) miles of the US 101 Express Lane in mid-2021 and the remainder of the 22-mile facility in mid-2022.

Exhibit 8. Project Timeline

PROJECT ACTIVITIES	TIMELINE
ENVIRONMENTAL - Final EIR/EA	Oct 2018 - COMPLETED
Construction Manager / General Contractor CMGC Contract Executed	Apr 2018 - COMPLETED
System Integrator Contract (Planned Execution. BAIFA will perform system integration for the San Mateo County Express Lanes with existing resources	Oct 2019
CONSTRUCTION	
SOUTHERN SEGMENT (PM 0 to PM 6) Santa Clara County Line to Whipple I/C • HOV To Express Lane Conversion - Civil construction to convert an existing HOV lane into the future Express Lane	
PS&E (Civil) Completion	November 2018 - COMPLETED
Begin Civil Construction	March 2019 - COMPLETED
End Civil Construction	November 2019
Systems Integration Design Complete	February 2020
Systems Integration Construction Complete	December 2020
Systems Integration Acceptance Testing Complete	May 2021
Open Express Lanes (SOUTHERN SEGMENT)	***June 2021***
NOTE -The Southern Segment of the Project is estimated to open in June 2021 in coordination with the Express Lane Project opening in Santa Clara County directly to the south	
NORTHERN SEGMENT (PM 6 to PM 21.8) San Mateo US 101 Post Mile 6 to the I-380 I/C • Express Lane Addition - Civil construction to add an Express Lane	
PS&E (Civil) Completion	September2019
Begin Civil Construction	January 202020
End Civil Construction	June 2022
Systems Integration Design Complete	May 2020
Systems Integration Construction Complete	April 2022
Systems Integration Acceptance Testing Complete	October 2022
Open Express Lanes (NORTHERN SEGMENT)	***October 2022***
POLICY	
C/CAG and SMCTA Approval of the Creation of the San Mateo US 101 Joint Powers Authority (JPA)	April 2019 (C/CAG) & May 2019 (SMCTA)
Commission Approval of Tolling Authority	August 2019
Approve Operations and Tolling Policies	December 2019

The integrated Project delivery team will use several project management tools to assure the Project is controlled and completed on time through the remaining design and construction phases, as summarized below.

Project Management and Reporting

Reports are currently being prepared to assess status and track progress on costs, budgets, schedules, quality, environmental mitigation status, safety, labor compliance, and many other items for the Project. These reports cover periods ranging from one (1) week to as long as one (1) year. Additionally, special reports concerning a particular topic are prepared, when necessary or requested. The JPA staff will ensure that these reports are prepared by the Project Management Consultant, designer, civil contractor, Caltrans and/or toll system integrator as appropriate.

Reports for the SB 1 funding (SCCP and LPP funding) will also continue to be prepared for review by the CTC.

A formal cost, schedule, and status report are produced and reviewed monthly with agency management representing the Project Management Team (PMT). A status meeting will be held every 4-6 weeks by the Project Management Team (PMT). The PMT consists of executives from the agencies partnering to deliver the Project:

- JPA
- SMCTA;
- C/CAG
- Caltrans District 4

An Executive Steering Committee meets on a quarterly basis with representatives from:

- Caltrans District 4
- C/CAG
- SMCTA
- Metropolitan Transportation Commission (MTC)
- Santa Clara Valley Transportation Authority (VTA)
- Google
- Facebook
- Stanford University

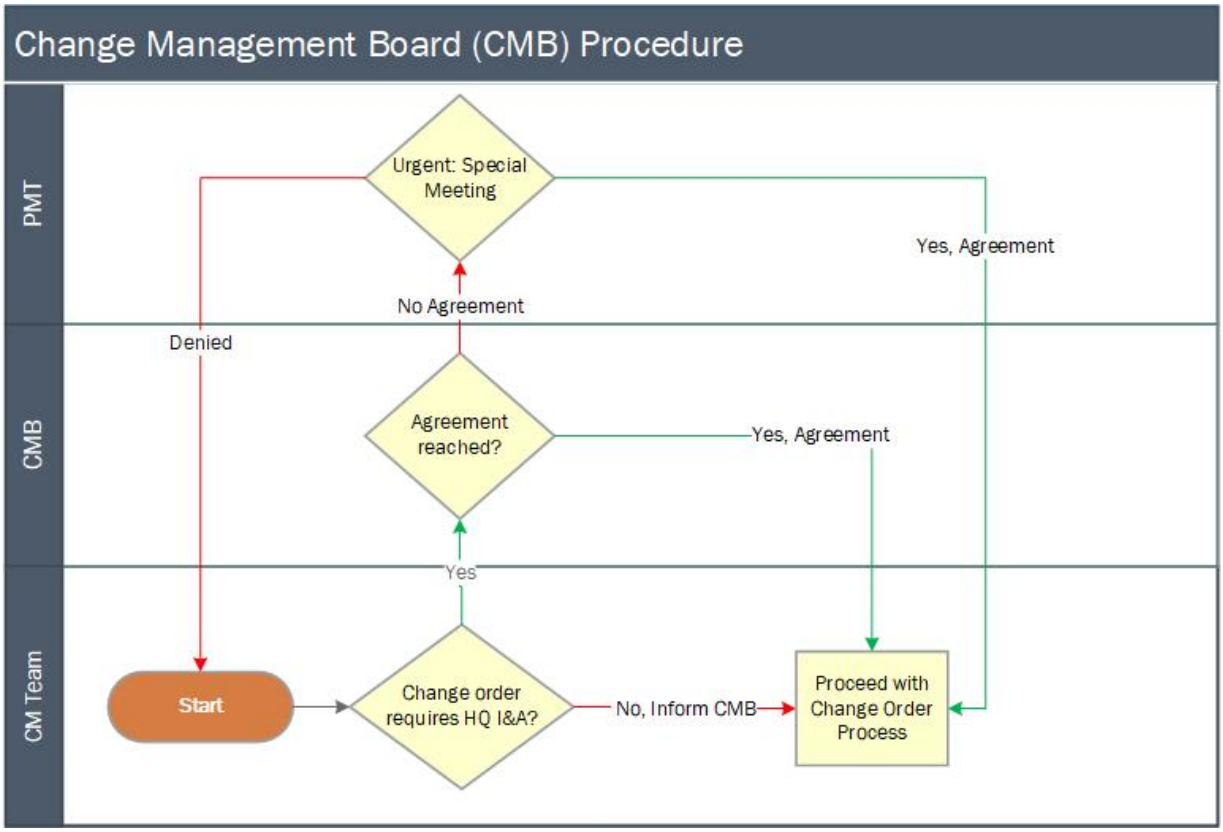
The project management structure also includes:

- Integrated Project Development Team (IPDT) (monthly through design phase)
    - Representatives from JPA, SMCTA, C/CAG, and Caltrans.
- Design Management Team (DMT) (weekly)
    - Representatives from JPA, SMCTA, C/CAG, and Caltrans
- Change Management Board (CMB) (weekly)
    - Representatives from JPA, SMCTA, C/CAG, and Caltrans

- Due to the Integrated Team approach to delivering this Project, the Project Change Management and Claims Procedures utilized will include agreed upon Project specific procedures between signatories to control changes and claims. These specific procedures will not conflict with Caltrans Standards or Manuals requirements (Exhibit 10).

- Construction Team Meeting (weekly)
  - Representatives from JPA, SMCTA, C/CAG, and Caltrans, CMGC Contractor

Exhibit 9: Change Management Board Structure



Status Meetings

The PMT representatives l attend a regular status meeting. The purpose of the meetings is to discuss costs, schedules, quality issues, compliance with federal and State requirements, and other status items with enough detail to allow all involved parties to be fully aware of the significant issues and actions planned to mitigate any adverse impacts. The project managers prepare a monthly status report for discussion at the meeting. The format of the report may change over time as the Project proceeds and new topics are identified. The monthly Project status report will include:

- Executive Summary;

- Activities and Deliverables;
- Risk Management
- Action Items/Outstanding Issues;
- Schedule Adherence;
- Cost Adherence;
- Quality Adherence; and
- Safety Summary.

Weekly Progress Meetings

Other project delivery teams conduct progress meetings on a weekly or monthly basis that will continue throughout the completion of team's tasks, until completion of construction. The purpose of these weekly meetings is to:

- Review the schedule with emphasis on a three-week look ahead;
- Provide ongoing dialogue;
- Report Project construction status;
- Identify problems encountered and proposed resolutions;
- Review and address safety issues;
- Address coordination issues with utilities or others; and
- Identify those issues or barriers to success that require immediate action or elevation to senior Project management.

Weekly meetings also identify significant issues that need to be elevated to the PMT for discussion and/or Immediate communication of progress and issues are anticipated to address adverse impacts in a timely manner. 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 BAIFA to deliver the System Integrator component of the Project.

