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**Regular Teleconference Meeting of the Capital SouthEast Connector JPA  
Board of Directors**

**Date:** Friday, January 28, 2022, 8:30 a.m. to 10:30 a.m.

**Meeting Location:**

Consistent with California Government Code Section 54953(e)(1)(a), an online meeting of the Capital SouthEast Connector JPA Board of Directors will be held exclusively via teleconference in light of COVID-19 and the state of emergency proclamation and state and local recommended measures for physical distancing, including the Sacramento County Public Health Officer's teleconferencing recommendation. This meeting will be held via Zoom. Join the meeting on your computer or mobile device:

<https://us06web.zoom.us/j/85466469990?pwd=ZjNWVURreXJra2xkZVIGUHI1cmtuQT09>

**Webinar ID:** 854 6646 9990

**Passcode:** 805115

To join the meeting by phone: +1 669 900 6833 or +1 253 215 8782

**Public Comment:**

If you wish to address the Board of Directors during the meeting, please wait until the Board Chair requests comments from the public. All public participants will be placed on mute during the meeting, until such time as the Board Chair requests public comment. Computer and mobile device attendees should use the Zoom "Raise Hand" feature when the Board Chair requests public comment. The "Raise Hand" feature can be found by moving your mouse on the Zoom meeting screen to reveal the toolbar. Then click on the "Participants" tab and then click "Raise Hand". Alternatively, windows users can use the keyboard shortcut ALT+Y and mac users can use the keyboard shortcut OPTION+Y to raise or lower your hand for comment. Phone attendees should press \*9 to "Raise Hand" for public comment.

The Board of Directors requests that you limit your comments to three (3) minutes per person so that all present will have time to participate. The Board of Directors reserves the right to reasonably limit the total time for public comment on any particular noticed agenda item as it may deem necessary.

## **AGENDA**

The Board may take action on any matter listed on this agenda to the extent permitted by applicable law. Staff Reports are subject to change without prior notice.

1. Call to Order & Roll Call: Directors Hidahl, Howell, Hume, Nottoli, Sander
2. Pledge of Allegiance
3. Adopt Resolution 2022-01 Making Findings and Determinations Authorizing Virtual Teleconference Meetings under Government Code Section 54953(e) (AB 361).
4. Public Comment on Non-Agenda Items

Members of the public may comment on any item of interest to the public within the subject matter jurisdiction of the Board of Directors. Each person will be allowed three minutes, or less if a large number of requests are received on a particular subject. After ten minutes of testimony, the Chair may choose to hear any additional testimony following the Discussion Items.

Please note, under the provisions of the California Government Code, the Board is prohibited from discussing or taking action on any item that is not on the agenda. The Board cannot take action on non-agendized items raised under "Public Comment" until the matter has been specifically included on the agenda. Those participants who wish to address a specific agendized item are encouraged to offer their public comments during consideration of that item.

5. Executive Director's Report: January 2022 Update

### **Consent Calendar Items**

6. Approve Action Minutes of the December 10, 2021, Regular Teleconference Board Meeting
7. Connector Project Construction Update (Receive and File)
8. Notice by the City of Folsom to Bidders and Release of Request for Proposals for Scott Road Realignment (Receive and File)
9. Update on Funding Opportunities Related to the Infrastructure Investment and Jobs Act (Receive and File)
10. Update on State Funding and Transportation Budget Opportunities (Receive and File)
11. Review of Redistricting Boundaries along the Connector Alignment (Receive and File)

12. Review of New Development Trends Associated with the Transportation Mitigation Fee Program (Receive and File)

**Discussion and Action Items**

13. Nomination and Election of Board Chair and Vice-Chair for Calendar Year 2022  
- Resolution 2022-02
14. Review of Connector Project Benefit-Cost Analysis prepared by Economic Planning Systems, Inc.
15. Announcements or Final Comments from Board Members

**ADJOURN**

The next meeting of the Capital SouthEast Connector JPA Board will be held on

**March 25, 2022**

\*City of Rancho Cordova City Hall, Council Chambers  
2729 Prospect Park Drive, Rancho Cordova, CA 95670

\*Location is subject to change due to COVID-19 restrictions on public gatherings

## **NOTICE REGARDING CHALLENGES TO DECISIONS**

Pursuant to all applicable laws and regulations, including without limitation, California Government Code Section 65009 and or California Public Resources Code Section 21177, if you wish to challenge in court any of the above decisions (regarding planning, zoning and/or environmental decisions), you may be limited to raising only those issues you or someone else raised at the public hearing(s) described in this notice/agenda, or in written correspondence delivered to the Board at, or prior to, the public hearing.

## **GOVERNMENT CODE 54957.5 et seq.**

Public records, including writings relating to an agenda item for open session of a regular meeting and distributed less than 72 hours prior to the meeting, are available for public inspection at 10640 Mather Blvd., Suite 120, Mather, CA 95655. The on-line version of the agenda and associated materials are posted for your convenience at <http://www.ConnectorJPA.net>. Some documents may not be posted on-line because of their size and/or format (maps, site plans, and renderings). As they become available, hard copies of all documents are available at 10640 Mather Blvd., Suite 120, Mather, CA 95655.

## **ADA COMPLIANCE STATEMENT**

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Connector JPA at (916) 876-9094. Notification 48 hours prior to the meeting will enable the Connector JPA to make reasonable arrangements to ensure accessibility to this meeting.

If requested, this agenda can be made available in appropriate alternative formats to persons with disabilities, as required by Section 202 of the Americans with Disabilities Act of 1990 and the Federal Rules and Regulations adopted in implementation thereof. Persons seeking an alternative format should contact the Connector JPA for further information. A person with a disability, who requires a modification or accommodation, including auxiliary aids or services, to participate in a public meeting, should telephone or otherwise contact the Connector JPA 48 hours prior to the meeting. The Connector JPA may be reached at 10640 Mather Blvd., Suite 120, Mather, CA 95655 or by telephone at (916) 876-9094.

### **ITEM 3**

**MEETING DATE:** January 28, 2022

**TITLE:** Adopt Resolution Making Findings and Determinations Authorizing Virtual Teleconference Meetings under Government Code Section 54953(e) (AB 361).

**PREPARED BY:** Osman Mufti, General Counsel

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### **RECOMMENDATION**

Approve Resolution 2022-01 making findings and declaring its intent to continue remote teleconference meetings pursuant to Government Code section 54953(e) due to the Governor's COVID-19 State of Emergency Proclamation, Sacramento County Public Health Officer recommendations, and state regulations related to physical distancing.

### **BACKGROUND – ASSEMBLY BILL 361**

The JPA Board has been conducting its public meetings under the Governor's Executive Orders issued in connection to the COVID-19 pandemic and its related health and safety risks which allowed legislative bodies to hold meetings exclusively by teleconference.

Effective October 1, 2021, Assembly Bill (AB) 361 allows local legislative bodies to continue to hold modified remote meetings during a proclaimed state of emergency, if state or local officials have imposed or recommended measures related to physical distancing which warrant holding meetings remotely.

### **SACRAMENTO COUNTY HEALTH OFFICER ORDER**

On January 6, 2022, the Sacramento County Health Officer issued an order directing all public meetings in the county to occur virtually until further notice. The order cites to the rapid emergence and spread of the COVID-19 Omicron variant and states that the order is necessary to control and reduce the rate of community spread and to reinforce the need for safe interactions.

### **TELECONFERENCE MEETINGS**

In order for the Board to conduct meetings under the AB 361 teleconference meeting rules, the Board meetings must meet one of the following provisions:



(A) The local agency is holding a meeting during a proclaimed state of emergency, and state or local officials have imposed or recommended measures to promote social distancing; or

(B) The local agency is holding a meeting during a proclaimed state of emergency for the purpose of determining, by majority vote, whether as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees; or

(C) The local agency is holding a meeting during a proclaimed state of emergency and has determined, by majority vote, that, as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.

The AB 361 modified teleconference meeting rules can only be used in the event there is a Governor issued a state of emergency. The Governor's COVID-19 state of emergency satisfies this requirement.

The second requirement of item (A) above is satisfied currently as the January 6, 2022 Sacramento County Health Officer Order directs all public meetings in the county to be virtual.

## **ATTACHMENTS**

- a. Resolution 2022-01
- b. County Health Order

**Item 3 b**



**ORDER OF THE HEALTH OFFICER OF THE COUNTY OF SACRAMENTO  
DIRECTING ALL PUBLIC MEETINGS IN THE COUNTY TO OCCUR  
VIRTUALLY UNTIL FURTHER NOTICE AND ENCOURAGING  
WORKPLACES TO CONDUCT MEETINGS REMOTELY AS BUSINESS NEEDS  
PERMIT**

**DATE OF ORDER: January 6, 2022**

**BACKGROUND**

The rapid emergence of the highly transmissible COVID-19 Omicron variant coupled with holiday gatherings has led to unprecedented COVID-19 case rates in Sacramento County. On December 30, 2021, there were 1,917 new COVID-19 cases reported in Sacramento County, which is 51.3% higher than the highest episode date of the winter surge of 2020 (1,267; December 14, 2020). Sacramento County's COVID-19 case rate on January 4, 2022 reached an all-time high level of 80.3 per 100,000 residents.

While data on the Omicron variant is still emerging, it has quickly become the dominant variant in the United States. The high case rates in our region are projected to impact capacity in Sacramento County hospitals.

All individuals in Sacramento County, especially those who are unvaccinated or not up-to-date with their vaccination (boosted, if eligible) and those at higher risk of severe outcomes from COVID-19, should take personal measures to reduce their risk of acquiring COVID-19. In addition to existing COVID-19 mitigation measures, including vaccination and face coverings, additional actions can help limit the likelihood of COVID-19 transmission in workplaces and public settings.

This Order is necessary to control and reduce the rate of community spread and to reinforce the need for safe interactions. The Health Officer will continue to assess the public health situation as it evolves and will reevaluate the need for this Order no later than February 1, 2022. The Health Officer may modify this Order, or issue additional Orders related to COVID-19, as changing circumstances dictate.

## **ORDER**

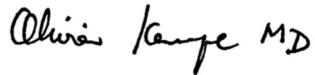
UNDER THE AUTHORITY OF CALIFORNIA HEALTH AND SAFETY CODE SECTIONS 101040, 101085, 120175, AND 120220, THE HEALTH OFFICER OF THE COUNTY OF SACRAMENTO ("HEALTH OFFICER") HEREBY ORDERS AS FOLLOWS:

1. This Order **shall become effective January 6, 2022 at 8:00 a.m.** and will continue to be in effect until rescinded or amended in writing by the Health Officer.
2. The July 29, 2021 Order of the Health Officer directing all individuals in Sacramento County to wear face coverings indoors in workplaces and public settings remains in place and is unaffected by this Order.
3. All public boards, councils, commissions, and other similar bodies shall suspend in-person public meetings and conduct all meetings virtually. Affected bodies shall ensure opportunities for virtual public participation and compliance with the Brown Act and all other relevant statutes.
4. Employers and businesses shall consider conducting meetings remotely and take other measures as necessary to reduce transmission risk as much as business needs will permit.
5. Employers and businesses subject to the Cal/OSHA COVID-19 Emergency Temporary Standards (ETS) and/or the Cal/OSHA Aerosol Transmissible Diseases Standards should consult the applicable regulations for additional requirements. The ETS allow local health jurisdictions to mandate more protective measures.
6. All State orders and guidance documents referenced in State orders are complementary to this Order. By way of this Order, the Health Officer adopts such directives as orders as well. Where a conflict exists between a local order and any State public health order related to the COVID-19 pandemic, the most restrictive provision controls pursuant to, and consistent with, California Health and Safety Code § 131080.
7. **Copies of Order.** Copies of this Order shall promptly be: (1) made available at the County Administration Building at 700 H Street, Sacramento 95814, First Floor; (2) posted on the Sacramento County COVID-19 website (COVID19.saccounty.net) and County Health Department's website (dhs.saccounty.net/PUB); and (3) provided to any member of the public requesting a copy of this Order.



8. **Severability.** If any provision of this Order or the application thereof to any person or circumstance is held to be invalid by a court of competent jurisdiction, the remainder of the Order, including the application of such part or provision to other persons or circumstances, shall not be affected and shall continue in full force and effect. To this end, the provisions of this Order are severable.

**IT IS SO ORDERED:**



Olivia Kasirye, MD, MS  
Health Officer of the County of Sacramento

Dated: January 6, 2022



## **ITEM 5**

**MEETING DATE:** January 28, 2022

**TITLE:** Executive Director's Report for January 2022

**PREPARED BY:** Derek Minnema

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Each month the Executive Director provides a report to the Board. The Executive Director will give an oral update on the agency's activities during January at the meeting.

## **ITEM 6**

**MEETING DATE:** January 28, 2022

**TITLE:** Action Minutes of the December 10, 2021, Regular Teleconference Board Meeting

**PREPARED BY:** Derek Minnema

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### **RECOMMENDATION**

Approve Action Minutes of the December 10, 2022, Regular Teleconference Board Meeting.

### **ACTION MINUTES**

The Capital SouthEast Connector JPA Board of Directors met in regular session on December 10, 2021, via teleconference.

**Call to Order** Chair Howell called the meeting to order at 8:34 a.m.

**Roll Call** Present: Directors Hidahl, Howell, Hume, Nottoli, Sander

### **Item #3: Adopt Resolution 2021-30 Making Findings and Determinations Authorizing Virtual Teleconference Meetings under Government Code Section 54953(e) (AB 361)**

Executive Director Minnema introduced the item and Osman Mufti, JPA Legal Council, provided a presentation summarizing the item. A brief discussion amongst the Board and JPA staff ensued.

A motion was made by Director Hidahl and seconded by Director Nottoli and passed by unanimous vote that:

THE BOARD OF DIRECTORS ("BOARD") OF THE CAPITAL SOUTHEAST CONNECTOR JOINT POWERS AUTHORITY ("CONNECTOR JPA") HEREBY MADE FINDINGS AND DETERMINATIONS AUTHORIZING VIRTUAL TELECONFERENCE MEETINGS DUE TO THE GOVERNOR'S PROCLAMATION OF STATE EMERGENCY AND LOCAL RECOMMENDATIONS AND STATE REGULATIONS RELATED TO PHYSICAL DISTANCING DUE TO THE THREAT OF COVID-19 WITH RESOLUTION 2021-30

No public comment was received on this item.

### **Public Comments on Non-Agenda Items**

There were no comments from the public on non-agenda items.

### **Open Session**

#### **Item #5: Executive Director's Report**

The Board received Executive Director Minnema's comprehensive oral report for December 2021 and a year-end-summary. A brief discussion amongst the Board and JPA staff ensued.

Public comment was received by Kevin Bewsey on this item.

### **Consent Calendar Items**

A motion was made by Director Hidahl and seconded by Director Hume and passed by unanimous vote in favor that:

THE BOARD OF DIRECTORS OF THE CAPITAL SOUTHEAST CONNECTOR JOINT POWERS AUTHORITY APPROVES THE FOLLOWING ITEMS ON THE CONSENT AGENDA:

#### **Item #6: Approve Action Minutes of October 29, 2021 Board Meeting**

#### **Item #7: Adopt 2022 Connector JPA Regular Board Meeting Schedule – Resolution 2021-31**

#### **Item #8: Authorize the Executive Director to enter into an Agreement with Kittelson & Associates, Inc. for consulting services related to Connector Project Performance Benefits - Resolution 2021-32**

#### **Item #9: Accept an update on Connector Project Construction Update**

No public comments was received on the consent item.

### **Discussion and Action Items**

#### **Item #10: Nomination and Election of Board Chair and Vice-Chair for Calendar Year 2022 - Resolution 2021-33**



Executive Director Minnema introduced the item and provided a presentation summarizing the item. A brief discussion amongst the Board and JPA staff ensued.

A motion was made by Director Hume and seconded by Director Howell and passed by unanimous vote that:

THE BOARD OF DIRECTORS (“BOARD”) OF THE CAPITAL SOUTHEAST CONNECTOR JOINT POWERS AUTHORITY (“CONNECTOR JPA”) HEREBY ELECTS DIRECTOR SANDER FROM THE CITY OF RANCHO CORDOVA TO SERVE AS CHAIR OF THE BOARD AND DIRECTOR HIDAHL FROM THE COUNTY OF EL DORADO TO SERVE AS VICE-CHAIR OF THE BOARD WITH RESOLUTION 2021-23.

No public comment was received on this item.

### **Closed Session**

#### **Item #11: Closed Session**

**Conference with Real Property Negotiators Pursuant to Government Code § 54956.8**

### **Open Session**

No reportable action from closed session.

#### **Item # 12: Announcement and Final Comments from Board Members**

No action was taken on this item.

No public comment was received on this item.

### **Adjournment**

The meeting adjourned at approximately 9:50 a.m.

### **APPROVAL OF ACTION MINUTES FOR DECEMBER 10, 2021**

Approved By:

Attest:

\_\_\_\_\_  
Kerri Howell  
Chair of the Board

\_\_\_\_\_  
Derek Minnema  
Board Secretary

## ITEM 7

**MEETING DATE:** January 28, 2022

**TITLE:** Connector Project Construction Update (Receive and File)

**PREPARED BY:** Matt Lampa

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### **RECOMMENDATION**

Receive and file this update.

### **CONSTRUCTION UPDATE**

Construction is currently in progress on three Connector projects:

Segment A2, Kammerer Road (Bruceville Road to Lotz Parkway)

Project construction is essentially finished, with the roadway work completed and all lanes open to traffic. Work is in progress on the inlet and outlet structures for the drainage basins, and it's anticipated all drainage basin work will be completed within the next 1-2 months, after the basins dry out and are accessible.

We would like to thank all our project partners for helping to make this a successful project that will greatly improve safety and operations on Kammerer Road!



Segment B2, Grant Line Road (Waterman Road to Bradshaw Road)

- Traffic signal installation
- Placed decomposed granite along bike paths
- Placed erosion control and hydroseed



Segment D3a, White Rock Road (Prairie City Road to East Bidwell Street)

- Constructed drainage inlets
- Placed erosion control and storm water BMPs in preparation for winter suspension
- Project is currently suspended for the winter





## **ITEM 8**

**MEETING DATE:** January 28, 2022

**TITLE:** Notice by the City of Folsom to Bidders and Release of Request for Proposals for Scott Road Realignment (Receive and File)

**PREPARED BY:** Matt Lampa

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### **RECOMMENDATION**

Receive and file this update.