4.C *Operation – Has the applicant presented a reasonable statement setting forth plans for operation of the facility?*

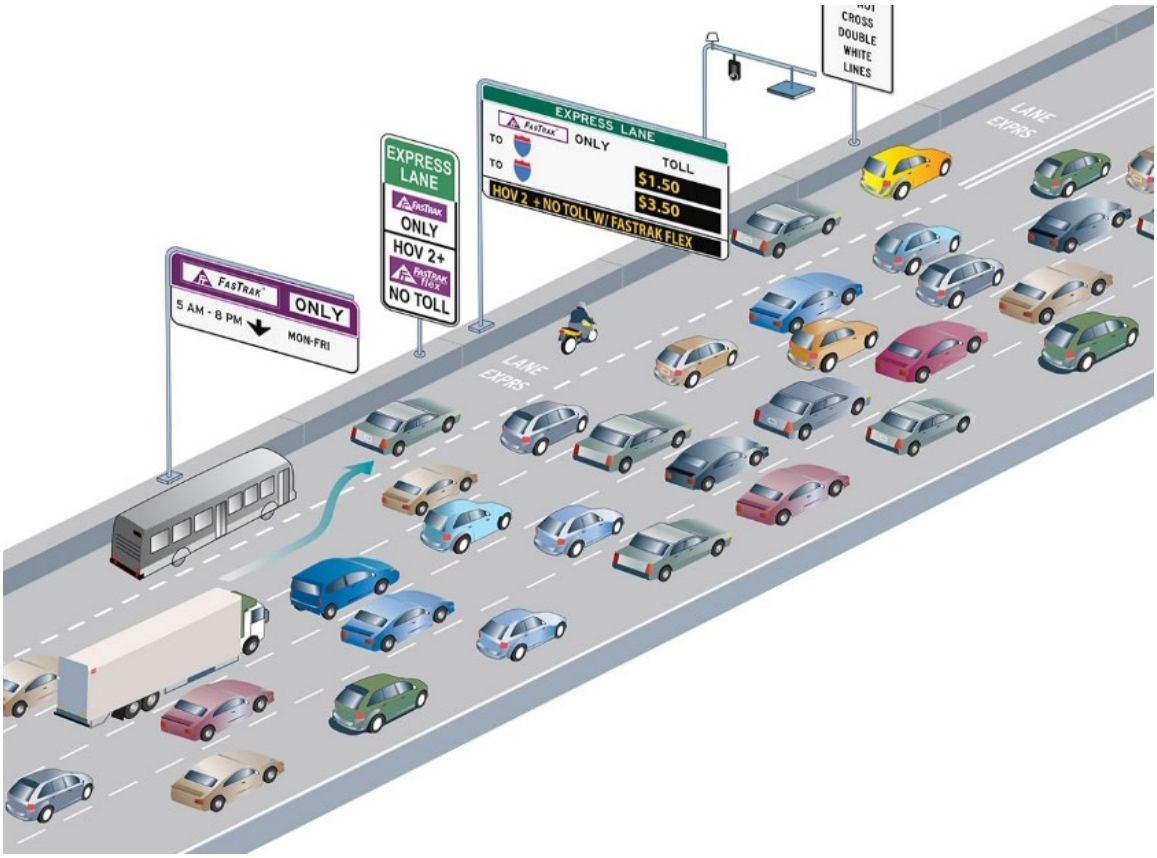
The US 101 Express Lanes access configuration will be continuous open access in both directions of US 101 with no buffers. The express lanes will be delineated by striping without ingress or egress locations.

The tolling and signage infrastructure needed to operate the US 101 Express Lanes include:

- Toll gantries (read points) includes Automatic Vehicle Identification (AVI) equipment to detect and read transponders, Automatic Vehicle Detection System (AVDS) to detect vehicles in the express lanes, Traffic Monitoring System (TMS) to provide real-time traffic data to the dynamic pricing algorithm, digital video auditing system (DVAS), Violation Enforcement System (VES) cameras in illuminated areas, and CHP numeric enforcement beacons;

- Enforcement areas at four toll gantry locations and an additional enforcement area in each direction that may not include a toll gantry;
- Signage approaching 101 Express Lane entry and exit points, including changeable message signs upstream of entry points indicating the toll amount;
- Cameras to watch ambient traffic in the express and general purpose lanes, verify toll signs, and monitor overall traffic operations; and
- Fiber optics infrastructure that will provide the communication backbone between the roadside devices and the Toll Collection System (TCS) and centralized toll operations offices.

Exhibit 10: Express Lane Access Configuration



The policies under which the US 101 Express Lanes will operate will be approved by the JPA in advance of the opening of the US 101 Express Lane. Toll policy to be considered by the JPA will involve working with other Bay Area toll system owners and operators toward regionally-consistent policies that allow seamless travel. Toll policy will include, but not be limited to HOV occupancy requirements, tolling objective (i.e. travel time minimization or revenue maximization), discounts (HOV-2, clean air vehicles), hours of operation, revenue projection, development of a financial plan to provide funds to the Project, operations, reserves, programs, and projects. The toll policy adopted by the JPA will identify those

vehicles to be afforded free and/or discounted use of the US 101 Express Lanes. The assumptions include the following toll policy elements:

Type of Tolling and Method of Determining Toll Amounts.
The US 101 Express Lanes will use dynamic pricing to manage demand from vehicles that want to pay a toll. This is to manage traffic and incidents, increase vehicle and person-throughput, reduce congestion and meet the federally mandated requirement (Title 23, Section 166 of the U.S. Code) of maintaining a minimum average speed of 45 mph, as well as to meet state requirements to maintain LOS C or LOS D (Sections 149.1 and 149.5 of Streets and Highways Code). One example of maintaining an acceptable level of service would be to display "HOV ONLY" on the variable messaging signs when the express lane exceeds capacity.

The express lane system will employ a dynamic pricing algorithm which will continuously evaluate data from traffic monitoring sensors along the express lanes network. The algorithm will use real-time traffic data to calculate and display new toll sets on the signs every five minutes (the toll interval is configurable). Toll rates will increase as congestion increases in the express lane to regulate the number of vehicles in the express lane so that traffic will remain free-flowing. Conversely, the toll rate will decrease with decreasing levels of congestion in the express lane to allow more toll paying motorists to "buy in" to take advantage of the excess capacity.

Express lane operators will have the ability to override the dynamic pricing during incidents, lane closures or otherwise as appropriate.

The US 101 Express Lanes toll system may initially use time-of-day pricing while calibrating its dynamic pricing algorithm.

Outcomes of the operation of the US 101 Express Lanes facility include:

- The primary goal of pricing will be to manage traffic, increase vehicle and person-throughput, reduce congestion and to meet State and federal performance requirements. Federal requirements mandate maintaining a minimum speed of 45 mph in the express lanes 90 percent of the time over a consecutive 180-day period.
- Other outcomes that operation of the of the US 101 Express Lanes facility include:
    - Maintain travel time savings for customers;
    - Reduce the likelihood of congestion by incentivizing traffic to travel during other hours;
    - Accommodate projected growth in travel demand;
    - Travel time reliability and;
    - Ensure that the US 101 Express Lanes generate enough revenue to cover debt obligations and operations and maintenance costs.

Toll Discounts.
The proposed express lanes facility will allow vehicles with three or more occupants (HOV 3+), emergency vehicles, motorcycles, and buses to gain access to the express lanes at no toll charge and single-occupancy vehicles (SOVs) to gain access to the express lanes at a full toll charge. No final determination has been made regarding vehicles that will travel in the US 101 Express Lanes with a reduced toll. The JPA will consider in a tolling policy a rate for HOV 2s (vehicles with two occupants) and

Clean Air Vehicles (CAVs) that meet specified emission standards with a DMV-issued decal to gain access to the express lanes at a reduced toll charge. A toll policy to be adopted by the JPA will identify those vehicles to be afforded free and/or discounted use of the US 101 Express Lanes. Requirements of state law with respect to free use of the US 101 Express Lanes by CAV decal vehicles will be met by JPA's toll policy. The JPA will consider and work with other Bay Area toll operators toward regionally-consistent toll discount policies to ease customer communication and reduce confusion.

Maximum Optimal Throughput Volume in the US 101 Express Lanes.
During peak periods of traffic congestion, the volume of traffic using the US 101 Express Lanes will be managed to maintain free flow speeds and minimize congestion in the US 101 Express Lanes. This will be accomplished by optimizing traffic volume and flow rate in the US 101 Express Lanes using dynamic pricing as described above.

The JPA will contract with BAIFA for services to support the US 101 Express Lane. Information about the agency and the functions they will perform related to the US 101 Express Lanes are detailed below.

Bay Area Infrastructure Financing Authority (BAIFA)
BAIFA is a joint exercise of powers agency formed by MTC and BATA to plan, develop, operate and finance transportation and related projects, including express lanes. On April 24, 2013 MTC entered into a cooperative agreement with BAIFA through which MTC delegated authority to BAIFA to develop and operate the 270-mile MTC Express Lanes system.

Similar to the relationship with MTC, BAIFA will operate the US 101 Express Lanes with delegated authority (through a contractual agreement) from the JPA to perform the following express lane roles for the US 101 Express Lane:

- Operate the toll system.
- Oversee daily operations of the express lanes.
- Maintain toll equipment.
- Monitor and report on express lane performance.
- Provide enforcement tools to the CHP.
- Perform marketing and public outreach for the express lanes.
- Protect personal identifiable information (PII).