### **BACKGROUND**

Staf completed the final design and environmental clearance for the Scott Road Realignment Project in the late summer of 2021. An amendment to the construction MOU with the City was executed in December 2021 clarifying roles and responsibilities, and the JPA's commitment for funds provided bids are received near the construction estimate.

The Project is a component of Connector Segment D3. It realigns Scott Road to the new signalized intersection at White Rock Road/Prairie City Road within the City of Folsom ("City") right of way. The realigned roadway will be upgraded to current design standards, including shoulders and drainage improvements.

### **NOTICE TO BIDDERS AND REQUEST FOR PROPOSALS**

On January 11, the City issued a notice to bidders to solicit cost proposals for construction and released a Request for Proposals ("RFP") for Construction Engineering and Materials Testing services. The deadlines to submit proposals are as follows:

- Construction Bid – 2 pm on February 10, 2022
- Construction Engineering – 2 pm on February 11, 2022

The Project is publicly advertised on the JPA and City websites, and all bid documents and the RFP are available at CIPList.com. Staff will update the Board with bid results in March.

### **ATTACHMENTS**

- a. Notice to Bidders for Construction Cost Proposals
- b. Notice of Request for Proposals for Construction Engineering and Materials Testing

## Item 8 a

### **NOTICE TO BIDDERS NOTICE TO SUBCONTRACTORS**

Sealed Proposals will be received at the City Clerks Office, City of Folsom, 50 Natoma Street, Folsom, California 95630 up to the hour of **2:00 PM on Thursday, February 10<sup>th</sup> 2022** and opened at **2:00 PM**, or as soon thereafter as business allows, in the office of the Department of Public Works for construction of:

#### **SCOTT ROAD REALIGNMENT PROJECT**

In accordance with the Contract Documents issued by the City of Folsom for the Scott Road Realignment Project, the proposal must be submitted on printed forms supplied by the Department of Public Works enclosed in an envelope marked:

#### **SEALED PROPOSALS FOR:**

#### **SCOTT ROAD REALIGNMENT PROJECT**

General Contractor's License: Class A-General Engineering

**Prebid Meetings:** No meeting will be held.

**Requests for technical information or clarification shall be directed to the City's representative, Brian Reed at [breed@folsom.ca.us](mailto:breed@folsom.ca.us).**

City affirmatively identifies this project as a "public work" as that term is defined by Labor Code Section 1720, and the project is, therefore, subject to prevailing wages under Labor Code Section 1771.

Contractor and its subcontractors shall fully comply with all the provisions of the California Labor Code governing the performance of public works contracts including, but not limited to, payment of prevailing wages, limitations on time worked, compliance with apprentice requirements, maintenance of payroll records, posting of wages at the job site and prohibitions against discrimination. The prevailing rates so determined are on file with the City Clerk and they are available for public inspection. They may also be obtained on the internet at [http://www.dir.ca.gov/DIR/S&R/statistics\\_research.html](http://www.dir.ca.gov/DIR/S&R/statistics_research.html). Those prevailing wage rates hereby are incorporated in this Contract and made a part hereof. (See General Provisions, Article 6, Section 6.01)

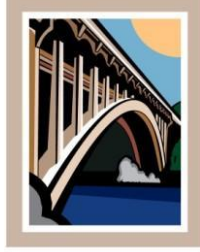
Pursuant to California Public Contracts Code, any contract awarded pursuant to this invitation for proposal shall obtain a provision permitting the substitution of securities for any moneys withheld to ensure performance under the contract. The terms of such provisions shall be according to the requirements of the Public Contracts Code Section 22300.

Each bid must be accompanied by security consisting only of cash, California Bank Cashier's Check, Certified Check, California Bank Money Order, or bid bond made payable to the "City of Folsom" in the sum of ten percent (10%) of the sum of the proposal.

The right to reject any and all proposals, or waive any informality in any proposal received is reserved by the City Council/JPA Board.

Mark Rackovan  
Public Works Director

**Item 8 b**



CITY OF  
**FOLSOM**  
DISTINCTIVE BY NATURE



**REQUEST FOR PROPOSALS (RFP) TO PROVIDE CONSTRUCTION  
ENGINEERING AND MATERIAL TESTING SERVICES FOR:  
SCOTT ROAD REALIGNMENT**

Copies of the Request for Proposal are available on [CIList.com](http://CIList.com)

Contact: Brian Reed at [breed@folsom.ca.us](mailto:breed@folsom.ca.us)

**CLOSING TIME & DATE FOR RECEIVING PROPOSALS:**

2:00 PM, Friday, February 11, 2022

**SUBMIT RFP'S TO:**

BRIAN REED  
SENIOR CIVIL ENGINEER  
CITY OF FOLSOM  
By Email  
[breed@folsom.ca.us](mailto:breed@folsom.ca.us)

## ITEM 9

**MEETING DATE:** December 10, 2021

**TITLE:** Update on Funding Opportunities Related to the Infrastructure Investment and Jobs Act (Receive and File)

**PREPARED BY:** Derek Minnema

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### **RECOMMENDATION**

Receive and file this update.

### **INTRODUCTION**

On November 15, 2021, the Infrastructure Investment and Jobs Act ("IIJA") was signed into law (Public Law 117-58). The IIJA provides \$550 billion over fiscal years 2022 through 2026 in new Federal investment in transportation infrastructure, including roads, bridges, mass transit, rail, aviation, and broadband infrastructure.

Over the coming months, USDOT will begin to announce Notice of Funding Opportunities ("NOFOs") to solicit applications for discretionary grant programs.

Potential funding opportunities for the Connector project are described below.

### **DISCRETIONARY GRANTS**

- Rebuilding American Infrastructure with Sustainability and Equity ("**RAISE**") Grants (\$15B, expanded) – RAISE grants support surface transportation projects of local and regional significance. NOFO release imminent.
- Infrastructure for Rebuilding America ("**INFRA**") Grants (\$14B, expanded) – INFRA grants will offer needed aid to freight infrastructure by funding state and local government projects of regional or national significance. NOFO will be released next month.
- Rural Surface Transportation Grant Program (\$2B, new) – This new competitive grant program will focus on surface transportation in rural areas, emphasizing improving the safety and reliability of the movement of people and freight. NOFO will be released next month.

- Safe Streets for All (\$6B, new) – This program will provide funding directly to local and tribal governments to support their efforts to advance "vision zero" plans and other improvements to reduce crashes and fatalities, especially for cyclists and pedestrians.
- Strengthening Mobility and Revolutionizing Transportation ("**SMART**") Grant Program (\$1B, new) – The SMART Grant program will be a programmed competition that will deliver competitive grants to states, local governments, and tribes for projects that improve transportation safety and efficiency.
- MEGA Projects (\$15B, new) – This new National Infrastructure Project Assistance grant program will support multi-modal, multi-jurisdictional projects of national or regional significance. NOFO will be released next month.
- Federal Highway Administration competitive grants for nationally significant bridges and other bridges (\$12.5B, new) – This new competitive grant program will assist state, local, federal, and tribal entities in rehabilitating or replacing bridges, including culverts. Large projects and bundling of smaller bridge projects will be eligible for funding.

### **IMPLEMENTATION RISKS**

Although implementation is underway, a few potential risks for delay remain, including:

- Fiscal Year 2022 Appropriations: The government is currently funded by a Continuing Resolution through February 18, 2022. While some programs have already received funding, an FY22 appropriations bill's continued delay could postpone IIJA implementation.
- Staffing Challenges: Much of the \$550 billion in new spending the IIJA provides will go to projects funded entirely or primarily by grants. That creates the biggest immediate challenge in carrying out the IIJA, as evaluating and tracking grant applications is labor-intensive. Federal agencies need hundreds of new grant personnel, budget analysts, and managers.

### **POTENTIAL FUNDING EFFORTS**

Staff will continue working with the elected representatives to position the project for federal funds, including competitive grants and new programs. Staff anticipates a busy first half of the year as notices begin to be released.

## **ITEM 10**

**MEETING DATE:** December 10, 2021

**TITLE:** Update on State Funding and Transportation Budget Opportunities  
(Receive and File)

**PREPARED BY:** Derek Minnema

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### **RECOMMENDATION**

Receive and file this update.

### **INTRODUCTION**

On January 10, 2022, the Governor submitted a draft budget to the the members of the Senate and the Assembly of the California Legislature. The draft budget is available here: <https://www.ebudget.ca.gov/> The initial budget proposes \$9.1 billion for transportation. That funding is broken down as follows:

- \$4.2 billion for high-speed rail
- \$2 billion for statewide rail and transit projects
- \$1.25 billion for rail and transit in southern california
- \$750 million for Active Transportation program
- \$500 million for grade separation projects
- \$400 million for climate adaptation projects

### **POTENTIAL FUNDING EFFORTS**

Staff will continue to work with the elected representatives to favorably position the project for state funds, including competitive grants and appropriations. The legislature is preparing its version of a budget and the Governor will issue a 'Revise' budget in May.

### **ATTACHMENTS**

- a. Draft Budget Transportation Summary for 2022-23

# TRANSPORTATION

Transportation is the state's largest source of greenhouse gas emissions—accounting for more than 50 percent of emissions when including the production and deployment of fuels—and contributes to unhealthy air quality, particularly in disadvantaged communities. Moving to a multi-modal zero-emission transportation future delivers climate and health benefits, and creates a foundation for the development of sustainable communities.