Through the JPA contract with BAIFA, the Bay Area Toll Authority (BATA) will also provide services to support the US 101 Express Lane

BATA was created by the California Legislature in 1997 to administer the bridge tolls on the San Francisco Bay Area's seven state-owned toll bridges. In August 2005, the California Legislature expanded BATA's responsibilities to include administration of all toll revenue and joint oversight of the toll bridge construction program with Caltrans and the CTC.

BATA's express lane roles include:

- Operate the Regional Customer Service Center (RCSC) including:
  - Manage FasTrak® customer accounts, protect PII, and provide general customer service.

- Collect express lane tolls from FasTrak® customer accounts based upon trip transaction records from express lane operators.
- Reverse tolls in the event that express lane operating conditions are impacted during an incident.
- Issue toll violation notices.
- Track, inventory, and distribute FasTrak®/FasTrak Flex® toll tags to customer service outlets.
- Operate, support and maintain FasTrak® back office operations (e.g., trip records, revenue and account information).
- Provide marketing of the express lanes along with other FasTrak® marketing.
- Administer and distribute toll revenue to the express lanes agencies.
- Establish interface with credit and debit card processing and banking services.
- Establish interface with DMV for processing license plate reads and matching with registered vehicle owner.
- Administer toll revenue generated by the region's seven state-owned toll bridges, including any express lane operations at the bridge approaches and toll plazas.

Methods of Toll Collection.

The US 101 Express Lanes toll system will be developed in accordance with the specifications detailed in California Code of Regulations. It will be compatible with the regional toll network operated in the Bay Area using the FasTrak® service mark. The prevailing toll will automatically be debited from the prepaid account associated with the toll tag account detected by the toll system. A FasTrak® account may be established through BATA (under contract to the JPA's facility operations contractor) or through another California toll agency.

All vehicles using the US 101 Express Lanes will be required to use a California Title 21 transponder, even if not subject to a toll. (FasTrak® is the trademarked California Title 21 interoperable transponder, Title 21 is explained below.) A transponder is a radio frequency identification unit that transmits a signal to a roadside or overhead reader. Each transponder transmits a unique signal that uniquely identifies the transponder unit. Transponders may be equipped with a switch that motorists will utilize to declare their vehicle occupancy. The position of the switch will be used to assess the correct toll amount based on HOV occupancy status.

Exhibit 11: FasTrak® Flex Toll Tag

Toll exempt vehicles (those not paying any toll) include those with a FasTrak Flex® toll tag toggled to "3+" if they have 3 or more passengers. A discounted rate may be charged to FasTrak Flex®-equipped vehicles toggled to "2" to represent a vehicle with two occupants. Full toll rates are charged to FasTrak Flex®-equipped vehicles without any declaration or classification of discount eligibility. Drivers with older non-switchable toll tags will be charged full toll rates. When the system detects a vehicle without a tag or an invalid tag at a toll point, the system's cameras capture pictures of the vehicle's license plate. If the license plate image is successfully matched to a FasTrak® account, then the toll amount will be applied to the user's account. If the license plate image is not matched, it will be further processed as a potential toll violator.

The US 101 Express Lanes will read legacy Title 21 tags as well as the newly-adopted standard issued 6C tags which are anticipated to be in circulation before the US 101 Express Lanes are open for use. California's Office of Administrative Law has established 6C as the State of California's official ETC protocol on January 1, 2019. The regulations will require a complete phase-out of the existing Title 21 protocol used by the state's FasTrak® system by January 1, 2024.

The US 101 Express Lane will use a segment and zone system. Segment pricing is a combination of zone pricing and end-to-end pricing. On longer corridors (such as the Project), segments are defined so that the prices are guaranteed for travel to intermediate destinations instead of the end of the facility. Like the limits established for toll zones, the intermediate destinations chosen to define the limits of pricing segments will take into consideration the ability of the segment toll to effectively manage demand within the segment, with the limits chosen to reflect important destinations within the corridor. In the example in Exhibit 12, two segments are defined; Segment 1 is defined to include Zone 1 and Zone 2 and allows the price to travel to Destination B to be displayed within the first segment and the price to travel to Destination D to be displayed within the second segment. This strategy allows customers to see prices to travel to destinations that are further than one zone away but also preserves flexibility to manage demand. It should also be noted that segment pricing may look and function the same as end-to-end pricing for corridors that have a single segment. Because there is continuous access along the US 101 Express Lanes, a toll will be collected for use of each toll zone of the US 101 Express Lanes. The toll rate in effect for each defined zone will be charged to any vehicle entering the express lane anywhere within

the limits of the zone, regardless of how far the vehicle travels in the zone, or how many toll points the vehicle passes under while in the zone. Zones may include multiple toll points. The large number of toll points will minimize opportunities to avoid tolls with weaving movements in and out of the Express Lanes. Once a driver decides to use any portion of an Express Lane zone, they have chosen to pay the toll for the use of that entire zone. The toll rate for a given zone will be locked in for a vehicle once it has been detected in the first toll point within the zone and will not have to pay a higher toll if the toll rate were to increase while traveling between toll points within a zone.

Exhibit 12 - Example of Express Lane Zone and Segment Pricing Concepts

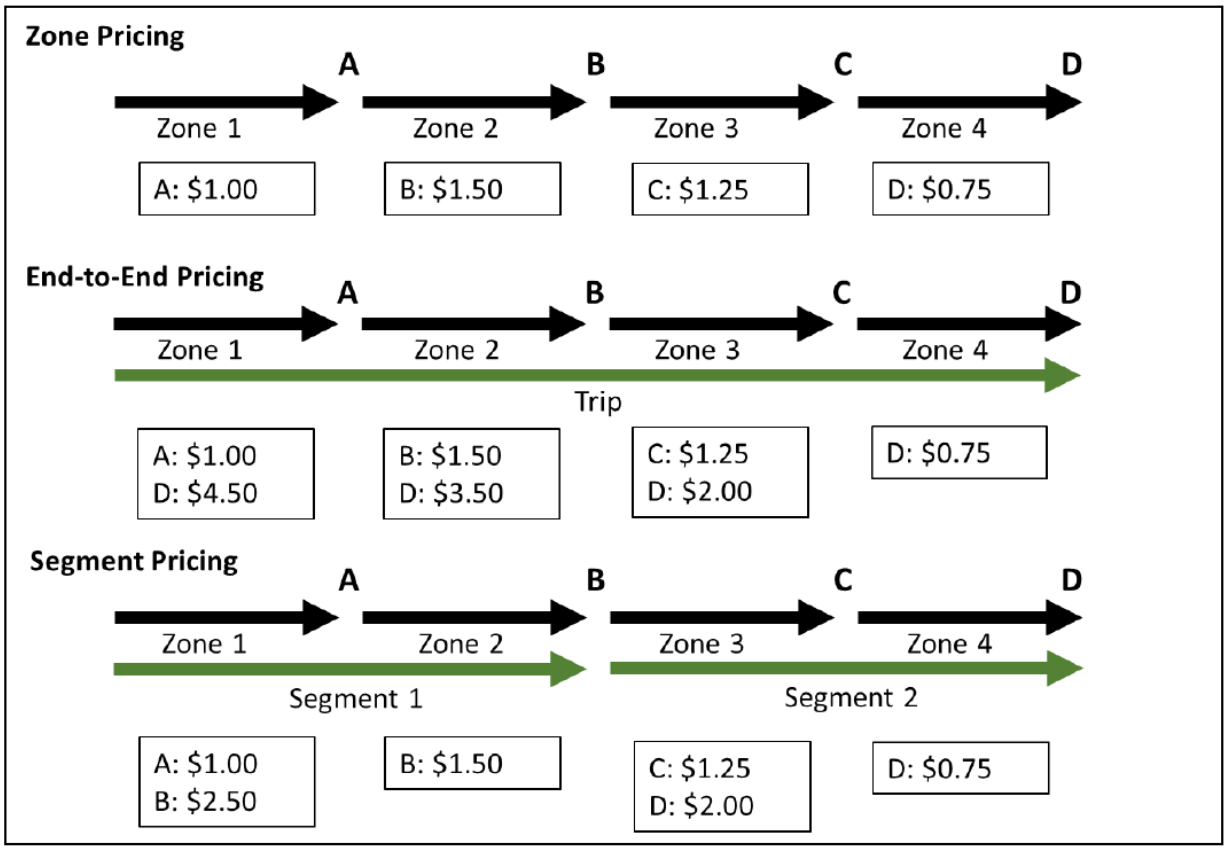
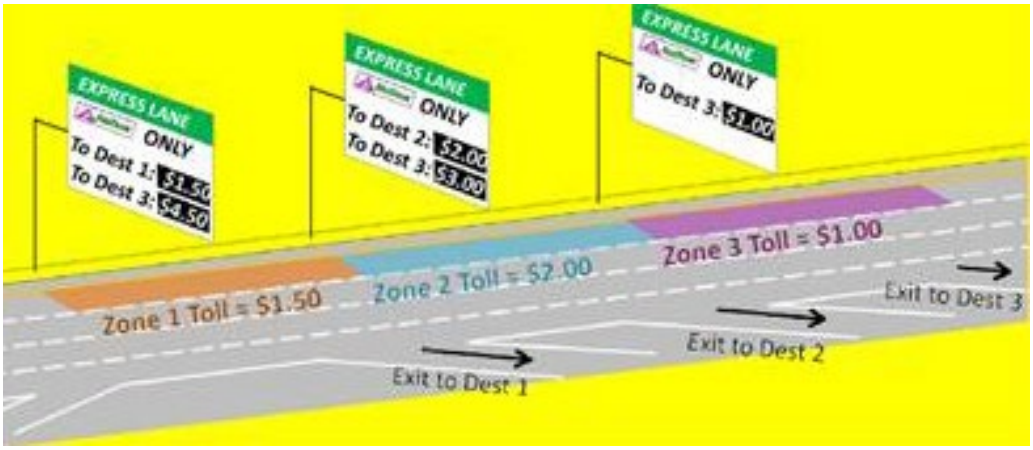


Exhibit 13 - Example of Zone-Based Pricing and Signing Within a Toll Segment



The beginning and end of pricing zones is based on logical termini determined via analysis of traffic patterns along the corridor and somewhat consistent traffic patterns and characteristics within each zone. As a vehicle will traverse multiple zones, the toll system will bundle the data from all those toll zones into one trip transaction.

Because the pricing can change every five minutes, it is desirable to provide as much consistency as possible in the presentation of information to the driver, to aide a driver's ability to quickly understand changed circumstances no matter what Bay Area express lane facility they are using. The US 101 Express Lane will have:

- The corridor segmented into zones for the purposes of tolling,
- Each zone will have its own toll rate that changes based on traffic conditions,
- Priced destination signs will show toll rates in a further downstream destination and tolls shown on the same priced destination signs will not be additive (i.e., the price to the furthest downstream location is inclusive of the price to the end of the current zone).
- The price to travel within a zone is independent of the distance traveled in the zone, or where the driver enters the zone.

Methods of Toll Enforcement.

Ensuring that each motorist pays the correct toll and minimizing toll evasion are essential to operation of the US 101 Express Lanes. A toll violation occurs when a vehicle passes through a toll zone but does not have a valid FasTrak® account. Toll violation enforcement is primarily an automated task. The field detection system will capture images of all vehicle license plates. If there is no toll tag detected, the license plate images will be compiled into a trip before being sent to the Regional Customer Service Center (RCSC, provided through the JPA contract with BAIFA and will utilize the existing RCSC facility and resources) for toll payment processing. At the RCSC, the license number will be cross-checked against valid accounts. If the plate is associated with a valid account, the account is charged the toll at the time of the transaction. If the plate is not associated with a valid account, a toll violation will be issued to the registered owner of the vehicle although the driver of the vehicle is ultimately responsible for payment according to statute. If the amount goes unpaid a notification will be referred to DMV to withhold vehicle registration until the amount is paid.

The violation will be processed in the same manner as any FasTrak® toll violation. Prior to the opening of the Project, the JPA will approve a toll facility ordinance to establish tolls and a toll collection process, to establish civil penalties for the evasion of those tolls or noncompliance with other policies set forth in this ordinance, and to establish a program that addresses how motorists can enroll and participate in the toll facility program. The JPA will consider the policies of other Express Lane operators in the region in this process. The toll ordinance is anticipated to address: amount of time to respond to a toll violation notice, amount of penalty, consideration of waiving of penalty for first time violators that sign up for a FasTrak® account, amount of second notice penalty, and additional penalties and fees after the second notice that could lead to withholding the vehicle registration. Instructions for contesting a violation would be provided with any violation notice. The JPA will consider and work with other Bay Area toll operators toward regionally-consistent toll ordinance policies to ease customer communication and reduce confusion.

CHP employs several operational strategies to enforce express lane compliance. One of those strategies utilizes CHP-vehicle median observation areas. This design approach was developed by Bay Area express lane operators working with Caltrans and CHP. The Project will include median observation areas, with adequate space for larger CHP vehicles to be located behind protective barrier at a raised elevation. Observation areas are wider median areas where CHP can observe express lane patrons to ensure compliance with express lane eligibility requirements. Observation areas will be strategically located to allow CHP to easily view enforcement beacons. The raised elevation of the observation area improves visibility for CHP officers towards the express lanes as well as the numeric beacons identifying the vehicle occupancy as declared by the vehicle's toll tag. The raised area facilitates a more rapid response out of the observation areas when needed. The raised elevation also increases visibility of the CHP vehicles from the express lanes, to deter potential violators.

To assist CHP with enforcement of HOV occupancy requirements, the JPA will be able to provide a web portal through which CHP can access toll tag data for vehicles using the US 101 Express Lanes (through the BAIFA operations contract). The portal and look-up tools can be accessed by CHP officers via in-vehicle computers, smartphones and desktop computers for express lanes enforcement purposes only. The look-up tool provides CHP with real-time information about the declared occupancy of the vehicle according to the toll tag switch setting for up to the last five read points in the last thirty minutes. If CHP issues an occupancy violation citation, they can associate the citation number with the look-up query.

Hours of Operation.

Caltrans will set the hours of operation for the HOV Lane. In working with Caltrans, as through the project development process, it is anticipated that the US 101 Express Lane will operate consistent with other BAIFA managed express lane corridors in the Bay Area, typically from 5 am to 8 pm Monday through Friday. Outside of the hours of operation or during incidents, a message such as "OPEN TO ALL" or "NO TOLL" will be displayed next to the destinations on pricing signs. This will inform drivers that the express lanes are permitted to be used by all vehicles without paying a toll, except for those vehicles prohibited from using the lane as per the vehicle code. It is expected that the JPA will approve an operations policy, consistent with the CHP and Caltrans incident management policies, to define the parameters for the transfer of operations decisions for the Express Lane in the event of an incident.

Intermediate Access.
The US 101 Express Lanes access configuration will be continuous open access in both directions of US 101 with no buffers and will have no intermediate ingress or egress locations.

Account and Violation Fees.
It is expected that the JPA will approve a policy that account and violations fee structures will be the same as currently exist on other BAIFA managed Express Lanes in the region. The toll system will be designed for flexibility - allowing pay-by-plate accounts, enforcement of toll violations, while enabling the toll operator to set and enforce toll policies in a uniform manner. Uniformity and consistency are needed for responsive customer service and public acceptance of express lane pricing.

Truck Access.
Sections 22348 and 22406 of the California Vehicle Code restrict vehicles such as those pulling trailers, large trucks and other vehicles subject to a 55-mph speed limit to the right most lanes of traffic, thereby precluding them from using HOV and express lanes regardless of vehicle occupancy.

Additional Aspects of the Plan for Operations.
If the CHP determines the need, based on field conditions, it dispatches Freeway Service Patrol (FSP) support to an incident. FSP drivers patrol the Bay Area freeways (including the US 101 corridor) during hours of peak congestion, providing response to incidents including clearing of debris, towing and minor auto repairs. Each of the major freeways in the Bay Area has a schedule and allocation of FSP resources based on historical data regarding the average number of incidents for the corridor. The existing FSP resources for each of the express lane corridors will be reviewed on a case-by-case basis to determine the adequacy to address the operational needs of the express lanes. Additional FSP resources will be identified if necessary.

US 101 Express Lane operations will be carried out in cooperation with the Caltrans District 4 Traffic Management Center (TMC).

Concept of Operations Report
A Draft Concept of Operations document for the 101 Express Lanes has been prepared and submitted to FHWA as required with the approval of the document anticipated in August 2019. The Concept of Operations includes substantial detail regarding all the systems necessary to construct, operate, and maintain the 101 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?*

The Project is on the National Highway System and the FHWA has been involved in the Project. The Project is defined as a Project of Division Interest (PoDI). FHWA will perform full oversight of the Project as defined in the Project Oversight Agreement executed between SMCTA, C/CAG, Caltrans and FHWA in September 17, 2018. FHWA approval actions are required for the Major Project deliverables and other documents required by FHWA and includes the FHWA role in the CMGC contract.

FHWA has assigned a Project Oversight Manager from its Sacramento Division office. The Project Oversight Manager will provide or facilitate all FHWA actions and approvals with oversight from the FHWA Division office and assistance of other FHWA personnel. The Project Oversight Manager will be responsible for oversight of the local agency administration of the Project.

FHWA will perform oversight through inspections, review of data, and various other means, including audits and independent testing. The United States Department of Transportation Office of Inspector General may also perform 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?*

The JPA will have responsibilities to implement and maintain the system, including implementation of the express lane toll collection system and to administer a value pricing (dynamic pricing) program for express lanes. Specifically, the JPA will be responsible for:

- Operations and maintenance for any devices installed for the US 101 Express Lane exclusively needed for the system;
- Establishing dynamic pricing program business rules and account policies, including setting the amount of express lane tolls; and
- Collecting tolls in accordance with the business rules and account policies.
- Perform marketing and public outreach for the express lanes.