The Climate Action Plan for Transportation Infrastructure (CAPTI), released in July 2021, details how the state proposes to invest billions of dollars to combat and adapt to climate change while supporting public health, safety, and equity. Expanding on last year's investments in the transportation system, the Governor's Budget proposes almost \$15 billion for transportation programs and projects that align with climate goals, advance public health and equity, and competitively position the state to pursue significant federal investment through the Infrastructure Investment and Jobs Act (IIJA) and other federal funding programs by leveraging funding from state and local sources.

More specifically, these investments:

- Reduce millions of metric tons of carbon dioxide from the environment.
- Advance projects statewide to improve rail and transit connectivity between state and local/regional services—including advancement of the nation's first truly high-speed rail project.

## TRANSPORTATION

- Enhance safety and access for bicyclists and pedestrians, and target critical highway/rail grade separations and grade crossing improvements on key corridors throughout the state to reduce fatalities and injuries on the transportation system.
- Support climate resiliency and reduce risks from climate impacts.
- Remove barriers and connect disadvantaged communities, increasing access to opportunity.
- Deliver transportation projects that support the development of compact or infill housing to help California meet its housing goals.
- Move the state away from fossil fuel-based technologies and toward cleaner transportation technologies, including zero-emission vehicles and clean infrastructure.

### **SB 1 IMPLEMENTATION**

In addition, the Department of Transportation (Caltrans) continues to use the substantial increase in transportation revenues provided through SB 1 to address the backlog of maintenance and repairs on the state highway system. As California continues its recovery from the COVID-19 Pandemic, transportation revenues are rebounding, and Caltrans has accelerated repair and maintenance projects on the state's primary highway assets. Through a continued focus on "fix it first" projects, Caltrans continues to meet SB 1 performance goals.

The state is on track to reach the SB 1 statutory goal of having 98 percent of pavement and 90 percent of culverts in good or fair condition by 2027. Also, the state is on pace to meet the goal of repairing at least 500 additional bridges. Since its implementation in 2017, SB 1 funding has led to the following accomplishments:

- 8,000 lane miles of pavement and 998 bridges repaired.
- Lane miles repaired—prior to SB 1, 1,400 miles per year; since SB 1, 2,000 miles per year.
- 249 bridges repaired per year (as compared to 114 bridges per year prior to SB 1)
- 188,000 linear feet per year in culverts repaired (as compared to 23,000 linear feet per year prior to SB 1).
- An increase in Traffic Management System elements—from 59 percent in "good" condition to 79 percent in "good" condition.



## FEDERAL INFRASTRUCTURE INVESTMENT AND JOBS ACT

The federal IIJA provides a significant investment in the nation's infrastructure, authorizing over \$500 billion for transportation over five years. The IIJA provides a \$200 billion augmentation to existing and new transportation programs for highway, transit, highway safety, motor carrier, research, hazardous materials, and rail programs.

Under this measure, California is estimated to receive almost \$40 billion of formula-based transportation funding for the following programs over the next five years:

- Existing surface transportation, safety, and highway performance apportioned programs.
- A new bridge replacement, rehabilitation, preservation, protection, and construction program.
- A new program that will support the expansion of an electric vehicle (EV) charging network.
- A new program to advance transportation infrastructure solutions that reduce greenhouse gas emissions.
- A new program to help states improve resiliency of transportation infrastructure.
- Improving public transportation options across the state, with increased formula funding for transit.

The Budget includes an increase to base Federal Highway Administration transportation funding levels for California of \$1.8 billion in 2021-22 and \$1.9 billion 2022-23. In addition, Federal Transit Administration base transit funding will increase by \$385 million in 2021-22 and \$423 million in 2022-23. This funding will flow directly to local transit authorities and does not require any state budget changes. California is also anticipating a \$14.2 million annual increase to the National Highway Traffic Safety Administration grant program, administered by the Office of Traffic Safety. The additional funds will help address traffic fatalities and serious injuries on California roads.

In addition to new formula-based funding, the IIJA includes over \$100 billion in new competitive grants or augmentations to existing grant programs nationwide over five years for a variety of highway, safety, transit, rail, energy, and other activities. The state is uniquely positioned to take advantage of these funds based on its clean transportation leadership and ongoing funding commitments. With close alignment with

federal policy priorities on climate, equity, and safety, and the enactment of funding programs like Cap and Trade and SB 1, the state is ready to leverage state dollars to match and maximize the federal investment.

### **STATE TRANSPORTATION INFRASTRUCTURE PACKAGE**

The Budget proposes investing an additional \$9.1 billion in the transportation system and other related zero-emission vehicle (ZEV) efforts (see the Climate Change Chapter for additional ZEV details). The transportation infrastructure package focuses on increasing mobility options for Californians through rail, transit and active transportation projects, equity-related investments to reconnect communities, and enhanced safety projects.

This funding is comprised of the following investments in the transportation system:

- **High-Speed Rail**—\$4.2 billion to complete electrified high-speed rail construction in the Central Valley, perform advance work for service between Merced and Bakersfield, and complete advance planning and project design for the entire project. This is in addition to the funds available for this program in Cap and Trade.
- **Statewide Transit and Rail Projects**—\$2 billion to invest in high-priority transit and rail infrastructure projects. These projects will improve rail and transit connectivity between state and local/regional services, including projects on shared corridor routes.
- **Southern California Transit and Rail Projects**—\$1.25 billion to deliver local and regional projects focusing on mobility and greenhouse gas reduction.
- **Active Transportation and Projects to Connect Communities**—\$750 million to transform the state's active transportation networks, improve equity, and support carbon-free transportation options, including:
  - \$500 million for Active Transportation Program projects, which encourage increased use of active modes of transportation such as walking and biking, and increase the safety and mobility of non-motorized users.
  - \$150 million to establish the Reconnecting Communities: Highways to Boulevards Pilot Program, which will improve equity and remove transportation barriers by investing in the conversion of key underutilized highways into multi-modal corridors that serve existing residents by developing affordable housing and complete streets features in disadvantaged communities.

- \$100 million for bicycle and pedestrian safety projects, allocated through the Highway Safety Improvement Program, to reduce severe injuries and fatalities of vulnerable road users.
- **High Priority Grade Separation Projects**—\$500 million to support critical safety improvements throughout the state.
- **Climate Adaptation Projects**—\$400 million for state and local climate adaptation projects that support climate resiliency and reduce risks from climate impacts.

## SUPPLY CHAIN RESILIENCE AND PORT INFRASTRUCTURE INVESTMENTS

In response to global disruptions to the goods movement supply chain, the state is taking near- and long-term actions to alleviate congestion at California ports, which are critical to the regional, state, and national economies. In partnership with the Federal Administration, the state has taken steps to strengthen the resilience of California's and the nation's supply chain. In October, the Governor issued Executive Order N-19-21, which directed state agencies to identify additional ways to alleviate congestion at California ports and expanded efforts to ease supply chain issues by engaging stakeholders to discuss challenges created by record demand for imported goods and capacity issues.

In addition to challenges at the ports, California and the nation are facing commercial truck driver shortages, further disrupting the supply chain. The Department of Motor Vehicles (DMV) has implemented measures to mitigate the commercial truck driver shortage and keep goods moving quickly between California's largest ports and major distribution centers.

While the state has already taken several actions to mitigate supply chain disruptions, additional investments are necessary to support supply chain resiliency and transform the way California moves goods and people in a way that reduces greenhouse gas emissions and considers environmental impacts to communities.

The Budget proposes \$2.3 billion for supply chain investments, including \$1.2 billion for port, freight, and goods movement infrastructure and \$1.1 billion for other related areas such as workforce training and ZEV equipment and infrastructure related to the supply chain. This funding will improve supply chain resiliency and will be used to leverage federal funding. This can also support the U.S. Department of Transportation federal financing Emerging Projects Agreement with the California State Transportation Agency (CalSTA) and other discretionary programs made available through the IJJA, in a

## TRANSPORTATION

manner consistent with CAPTI goals. This proposal includes the following General Fund investments:

- **Port Infrastructure and Goods Movement**—\$1.2 billion for port-related high-priority projects that increase goods movement capacity on rail and roadways serving ports and at port terminals, including railyard expansions, new bridges, and zero-emission modernization projects.
- **Zero-Emission Equipment and Infrastructure**—\$875 million for zero-emission port equipment, short-haul (drayage) trucks, and infrastructure. See the Climate Change Chapter for additional details.
- **Workforce Training**—\$110 million for a training campus, to support workforce resilience in the face of supply chain disruption and accelerate the deployment of zero emission equipment and technologies. See the Labor and Workforce Development Chapter for additional details.
- **Commercial Driver's Licenses**—\$40 million to enhance California's capacity to issue Commercial Driver's Licenses.
- **Operational and Process Improvements**—\$30 million for the Governor's Office of Business and Economic Development to provide funding for operational and process improvements at the ports. This could include enhancing the movement of goods and improving data interconnectivity between the ports to enable efficient cargo movement, reduce congestion, and create opportunities to increase cargo volume by promoting and building supply chain efficiency.

## CLEAN CALIFORNIA INITIATIVE

Launched in 2020-21, the Clean California initiative invests \$1.1 billion over three fiscal years for state and local governments to clean up trash and debris statewide, beautify community gateways and public areas along highways, streets and roads while providing jobs to thousands of Californians. The Budget proposes \$100 million General Fund to continue the Clean California Local Grant Program into 2023-24, which provides grants to cities, counties, transit agencies, tribal governments and other government agencies to beautify their communities and remove trash and debris.

## RELIEF TO CALIFORNIA CONSUMERS

In an effort to potentially lower the price of gasoline and diesel fuel and provide some relief to consumers, the Budget proposes to forego the annual inflation adjustment to the per gallon fuel excise tax rate scheduled to occur on July 1, 2022.

The annual inflation adjustment will be resumed by 2023-24 with flexibility to delay the adjustment should economic conditions warrant it. This pause is expected to decrease fuel tax revenues by \$523 million in 2022-23 based on an estimated 5.6-percent inflation rate.

The Administration will also examine the potential to backfill the local share of reduced revenues on a one-time basis with State Highway Account funds.

## **ITEM 11**

**MEETING DATE:** January 28, 2022

**TITLE:** Review of Redistricting Boundaries along the Connector Alignment  
(Receive and File)

**PREPARED BY:** Derek Minnema

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### **RECOMMENDATION**

Receive and file this update.

### **BACKGROUND**

Every 10 years, following the completion of the United State census, new legislative district boundaries are drawn for state and congressional representatives. Last month, the California Citizens Redistricting Commission approved final maps for the Board of Equalization, Congress, State Senate and State Assembly.

### **REVIEW OF NEW DISTRICT BOUNDARIES FOR THE CONNECTOR ALIGNMENT**

Multi-district representation is not new to the Capital SouthEast Connector project team. With new district boundaries comes potentially new political representatives. Below outlines new districts the Connector alignment resides within and potential political representation for those districts.

State Senate: District 4, District 6, & District 8

State Assembly: District 5, District 7 District 9, & District 10

Congress: District 3, District 5, District 6, & District 7

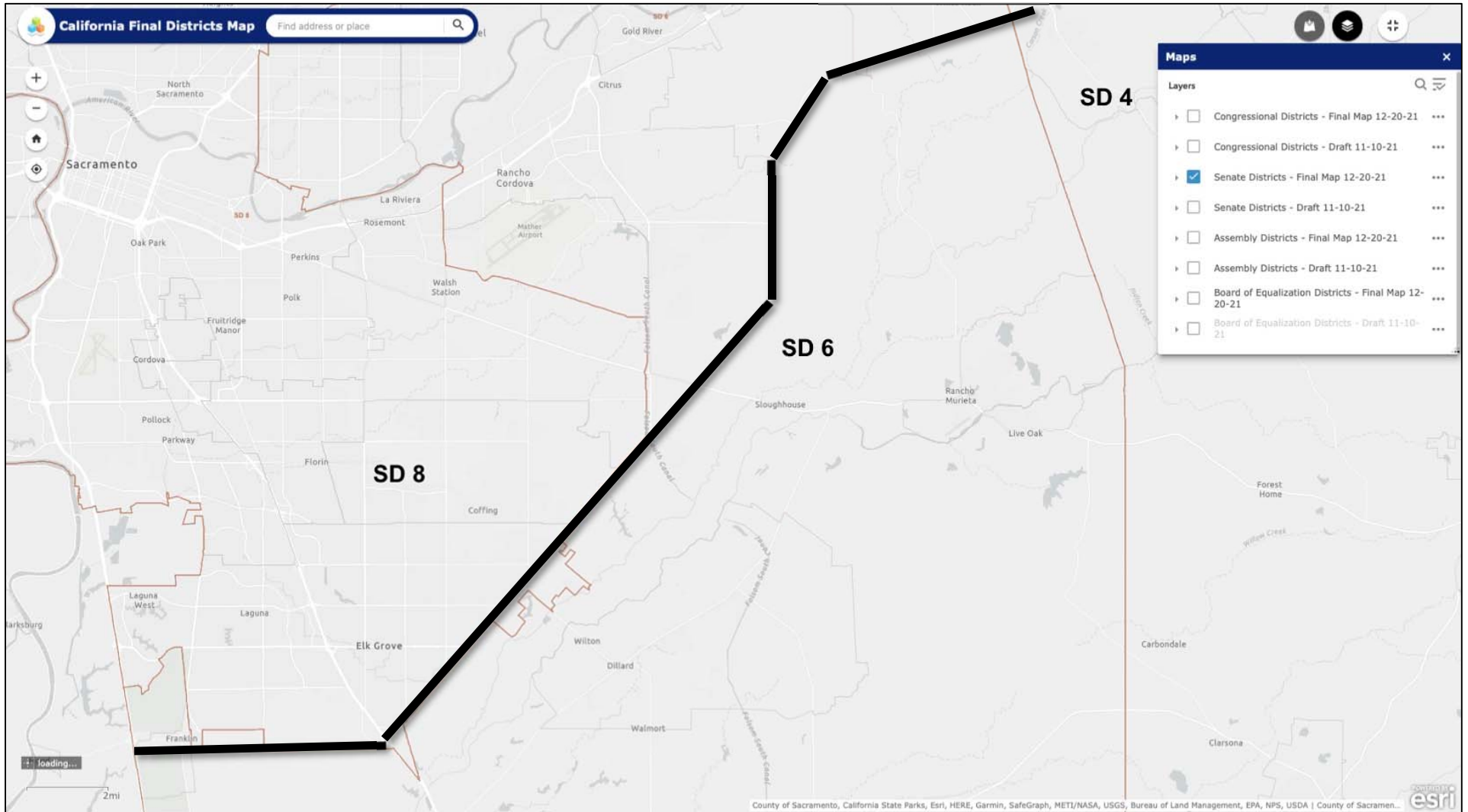
### **ATTACHMENTS**

- a. Maps of State Senate, State Assembly, and Congressional Districts with the Connector alignment