The JPA will enter into an agreement with BAIFA for toll system maintenance and with Caltrans regarding maintenance of the civil infrastructure component of the US 101 Express Lane facility (i.e. component that is not the tolling system). The agreement will address the operations and maintenance plan and define assumptions and responsibilities during the operational phase of the project as well as the liabilities and responsibilities of each party.

Toll System Maintenance

The JPA will contract with BAIFA (a joint exercise of powers agency that includes MTC as a member agency) to operate the US 101 Express Lanes (through a contractual agreement). BAIFA is currently providing operations for other express lane facilities in the Bay Area.

BAIFA will perform the following express lane roles for the San Mateo Express Lanes:

- Operate the express lane toll system.
- Oversee daily operations of the express lanes.
- Maintain toll equipment.
- Monitor and report on express lane performance.
- Provide enforcement tools to the CHP.
- In coordination with JPA, perform marketing and public outreach for the express lanes (i.e. FasTrak® related).
- Protect personal identifiable information (PII).

The maintenance agreement between the JPA and BAIFA will satisfy several toll related responsibilities that are anticipated to be required in a maintenance agreement between the JPA and Caltrans such as:

- Responsibilities to maintain the express lane tolling system;
- Operations and maintenance for any devices installed for the US 101 Express Lane;
- Implement dynamic pricing program business rules and account policies of the JPA; and
- Collecting tolls from FasTrak® customers in accordance with the business rules and account policies.

Through the JPA contractual agreement with BAIFA, the Bay Area Toll Authority (BATA) will also provide services to support the San Mateo Express Lane. This will provide efficiencies as the JPA will be able to utilize facilities and systems that are already in place, such as the Regional Customer Service Center (RCSC).

BATA's express lane roles will include operating the RCSC including:

- Manage FasTrak® customer accounts, protect PII, and provide general customer service.
- Collect express lane tolls from FasTrak® customer accounts based upon trip transaction records from express lane operators.
- Reverse tolls in the event that express lane operating conditions are impacted during an incident.
- Issue toll violation notices.
- Track, inventory, and distribute FasTrak® toll tags to customer service outlets.
- Operate, support and maintain FasTrak® back office operations (e.g., trip records, revenue and account information).
- Provide marketing of the express lanes along with other FasTrak® marketing.
- Administer and distribute express lane toll revenue to the JPA.
- Establish interface with credit and debit card processing and banking services.
- Establish interface with DMV for processing license plate reads and matching with registered vehicle owner.

<u>San Mateo Express Lanes Roadway Facility Maintenance Agreement</u>

The JPA will also be expected to enter into a maintenance agreement with Caltrans for maintenance of Project roadway facilities. It is expected that this agreement will address:

provisions for roadway maintenance which can include shoulders, concrete barrier, temporary facilities, CHP observation areas, vehicle pads, road surface treatments, structures, signage, guardrails, lighting, loop detectors and other related equipment.

- Reimbursement of Caltrans routine roadway maintenance costs, traffic operations costs and the operations, maintenance and rehabilitation projects costs.
- Reimbursement of Caltrans for costs of other items of work requested by JPA and agreed to by Caltrans.
- Standards and practices expected to be maintained (i.e. the Caltrans Maintenance Manual).
- Items not expected to be the responsibility of the JPA such as drainage.

- Defining the JPA responsibility for share of maintenance and rehabilitation projects, with the cost based on the number of lanes carrying traffic in the express lanes as a proportion of all lanes carrying traffic on the freeway.

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?*

Construction

The Project's cost estimate is based on the substantial completion of project development work to date including the PS&E phase for the Southern Segment with the construction phase underway. The PS&E phase of the Northern Segment is beyond 65 percent with a target completion for 100% PS&E Submittal of 9/3/19 and Ready To List (RTL) requirements completed by 9/20/19. Many risk factor reductions have been accounted for in the cost estimate based on the level of project development completed. The total Project cost estimate is $514.3 million.

The identified funds have been programmed, committed and/or allocated to the Project. Caltrans has allocated and awarded the Southern Segment Civil construction contract. The Northern Segment Civil Construction contract and the System Integrator services contract will be completed later in 2019 as well (Project schedule is further detailed in Part B Section Part 4B). The cost estimate includes Project construction cost and consideration of items such as escalation to year of expenditure, program management, public awareness & outreach. The funding plan includes a construction phase contingency representing about 9.25% of the capital outlay costs.

Exhibit 14. Project Capital Funding

(all amounts in thousands of $)

F/S/L*	Source	Project Development	ROW	Construction	Total
L	SMCTA Measure A	27,950	1,000	1,550	30,500
S	STIP - RIP		16,000	17,500	33,500
F	Federal Earmark (repurposed to Project)	9,500			9,500
L	Private Sector	3,000		50,000	53,000
S	SCCP (SB1)			200,000	200,000
L	Regional Toll Funds			95,000	95,000
F	ITIP	18,000			18,000
S	LPP (Formula) (SB-1)	1,550		250	1,800
S	LPP (Competitive) (SB-1)			20,000	20,000
L	JPA (Toll Revenue / Others)			53,000	53,000
TOTAL PROGRAMMED/COMMITTED		**60,000**	**17,000**	**437,300**	**514,300**

* F – federal funding source
S – state funding source
L – local funding source

- Project Approval and Environmental Document (PA&ED) was funded by a combination of federal (Federal Repurposing Earmark - $9.5M), SB-1 LPP Formula ($1.55M) and local funding (San Mateo County Transportation Measure and private sector contributions facilitated by San Mateo County Economic Development Association (SAMCEDA) – $8.5M and $3.0M, respectively).
- Design (PS&E) has been funded by State Transportation Improvement Program (STIP) (Interregional Transportation Improvement Program [ITIP] – $18.0M) and local funding (San Mateo County Transportation Measure - $19.45M).
- ROW Capital and Support is funded by STIP (Regional Transportation Improvement Program [RTIP] – $16.0M) and local funding (San Mateo County Transportation Measure – $1.0M).
- Construction Capital and Support funding includes SB 1 State Local Partnership Program (Competitive $20.0M), SB 1 State Local Partnership Program (Formula $.25M), SB 1 Solutions for Congested Corridors Program ($200.0M), STIP (RTIP – $17.5M), and local funding (San Mateo County Transportation Measure - 1.55M, Regional toll revenues – $95.0M, San Mateo County tolls/others – $53.0M and private sector contributions facilitated by SAMCEDA – $50.0M). Construction Capital includes civil construction and toll system equipment/software/system integration
- The Construction phase JPA (Toll Revenue / Others) revenue of $53 million is proposed to be funded with SMCTA Measure A sales tax funds or other local funds to construct the Project, with anticipated future excess revenue toll revenue funds to be used to reimburse the SMCTA for the funds expended on the Project construction. The identification and amount of reimbursement by year will be addressed in future expenditure plans for excess revenue as defined in statute.

Operations

The US 101 Express Lane facility is projected to collect about $29.4 million in Annual Gross Revenue. The revenue projection is based on assumptions that include HOV 3+ will use the lane with no toll, HOV 2 and Clean Air Vehicles (CAV) will be half priced, the facility operating hours will be from 5 a.m. to 8 p.m., and the maximum toll rate will not exceed $3 per mile. Revenue collected in the initial period of operation is assumed to be discounted based on the phased opening of the facility and an initial period for the public to become acquainted with the facility and its operational characteristics. These assumptions are also consistent with toll policy of other Bay Area toll system owners and operators in the Bay Area region and will support the JPA in ultimately approving a toll policy that is regionally-consistent and that will allow seamless travel in the Bay Area region.

Funding of the initial operation, before toll revenues are collected and/or enough to support operations, will be provided for by the JPA partners SMCTA and C/CAG. SMCTA and C/CAG expect that future toll revenues generated from the express lanes will be used to reimburse funding advances made by SMCTA and C/CAG. Exact reimbursement schedule will be negotiated amongst the parties.

The JPA will develop and implement an expenditure plan for the toll revenues. The annual cost of the US 101 Managed Express Lane facility is projected to cost approximately per year. Annual costs to operate the Project will include a customer service center, operations staff, operations contractor for O&M, roadway maintenance, funds for reserves for future rehabilitation costs, and CHP enforcement.

Exhibit 15: US 101 Express Lanes - Annual Operations Cost

	Annual Totals ($ x million)
PROJECTED REVENUE COLLECTION	**29.4**
EXPENSES	
Customer Service Center (Includes processing transactions and violations)	8.0
Operations Staffing Costs	1.2
Operations Contractor - O&M Costs	2.9
Roadway Maintenance Costs	2.6
Contribution to Future Rehabilitation and Reserves	2.0
CHP Enforcement in Field	1.3
Contingency (10% of annual operating expense)	1.8
TOTAL ANNUAL EXPENSES	**19.8**
APPROXIMATE NET REVENUE	**9.6**

Note: Expense projections are based on the costs associated with the JPA contracting with BAIFA to operate the US 101 Express Lane.