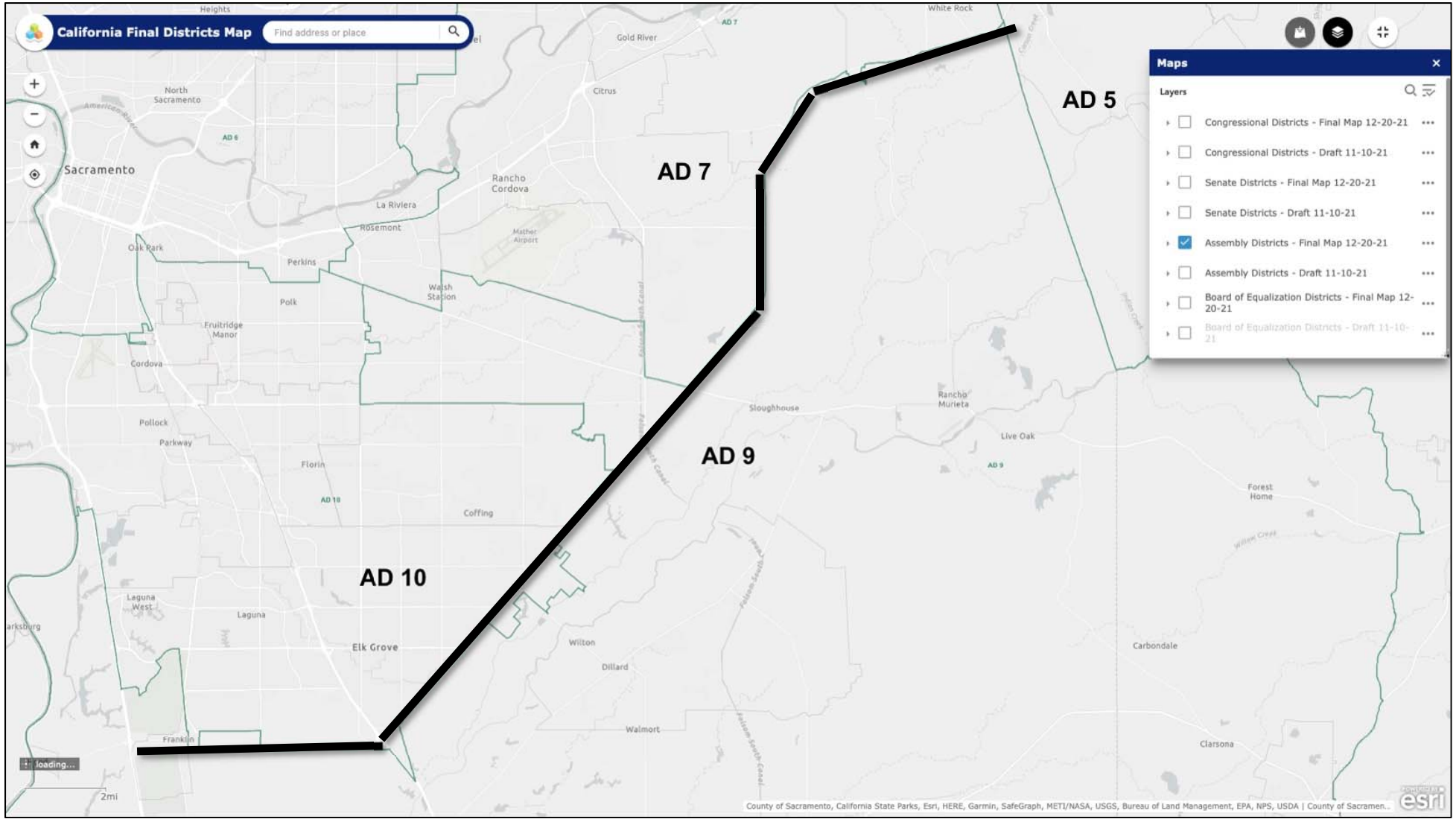
# Item 11 a



## State Senate Districts

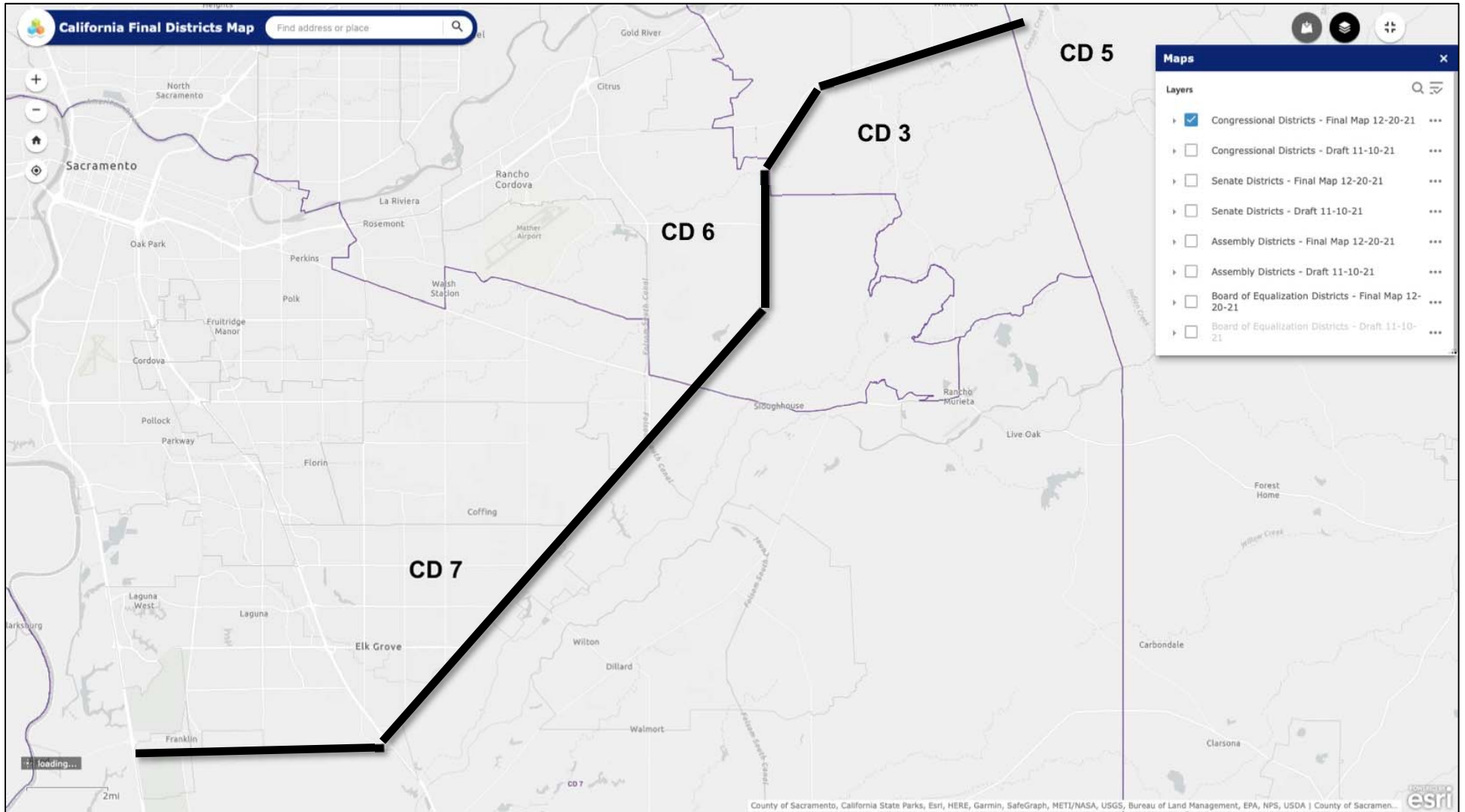


## State Assembly Districts





## Congressional Districts



## **ITEM 12**

**MEETING DATE:** January 28, 2022

**TITLE:** Review of New Development Trends Associated with the Transportation Mitigation Fee Program (Receive and File)

**PREPARED BY:** Derek Minnema

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### **RECOMMENDATION**

Receive and file this update.

### **BACKGROUND**

Measure A requires the County and each incorporated city to implement the Sacramento County Transportation Mitigation Fee Program ("SCTMFP"). The fees collected are remitted to the Sacramento Transportation Authority semiannually.

The goal of the SCTMFP is to develop and implement a uniform transportation mitigation fee on all new development that will assist in funding road and transit system improvements needed to accommodate projected growth and development.

In 2004, the Measure A ordinance projected that approximately \$488 million in revenue from new development would occur over the 30 years.

### **NEW DEVELOPMENT TRENDS ASSOCIATED WITH THE SCTMFP**

While development trends are positive, unfortunately, total fee revenue collected since the program's inception in 2009 (\$62.7 million) is only about 13% of the estimate included in the voter-approved expenditure plan.

Every agency in Sacramento County experienced an increase in development in FY 2021, except the City of Sacramento. The City's revenue declined from \$3.2 million to \$1.7 million.

### **ATTACHMENTS**

- a. Table 1: SCTMFP Revenue by Agency by Year
- b. Graph 1: Total SCTMFP Revenue by Year of JPA Agencies
- c. Graph 2: SCTMFP Revenue by Year by JPA Agency

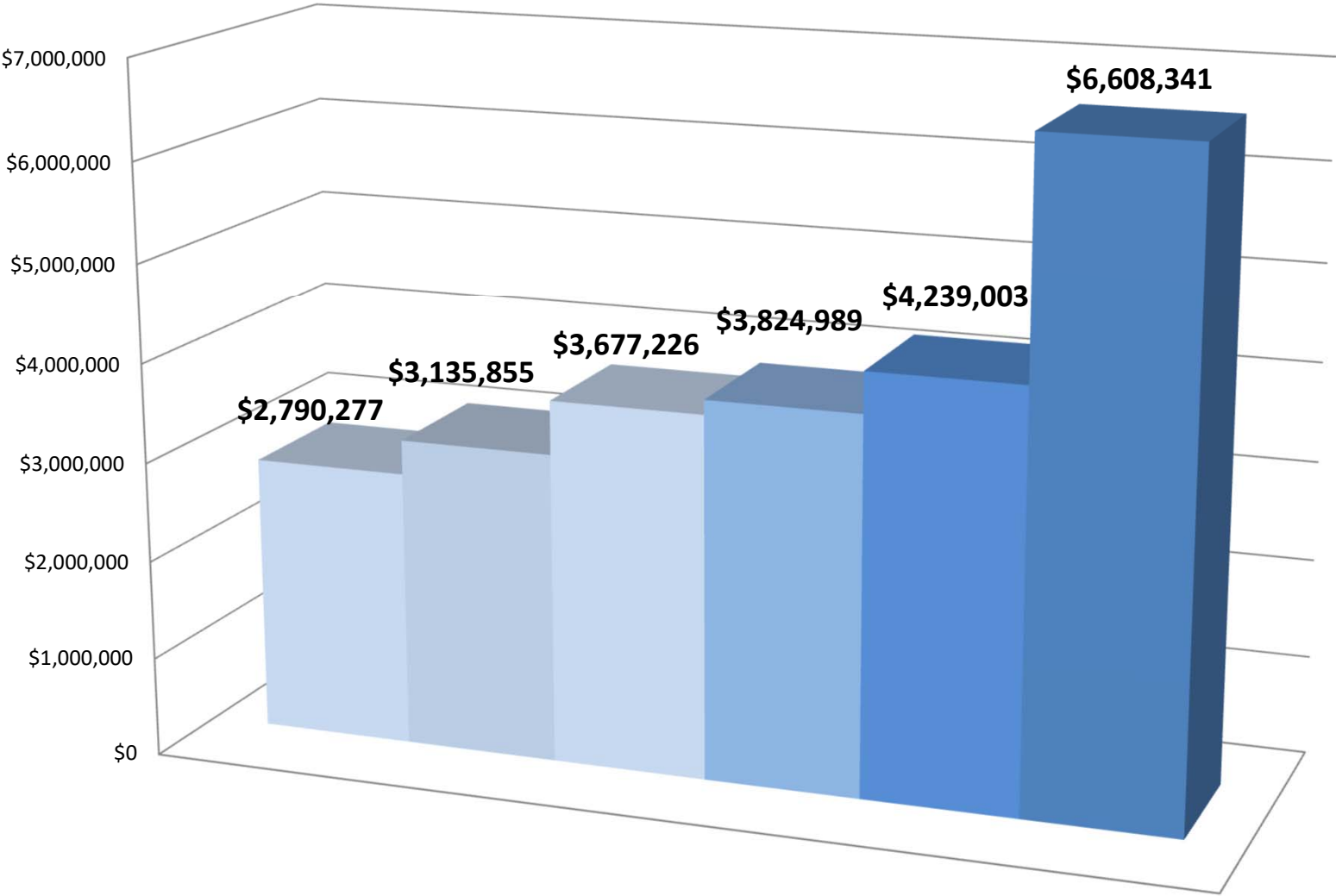
**Item 12 a**

**Sacramento Countywide Transportation Mitigation Fee Program (SCTMFP)  
Program Summary Through June 30, 2021**

<b>Entity</b>	<b>Sacramento</b>	<b>County</b>	<b>RC</b>	<b>EG</b>	<b>Galt</b>	<b>Folsom</b>	<b>CH</b>	<b>Caltrans</b>	<b>SRTD</b>	<b>CSCA</b>	
<b><u>Revenue</u></b>											<b><u>Total</u></b>
<b>FY 2009</b>	\$140,644	\$75,381	\$92,800	\$51,729	\$784	\$388,909	\$1,452	\$0	\$0	\$0	<b>\$751,700</b>
<b>FY 2010</b>	774,416	540,256	259,378	539,123	32,697	160,098	15,989	-	-	-	<b>2,321,958</b>
<b>FY 2011</b>	549,987	476,898	204,379	860,663	-	235,420	7,091	-	-	-	<b>2,334,437</b>
<b>FY 2012</b>	587,824	864,400	302,467	990,421	-	151,321	60,930	-	-	-	<b>2,957,362</b>
<b>FY 2013</b>	871,942	925,576	378,345	588,839	17,152	372,038	22,491	-	-	-	<b>3,176,382</b>
<b>FY 2014</b>	601,826	768,585	360,591	665,916	629,402	504,350	9,872	-	-	-	<b>3,540,542</b>
<b>FY 2015</b>	1,628,337	901,922	352,981	835,144	246,253	563,908	95,594	-	-	-	<b>4,624,139</b>
<b>FY 2016</b>	1,330,694	1,053,408	428,758	920,723	127,781	387,388	114,898	-	-	-	<b>4,363,650</b>
<b>FY 2017</b>	4,433,942	1,709,179	708,906	408,227	188,900	309,544	89,477	-	-	-	<b>7,848,174</b>
<b>FY 2018</b>	3,871,298	1,009,173	400,807	1,434,011	52,510	833,234	20,720	-	-	-	<b>7,621,753</b>
<b>FY 2019</b>	2,707,448	1,233,164	471,078	1,338,725	80,266	782,022	71,335	-	-	-	<b>6,684,037</b>
<b>FY 2020</b>	3,198,236	1,479,587	916,239	964,492	96,852	878,685	17,465	-	-	-	<b>7,551,556</b>
<b>FY 2021</b>	1,712,959	2,850,723	934,092	1,658,050	376,875	1,165,476	258,817	-	-	-	<b>8,956,993</b>
<b>Total</b>	<b>\$22,409,553</b>	<b>\$13,888,252</b>	<b>\$5,810,821</b>	<b>\$11,256,061</b>	<b>\$1,849,470</b>	<b>\$6,732,394</b>	<b>\$786,132</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$62,732,683</b>
<b><u>Expenditures</u></b>											
<b>FY 2009</b>	-	-	-	-	-	-	-	-	-	-	-
<b>FY 2010</b>	-	-	-	-	-	-	-	-	-	-	-
<b>FY 2011</b>	-	-	-	-	-	-	-	-	-	-	-
<b>FY 2012</b>	371,690	382,219	-	-	-	-	59,275	1,400,667	3,940,833	1,370,479	<b>7,525,163</b>
<b>FY 2013</b>	-	-	-	-	-	-	-	20,078	-	-	<b>20,078</b>
<b>FY 2014</b>	1,471,903	1,084,917	-	-	-	-	-	-	-	-	<b>2,556,820</b>
<b>FY 2015</b>	-	-	-	-	-	-	-	-	-	-	-
<b>FY 2016</b>	-	-	-	-	-	-	-	-	-	-	-
<b>FY 2017</b>	8,578,391	1,872,358	666,782	-	-	-	-	3,047,319	106,607	2,275,776	<b>16,547,233</b>
<b>FY 2018</b>	1,076,989	614,425	434,878	-	-	-	-	(6,599,873)	(4,047,440)	(2,316,651)	<b>(10,837,673)</b>
<b>FY 2019</b>	716,073	1,689,048	1,322,520	-	-	-	-	1,193,987	-	4,659,492	<b>9,581,120</b>
<b>FY 2020</b>	193,614	1,867,750	1,569,163	-	-	-	-	937,911	-	7,144,332	<b>11,712,770</b>
<b>FY 2021</b>	483,507	6,372,770	2,756,887	-	-	-	-	1,883,549	-	4,006,952	<b>15,503,666</b>
<b>Total</b>	<b>12,892,167</b>	<b>13,883,486</b>	<b>6,750,230</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>59,275</b>	<b>1,883,638</b>	<b>-</b>	<b>17,140,379</b>	<b>52,609,177</b>
<b>Fund Balance</b>	<b>\$9,517,386</b>	<b>\$4,765</b>	<b>(\$939,409)</b>	<b>\$11,256,061</b>	<b>\$1,849,470</b>	<b>\$6,732,394</b>	<b>\$726,857</b>	<b>(\$1,883,638)</b>	<b>\$0</b>	<b>(\$17,140,379)</b>	<b>\$10,123,506</b>
									<b>Interest program to date</b>		<b>585,319.00</b>
									<b>Fund balance</b>		<b>\$10,708,825</b>

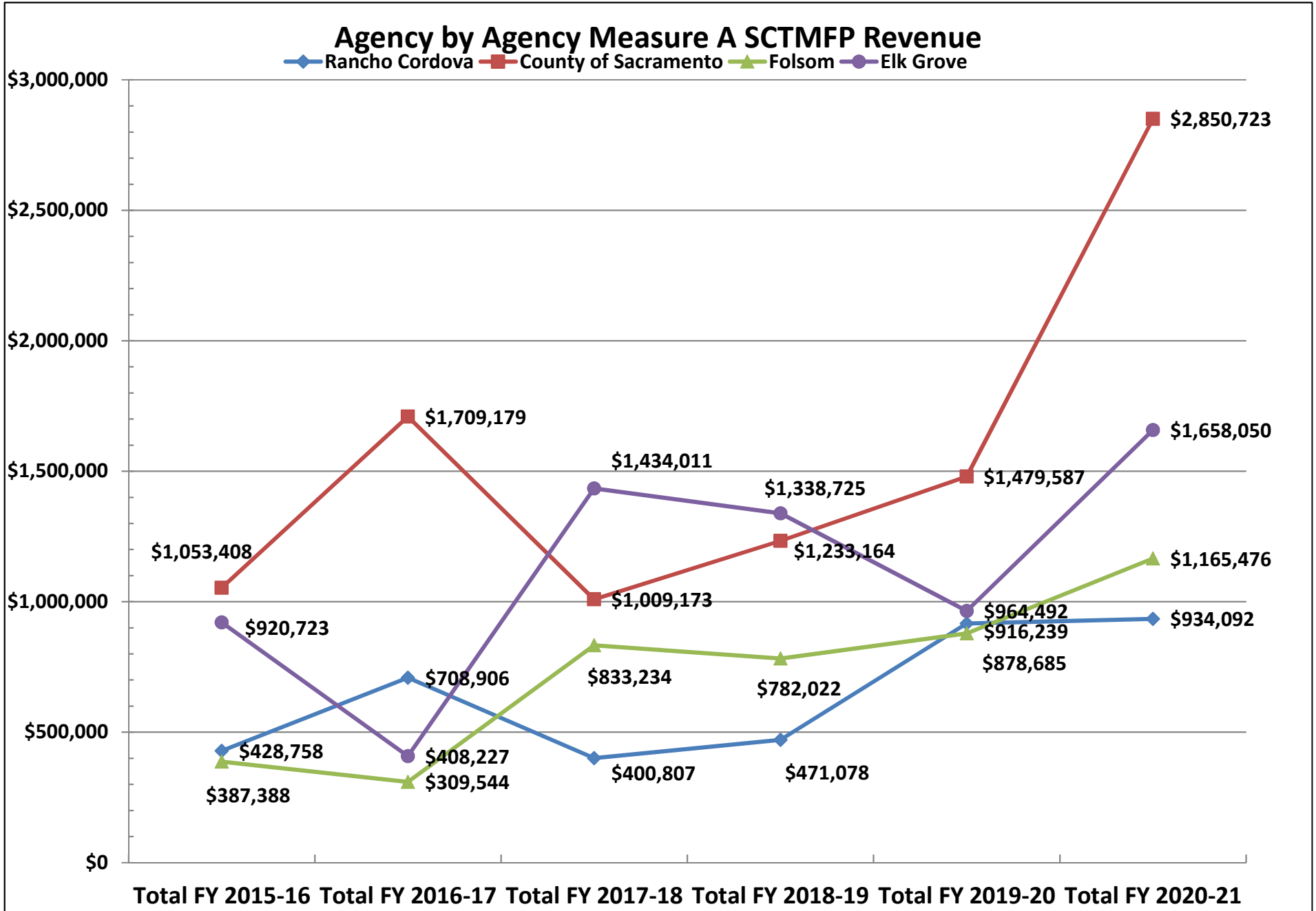
**Item 12 b**

### Measure A SCTMFP Revenue (Connector JPA Agencies)



■ Total FY 2015-16   ■ Total FY 2016-17   ■ Total FY 2017-18   ■ Total FY 2018-19   ■ Total FY 2019-20   ■ Total FY 2020-21

**Item 12 c**



## **ITEM 13**

**MEETING DATE:** January 28, 2022

**TITLE:** Nomination and Election of Board Chair and Vice-Chair for Calendar Year 2022

**PREPARED BY:** Derek Minnema

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### **BACKGROUND**

Section 6.c(1) of the Joint Exercise of Powers Agreement requires the Board to elect a chair annually among its members to preside at meetings.