The JPA will determine how to invest any net excess toll revenues generated in the US 101 Express Lane for items that could include programs, projects and equity programs (within the parameters defined in Section 149.7 of the Streets and Highways Code). BAIFA provides operations services for other Express Lanes in the Bay Area, with the above services for the Project proposing to incrementally add the existing services already being provided by BAIFA for the other Express Lane facilities. For instance, the Project is proposed to incur expenses for the existing Regional Operations Center staffing and operations performed by BAIFA based on the lane miles included in the Project relative to the lane miles of other express lane facilities operated by BAIFA. The use of any net toll revenues will be discussed in the following section (Part B Section 5B).

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?*

Expenditure of revenue generated on the US 101 Express Lanes will be subject to an expenditure plan developed by the JPA. The JPA, as the owner of the facility, will assume liability for the express lanes, and ensure sufficient funding for the routine maintenance, operation, rehabilitation and replacement of express lanes infrastructure (to be funded by toll revenue when possible). The JPA, in consultation with Caltrans and BAIFA (as the agency contracted to operate the Project), will define and identify the needs to be addressed in the expenditure plan to address ongoing operations and maintenance costs. The JPA will also develop and implement an expenditure plan for any net excess revenues generated. Net excess revenues could be used for other projects or programs that maintain or improve the safety, operation, or travel reliability for any transportation mode in the Corridor or provide or improve travel options in the corridor. Net excess revenue could be used to fund an equity program, should the JPA wish to pursue one. The JPA will also be responsible for any existing or future debt service, securing funding, loans or financing, including for any future improvements or extensions of the express lanes.

Additional details with respect to net excess revenues will be included in the expenditure plan guidelines adopted by the JPA for excess revenues as required under AB 194 prior to the opening of the Project.

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 Project is consistent with city, county, and regional plans.

Caltrans District 4 in coordination with the Metropolitan Transportation Commission (MTC), the Santa Clara Valley Transportation Authority (VTA), the City/County Association of Governments of San Mateo County (C/CAG), the San Mateo County Transportation Authority (SMCTA), the San Mateo County Transit District (SamTrans), and the San Francisco County Transportation Authority (SFCTA) have developed a Comprehensive Corridor Plan (CCP) for the US 101 South Corridor (Corridor). The Corridor

limits on US 101 extend from the end of the Central Freeway in San Francisco to the San Benito/Santa Clara County line. It also includes I-280 from the US 101/I-280 Interchange to the end of I-280 in Downtown San Francisco and SR 85 segments connecting to US 101 in Santa Clara County. The proposed Project which is the subject of this application covers only a portion of the CCP limits.

The US 101 South CCP establishes seven goals for the Corridor and identifies associated performance metrics. It provides an overview of demographics and land uses within the Corridor as well as discusses communities of concern and environmental considerations including sea level rise. It describes the multimodal transportation system that includes public transit services, Park and Ride facilities, private commuter shuttle services and active transportation facilities. It summarizes the Transportation Systems Management and Operations (TSMO) strategies and equipment that are currently deployed within the Corridor and examines the networks and major trip generators for freight movement. For freeway analysis, the CCP focuses on existing conditions and projected future conditions using several performance measures. The CCP includes recommended multimodal projects and provides an evaluation of how short-term highway and transit projects help meet the Corridor goals. The Project is among the recommended short-term projects that performed well in the evaluation.

The MTC Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), also referred to as Plan Bay Area 2040, includes the Project as follows: 17-06-0007; "Modify existing lanes on U.S. 101 to accommodate a managed lane" (approved July 26, 2017). The Project is part of the MTC HOV Master Plan, and the Bay Area Express Lanes network as described in the Bay Area High-Occupancy/Toll (HOT) Network Study Final Report. In addition to including the proposed Project in the RTP/SCS, the Plan Bay Area 2040 includes the continued development of a Regional Express Lane Network for the region.

The C/CAG includes the Project "Modify existing lanes on U.S. 101 to accommodate HOV/T lane" in the Countywide Transportation Plan 2040 (approved February 9, 2017)[8]. The plan identifies implementing express lanes on US 101 throughout the county as a way to encourage commuters to carpool or use transit services that would make use of the lanes and as a way to allow a pricing mechanism to manage the performance of the lanes and provide revenues for further improvement to the corridor.

The SMCTA Strategic Plan 2014-2019 (adopted December 4, 2014)[9] includes extending HOV lanes from Redwood City to San Bruno, which will be included in the proposed Project (SMCTA 2014).

The Final EIR/EA for the Project includes an evaluation of local, county, and regional plans and their consistency with the Project. (The Final EIR/EA is included in electronic media form with this application) Table 2.1.2-1 of the Final EIR/EA identifies applicable goals, policies, and objectives of plans covering the Cities of South San Francisco, Millbrae, Burlingame, San Mateo, Foster City, Belmont, San Carlos, Redwood City, Menlo Park, East Palo Alto, and Palo Alto, the County of San Mateo and Santa Clara. The Final EIR/EA concludes that the local agency "plans generally focus on improving local circulation while encouraging multi-modal transportation." While "None (1) of the plans specifically evaluate or reference the proposed Project."

[8] http://ccag.ca.gov/wp-content/uploads/2014/05/SMCTP-2040-FINAL_.pdf
[9] http://www.smcta.com/Assets/_Public+Affairs/Government+Affairs/pdf/Final+TA+Strategic+Plan+2014-2019.pdf

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?*

Traffic is currently diverting onto local adjacent and parallel arterials due to the poor performance of the US 101 corridor. The Project explicitly considered potential additional diversions of vehicles onto adjacent routes that could lead to congestion, safety problems, and infrastructure damage due to the tolls on the express lanes and concluded that the opposite will occur; the Project will encourage travelers to use US 101 over longer parallel routes such as El Camino Real and I-280. Through the project development process, travel modeling was conducted to project Vehicle Miles Traveled (VMT) on two levels, with modeling that focused on how the specific US 101 facility will operate as well as how all trips will occur across the entire transportation network in the area (i.e. US 101 as well as all other facilities including I-280 and El Camino Real). When modeling the US 101 facility on a stand-alone basis, VMT for the Project reflects an increase, based on the specific improvements that the Project will construct that will facilitate a higher volume of vehicles on the US 101 facility. By improving the operations of the US 101 facility, vehicles diverting to local streets to attempt to navigate around congestion points will be reduced. It also noted that the Project will accommodate more of the planned future growth in the Project corridor than the No Build Alternative.

The Project does not impact local and regional pedestrian and bicycle facilities. There are existing pedestrian/bicycle overcrossings at Broadway (Burlingame), Monte Diablo Avenue (San Mateo), Marine Parkway (Belmont), Bayfront Trail (Menlo Park), and Embarcadero Road overcrossing at Oregon Expressway (Palo Alto) that are not impacted by the US 101 Express Lane Project.

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. As explained more fully in the Final EIR/EA, the Project will:

- Create new HOV lane from Whipple Avenue to north of I-380, connecting with the existing lane south of Whipple extending into Santa Clara County (to SR 237) and creating more than 50 miles of continuous HOV lanes in the northbound and southbound directions;
- Carry up to 58 percent more HOVs and buses (2040 No-Build vs Build scenario);
- Increase person throughput by up to 20 percent in 2020 and up to 18 percent in 2040 compared to the No Build Alternative, therefore, more people will be able to move through the Project corridor in the same amount of time when compared to the No Build Alternative;
- Reduce travel time by up to 68 percent in 2020 and by up to 79 percent in 2040 compared with the HOV lane or general purpose lane in the No Build;
- Provide tolling and monitoring technology with the Build Alternative that will allow congestion to be managed to increase travel time reliability and maximum throughput during the periods of congestion;
- Travelers in the northbound or southbound general purpose lanes will generally experience travel time savings with the Build Alternative in both 2020 and 2040 AM and PM peaks;

- With the No Build Alternative, congestion will continue to increase in the general purpose lanes, but travelers will not have an option to reduce travel times;
- Provide travelers the ability to carpool, take transit, or pay to use the express lanes during periods of excess capacity in order to decrease travel time through the Project corridor.

Traffic in the US 101 Express Lanes will be managed to maintain and optimize the 45-mile per hour criteria set by the FHWA. The US 101 Express Lanes represent a traffic management tool deployed to enhance mobility along the Project corridor by providing motorists with the ability to choose to pay for an uncongested trip at free flow speeds as a dependable alternative to congestion expected in the general purpose lanes even with mainline freeway improvements.

To safeguard the quality of life throughout Northern California and ensure the economic productivity, the Project will increase the throughput of the freeway mainline and interchanges to reduce congestion and ensure the efficient flow of goods on one of the California's most heavily congested corridors. Moreover, the addition of tolled 101 express lanes will support regional economic competitiveness by supporting reliable and timely access to employment centers, educational opportunities, services, and other basic worker needs, as well as improved business access to markets. Businesses along the corridor account for 14 percent of California's Gross Domestic Product (GDP), 20 percent of the State's tax revenue, 54 percent of all patents in California, and provide 1.6 million jobs.

The US 101 corridor in the Project area is an essential part of the National Highway System, and an integral part of the FHWA's Primary Freight Network. It is a major south-north connector between Silicon Valley and San Francisco, two of the Bay Area's significant economic centers and a primary connection between the San Jose International Airport, the San Francisco International Airport, and the Port of Redwood City. The corridor is home to over three million people and companies that contribute to both the State and National economies. Along the US 101 corridor, an estimated $5.4 billion in economic productivity is lost each year due to traffic congestion, and the average delay per person has reached sixty-seven (67) hours per year

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 have been completed with Finding of No Significant Impact (FONSI). A joint CEQA/NEPA final document (Final EIR/EA) was prepared and approved on October 30, 2018 and published in the *Federal Register* (on December 11, 2018). A Notice of Determination was signed on October 31, 2018 and published by the State Clearinghouse. The California Transportation Commission approved resolution E-18-166 for future consideration of funding the Project in December 2018. The Final EIR/EA and the Notice of Determination is included in electronic media form with this application.

The Project is listed in PBA 2040, the San Francisco Bay Area's Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) (ABAG and MTC 2017). PBA 2040 was found to conform to the latest U.S. Environmental Protection Agency air quality conformity regulations on August 23, 2017, promulgated by FHWA and FTA. The Project is also included in MTC's financially constrained 2019

Transportation Improvement Program (TIP; MTC 2019). The regional air quality conformity analysis for the 2019 TIP was approved by FHWA and FTA on February 1, 2019. Amendments to the Final PBA 2040 (approved by the MTC on March 28,2018) and to the 2017 TIP modified the scope and projected cost of the Project. Two companion technical documents were also prepared – Addendum to the Final Environmental Impact Report for Plan Bay Area 2040 (EIR Addendum) and Transportation-Air Quality Conformity Analysis for the Amendment to Plan Bay Area 2040 and the 2017 Transportation Improvement Program, as amended by Revision Number 2017-28.

The San Francisco Bay Area has been designated as non-attainment for the 24-hour PM2.5 standard. Beginning December 14, 2010, certain Projects are required to complete a PM2.5 hot-spot analysis as part of the Project-level conformity determination process. The Project met the definition of a 'Project of air quality concern' under 40 CFR 93.123(b)(1) (new or expanded highway Projects that have a significant number of or significant increase in diesel vehicles) and therefore required a PM2.5 Hot Spot Analysis and was subject to interagency consultation. Project sponsors presented the Project to the MTC Air Quality Conformity Task Force on July 27, 2017. The Conformity Task Force (1) determines if a Project meets the definition of a Project of air quality concern and if the Project requires undergoing a Project-level PM2.5 hot-spot analysis, and (2) reviews the methods, assumptions and analysis of the PM2.5 hot-spot analysis. **The Project was determined to not be a Project of air quality concern**. By letter dated March 22, 2018 FHWA has agreed that the Project meets Project level conformity and that the Project conforms with the SIP.

An Environmental Commitment Record for the Project has been approved by Caltrans and lists mitigations to be implemented as identified during the NEPA/CEQA process (summarized in table E-1 of the approved environmental document).

Section 2.1.6 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.

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 Project is among the San Francisco Bay Area's top priorities to reduce the region's freeway congestion. Widespread support is demonstrated by the multiple funding sources secured for the Project. In addition to Solutions for Congested Corridors (SCCP) funding, the Project has secured funding from various federal, State, regional and local sources. The Project has also received an unprecedented, strong support from the private sector. Facilitated by the San Mateo County Economic Development Association (SAMCEDA), the private sector has provided $3 million for the environmental phase and committed an additional $50 million towards construction of the Project. There is widespread support for the Project as evidenced by the Caltrans, MTC, SMCTA and C/CAG actions approving the Project, as noted in Part B Section 6a.

An extensive outreach effort was conducted as part of the Project environmental review. The initial public scoping meeting was held in October 2016. Additional informational public meetings were held in

San Mateo and Redwood City in May and June of 2017, as well as twenty-two (22) meetings with staff from the local city jurisdictions along the corridor. The Draft EIR/EA was released in November 2017 and three public meetings were held over the following months. The Draft EIR/EA was recirculated in July 2018. All comments were addressed through the initial draft and recirculation of the EIR/EA. No further comments were received after the recirculation of the Draft EIR/EA. Early in the project development process there was some expressed opposition to the toll lanes concept, but after several additional outreach meetings with elected officials and the response to comments in the draft EIR/EA there is currently no opposition to the projects. Potential opposition was allayed due to the Project being primarily within the existing US 101 footprint and the expected reduction of local cut through traffic resulting from the Project. Additionally, the community and stakeholders have been aware of the Project because of prominently featured articles in several local newspapers throughout the project development process. There is currently no known opposition to the Project.

Among the national and regional transportation issues and needs to be addressed by the Project, corridor congestion and delay ranked high. As noted above in Section 6C, the Project includes one of the most heavily congested corridors in the Bay Area. The Project will reduce delay and travel time in both the GP and Express Lanes along the corridor (as noted in Part B Section 3). Degradation of HOV lanes is a national issue addressed by MAP-21. The existing HOV lanes along US 101 within the Project limits are degraded. The Project will address degradation by providing the infrastructure to manage as the US 101 Express Lanes to provide free flow speeds in the US 101 Express Lanes and discounted travel to HOVs meeting the occupancy requirement.

Funding for infrastructure improvements nationally and regionally has not kept pace with increases in travel and congestion. The Project will provide a portion of the funding for the construction of the US 101 Express Lane, as well as potential funding for transportation improvements in the Project corridor from net excess toll revenues.

The Project improvements have been proposed to be built within the existing Caltrans right of way (except for one location (of the over 22 mile project length) in the city of San Mateo), which allayed potential concerns from local agencies along the corridor. In addition, local agencies also supported improving the operations of the US 101 facility that is expected to reduce vehicles diverting to local streets to attempt to navigate around congestion points. Local jurisdictions in the corridor have been working cooperatively with SMCTA and C/CAG on Project topics affecting local streets such as temporary operational construction impacts and Project improvements on local streets. Cooperative Agreements will be negotiated with the City of San Mateo for areas related to local frontage roads that will be impacted by the Project.

The JPA will be conducting a tolling equity study as one of the inputs for their discussion in developing tolling policies for the corridor.

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 the JPA will collect performance data on the US 101 Express Lanes, 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*

In recognition of Streets and Highways Code Section 149.7(h), as amended by AB 194, JPA will provide information or data requested by the Commission or Legislative Analyst. Additionally, JPA recognizes that the Commission is obligated by that section to report to the State Legislature annually on the progress in the development and operation of each toll facility approved under Streets and Highways Code Section 149.7, as amended by AB 194. JPA will provide information as requested in support of CTC reporting requirements for the US 101 Express Lanes 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; and
- A discussion of any other issues identified, and actions taken to address those issues.

7.B *Performance Measurement*

JPA 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. The goals included in the corridor assumptions, which are subject to change, include:

- Expand and complement the existing and planned network of HOV lanes in the Bay Area, to encourage carpools, vanpools and express buses;
- Make the best use of HOV lane capacity;
- Provide reliable travel times; and
- Better manage all lanes to keep traffic moving

The objectives of the San Mateo 101 Express Lanes are consistent with the Bay Area Express Lanes program.

New systems will be installed as part of the Project to monitor and report on performance. Performance reporting requirements will be defined further as the Project develops. The JPA will contract with BAIFA for the operations of the US 101 Express Lane. BAIFA is currently reporting on performance of the other Express Lanes operated in the Bay Area and that reporting will serve as a model for US 101 Express

Lanes 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 BAIFA operated 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*

Pursuant to Public Contract Code §6700 et seq., the California Legislature has authorized Department of Transportation (Caltrans) to engage in a construction manager/general contractor (CMGC) Project delivery method as specified for Projects for the construction of highways, bridges, or tunnels. To achieve the benefits of the corridor improvements in a timely and cost-effective manner, the Project's civil infrastructure will be procured and contracted through a competitive CMGC procurement. Caltrans will be the contracting agency for the Construction of the civil infrastructure. A construction phase cooperative agreement between SMCTA, C/CAG and Caltrans has been executed for the Southern construction segments (6/6/2019). A construction phase cooperative agreement between SMCTA, C/CAG and Caltrans for the Northern construction segment is under review and anticipated to be executed in summer 2019.

The CMGC process for the Project consisted of a Request for Qualifications ("RFQ") for preconstruction services, submittal of a Statement of Qualifications ("SOQ"), evaluation of submittals and selection of the Construction Manager, award and execution of contract for the performance of preconstruction services. The intent of the CMGC process is to prevent cost overruns and identify costs savings. The CMGC team was given notice to proceed in April 2018.

The CMGC team services has partnered with the Caltrans's design team. As part of the project team, the selected Construction Manager provided input on schedule, phasing, constructability, cost and estimates, value engineering, and plan review throughout the design process. In addition to aiding the design process, the selected CMGC prepares and submits a Guaranteed Maximum Price ("GMP") for the labor, equipment, and materials that will be required to construct the Project based on the design process, plans, specifications, and estimate packages of the Project. In the CMGC process, if the GMP is accepted by Caltrans, a Construction Contract will be issued to the CMGC after the completion of the preconstruction phase. If the GMP is not accepted, Caltrans, in its sole discretion, reserves the right to end the Construction Manager's participation in the project development process at the completion of the design phase and advertise the Project.

The CMGC submitted a GMP for the southern segment of the US 101 Express Lane Project (from the Santa Clara County line to about San Mateo US 101 postmile 6) to construct the civil infrastructure requirements to convert the existing HOV lane in this segment to an express lane. The GMP was

accepted and the NTP to begin the construction of this phase was issued in March 2019. Caltrans will receive the GMP for the civil infrastructure requirements for the northern segment of the US 101 Express Lane Project (about San Mateo US 101 postmile 6 to the US 101/I-380 IC) and will evaluate and determine if the CMGC construction bid for this segment is accepted or that a contract for the work is advertised.

The JPA will also enter into a contract with BAIFA to provide the system integration, that includes toll system design, integration, provisioning, installation, implementation, and testing of the Project. BAIFA will also be contracted to provide operations, including toll collection related development, maintenance, repair, rehabilitation, improvement, reconstruction, administration, and operation of the toll collection system. BAIFA currently operates other Express Lanes in the region.

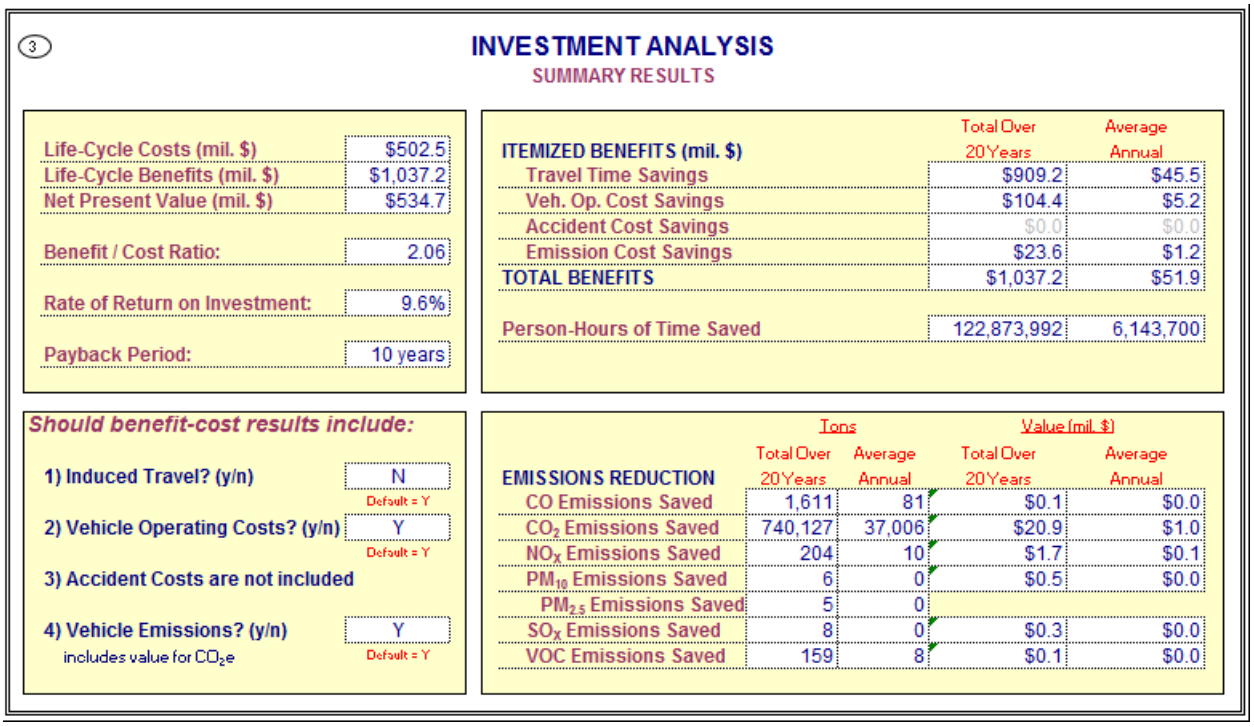
7.D *Cost Estimates – Is the estimated cost of the facility reasonable in relation to the cost of similar projects?*

There are no express lane projects that we are aware of that have a similar combination of improvements / existing conditions compared to the existing conditions and scope of this Project to provide a valid "apples to apples" cost comparison. To evaluate cost reasonableness, life cycle and benefit cost information is provided to address this question. The summary results of a benefit cost analysis with a discount rate of seven percent are provided in Exhibit 16. The results demonstrate that the throughput and efficiency benefits provided by the Project are a cost-effective infrastructure investment. Overall, the Project will produce a benefit-cost ratio of 2.06, which indicates that the benefits of the improvements outweigh the costs of the improvements.

A cost-benefit analysis for this application was performed using Caltrans Life-Cycle Benefit-Cost Analysis Model Version 6.2 Corridor, dated December 2017. The "Corridor" version was used because the Project encompasses a long corridor that measures in excess of 20 miles. The "Cal-B/C Corridor" model is used to capture benefits occurring outside of the roadway on which improvement is being proposed. The Travel Demand Model was used to develop travel forecast for the 2040 Build and No Build scenarios.

The Project provides an overall positive benefit/cost ratio of 2.06, with a ten-year payback period based on increased person-throughput, travel time and emissions reductions. Toll revenues have not been included in this B/C calculation. The facility is projected to generate tolls in excess of operating and maintenance costs. If included, the projected net excess revenue will shorten the payback period.

Exhibit 16. Investment Analysis Summary Results



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INVESTMENT ANALYSIS
SUMMARY RESULTS

Life-Cycle Costs (mil. $)	$502.5
Life-Cycle Benefits (mil. $)	$1,037.2
Net Present Value (mil. $)	$534.7
Benefit / Cost Ratio:	2.06
Rate of Return on Investment:	9.6%
Payback Period:	10 years

ITEMIZED BENEFITS (mil. $)	Total Over 20 Years	Average Annual
Travel Time Savings	$909.2	$45.5
Veh. Op. Cost Savings	$104.4	$5.2
Accident Cost Savings	$0.0	$0.0
Emission Cost Savings	$23.6	$1.2
TOTAL BENEFITS	$1,037.2	$51.9
Person-Hours of Time Saved	122,873,992	6,143,700

Should benefit-cost results include:

1) Induced Travel? (y/n)	N (Default = Y)
2) Vehicle Operating Costs? (y/n)	Y (Default = Y)
3) Accident Costs are not included	
4) Vehicle Emissions? (y/n) includes value for CO_2e	Y (Default = Y)

EMISSIONS REDUCTION	Tons: Total Over 20 Years	Tons: Average Annual	Value (mil. $): Total Over 20 Years	Value (mil. $): Average Annual
CO Emissions Saved	1,611	81	$0.1	$0.0
CO_2 Emissions Saved	740,127	37,006	$20.9	$1.0
NO_X Emissions Saved	204	10	$1.7	$0.1
PM_{10} Emissions Saved	6	0	$0.5	$0.0
$PM_{2.5}$ Emissions Saved	5	0		
SO_X Emissions Saved	8	0	$0.3	$0.0
VOC Emissions Saved	159	8	$0.1	$0.0

The forecast horizon year 2040 reflects future population and job growth consistent with MTC/ABAG regional forecasts and reflects background future road and transit projects consistent with the latest RTP – PBA 2040. Because the travel demand model uses a four-hour model applied for both the morning and afternoon peak periods, the effect of congestion that occurs during the highest peak hour is diluted, as vehicle demand and level of service is averaged across the peak periods. Therefore, the travel time savings, vehicle operating cost savings, and emission cost savings (derived from VHT) calculated by comparing the No Build and Build scenarios are deemed to be conservative estimates. In addition, the current Countywide model cannot estimate toll vehicles in the mid-day and off-peak (evening) conditions, so those benefits are also not included, leading to a possible underestimation of reported Project benefits.

The Project is scheduled to be under construction in 2019, with a completion date in 2022. The current total Project cost estimate is $514.3 million. The construction cost estimate is based on the engineers estimate through the 65% PS&E phase. Right-of-Way costs were estimated based on an analysis of the Project ROW requirements. Support costs were estimated as a percentage of construction costs. The Project construction cost estimate was last updated at 65 percent PSE completion in February 2019.

The Project cost estimate, which included construction, Right-of-Way (escalated to estimated date of acquisition), and support, and includes inflation to year of expenditure, program management, public awareness and outreach, environmental process costs, and costs including, but not limited to, the following:

- Construction and Right-of-Way capital;
- Roadway, drainage, structures, and civil tolling infrastructure;

- Utility relocation;
- Right-of-Way acquisition and damages;
- Tolling system integration;
- Electronic tolling equipment;
- System testing and start-up;
- Network Communications
- Support costs;
- Project and construction management;
- Caltrans independent quality assurance;
- Third-party agency costs; and
- Environmental mitigation.