Article IV.4. of the Authority's Bylaws states the term of office of the Chair and Vice-Chair shall be one year. If no successor is named by the conclusion of any Officer's term, the officer shall continue in the office until a successor is named.

### **DISCUSSION**

At the December Board meeting, the Board Approved Resolution 2021-33, electing David Sander (City of Rancho Cordova) as Chair and John Hidahl (El Dorado County) as Vice-Chair of the Board for the 2022 calendar year.

Staff understands that David Sander is no longer the City of Rancho Cordova's appointee to the JPA Board, accordingly this item is before the Board for further discussion.

### **ATTACHMENTS**

- a. Resolution 2022-02



**ITEM 13 a**

**RESOLUTION 2022-02**

**RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE CAPITAL SOUTHEAST CONNECTOR JOINT POWERS AUTHORITY  
APPROVING THE ELECTION OF BOARD CHAIR AND VICE CHAIR  
FOR CALENDAR YEAR 2022**

**BE IT RESOLVED** that Resolution 2021-33 is hereby repealed; and

**BE IT FURTHER RESOLVED** that after completing nominations and an election, the Board of Directors of the Capital SouthEast Connector Joint Powers Authority ("Board") hereby elects the director \_\_\_\_\_ to serve as Chair of the Board and the director \_\_\_\_\_ to serve as Vice-Chair of the Board.

This Resolution shall take effect immediately after its passage and adoption.

\* \* \* \* \*

PASSED AND ADOPTED this 28<sup>th</sup> day of January 2022, on a motion by  
Director \_\_\_\_\_, seconded by Director \_\_\_\_\_, by the following  
vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

\_\_\_\_\_  
Chairperson

ATTEST:

\_\_\_\_\_  
Secretary

## **ITEM 14**

**MEETING DATE:** January 28, 2022

**TITLE:** Review of Connector Project Benefit-Cost Analysis prepared by Economic Planning Systems, Inc.

**PREPARED BY:** Derek Minnema

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### **RECOMMENDATION**

Review this draft report and provide input as desired.

### **BACKGROUND**

A Benefit-Cost Analysis (“BCA”) is a standard process for identifying, quantifying, and comparing expected benefits and costs of a potential infrastructure project.

The 34-mile Connector project BCA was prepared by Economic & Planning Systems, Inc. (“EPS”), a full-service economic consulting firm with more than 30 years of experience in the fields of land use economics, municipal finance, and real estate market analysis, among others.

This BCA was completed to the standards as set forth by the US Department of Transportation (“USDOT”) as described in the 2021 Benefit-Cost Analysis Guidance for Discretionary Grant Programs (BCA Guidance).

### **EXECUTIVE SUMMARY**

EPS has shared with staff that the 34-mile Connector project demonstrates some of the most significant benefits of a transportation project that they have worked on.

The BCA finds a benefit-to-cost ratio of at least **2.81:1** at an annual discount factor of 7 percent, as recommended by OMB Circular A-94. Depending on the discount factor applied to the future stream of benefits and costs, this ratio could significantly increase; for example, **this ratio rises to 3.94:1** at a discount rate of 3 percent.

The 34-mile project reduces greenhouse gases, pollutant emissions, vehicle miles traveled, and regional congestion.



Development of the 34-mile project will dramatically improve roadway conditions and safety, reducing vehicle crashes and improving access and response times for emergency response services.

Additionally, the multi-modal project will create access to bicycle facilities that may induce new previously sedentary users to exercise. The BCA estimates the monetized value of improved journey quality benefits. As defined by the California Department of Transportation, journey quality benefits are the perceived benefit due to an enhanced quality of the trip for pedestrians and cyclists that arise from a greater feeling of safety, comfort, aesthetics, and other types of improvements.

Completing the project will support the economic vitality of Sacramento and El Dorado Counties and the surrounding region.

The project results in an overall positive benefit, as defined in the BCA Guidance. The project supports each of the five long-term outcomes typically addressed by benefit-cost analyses, as required for many USDOT grant applications: economic competitiveness, state of good repair, safety, quality of life, and environmental sustainability.

## **REVIEW OF PROJECT BENEFITS**

Total project benefits calculate to **\$1,685,849,375**. Using the mandated 7 percent discount factor to determine Net Present Value, the benefit is \$590,642,380.

- Travel Time Savings - Existing Users

The new roadway will facilitate improved traffic flow and more direct traffic routes, reducing Vehicle Hours Traveled (VHT) and travel time estimates. Existing users are defined in this BCA as users who would continue to use the existing roadway absent any improvements.

- Travel Time Savings - New Users (*Discounted 50%*)

Reductions for new users are estimated by isolating only the growth in average daily trips related to users who would not be willing to use the existing roadway under current conditions, i.e. the difference in Average Daily Trips (ADT) from the No Build Scenario to the Build Scenario. According to the BCA Guidance, the time savings for new users is equal to one-half of the value for existing users.

Note: Travel Time Savings is 250 travel days per year (excluding weekends and holidays).

- Reduced Freight Truck Miles Traveled

Under current conditions, existing quarries in the market area are not operating at peak efficiency because of transportation constraints and therefore cannot meet demand for aggregate in the market area. To meet existing demand, aggregate is being transported to the market area from quarries located in the Cities of Woodland and Marysville in Yolo and Yuba Counties, respectively. These facilities are considered to be the next best alternative for delivery of aggregate to the market area. The project will allow for additional movement of aggregate from local quarries throughout the region.

- Avoided Rehabilitation Costs

The existing roadway was constructed more than 60 years ago and is well beyond its useful life. The roadway has failing pavement with a current pavement condition index of below 60, based on the County of Sacramento Pavement Condition Report, completed in 2019. Under current conditions, it is anticipated an ongoing investment of \$39 per square yard would be required to maintain the current roadway condition. Because of budgetary constraints, Sacramento County is unable to perform the required maintenance, and the condition of the roadway continues to deteriorate.

- Safety Benefits

The existing geometrics of roadway through the Project area are primarily a 2-lane, undivided, unlit, rural roadway on rolling terrain, with a non-engineered alignment following natural contours. The corridor has minimal to no shoulders, steep roadside ditches, and non-standard clear recovery zones caused by the proximity of obstructions such as trees, utility poles, and steep side slopes. The result of these conditions is an alignment consisting of short vertical curves, creating unsafe driving conditions because of limited decision and stopping sight distances and inadequate design speeds.

An estimate of the reduction in fatalities, injury, and property damage incidents along the project from the No Build Scenario to the Build Scenario is determined using the California Life-Cycle Benefit/Cost Analysis Model.

- Cyclist and Pedestrian Benefits

The project will create access to bicycle facilities that may induce new users that were previously sedentary to exercise. It is well documented that increased physical activity has many health benefits, while inactivity results in higher medical and related costs.

- Reduced Vehicle Emissions: Auto

As the project results in a diversion of traffic from congested roadways elsewhere in the Sacramento Region, the project is anticipated to result in a net decrease in most harmful vehicle emissions. Calculation of the change in emissions in metric tons from the No Build Scenario to the Build Scenario is estimated using the California Life-Cycle Benefit/Cost Analysis Model.

- Reduced Vehicle Emissions: Cyclists

In addition to the decrease in emissions resulting from improved travel speeds and diversion from congested highways, the project includes a protected bike path, allowing for commuters to cycle to work in lieu of taking an automobile. The increase in commuter cyclists will result in a decrease in emissions as estimated by the California Active Transportation Benefit/Cost Analysis Model.

## **SUMMARY**

The benefit-cost ratio achieved in the analysis is significantly greater than one, even in the absence of potential additional calculations listed above, which are anticipated to increase the total net benefits of the Project.

In many ways, the BCA Guidance results in a conservative analysis of benefits. Where appropriate, EPS included a discussion of potential ranges of benefits for specific benefit categories beyond the USDOT-approved calculations.

## **ATTACHMENTS**

- a. Draft Benefit-Cost Analysis, dated January 10, 2022



## **TECHNICAL MEMORANDUM**

To: Capital Southeast Connector Joint Powers Authority  
From: David Zehnder and Sean Fisher  
Subject: Capital Southeast Connector Benefit-Cost Analysis;  
EPS #212076  
Date: January 10, 2022

This memorandum provides the Benefit-Cost Analysis (BCA) of the Capital Southeast Connector Project (Project or Connector), an innovative, smart corridor, 34-mile expressway. This BCA has been completed at the request of the Capital Southeast Connector Joint Powers Authority (JPA).

This analysis was prepared by Economic & Planning Systems, Inc. (EPS), a full-service economic consulting firm, with more than 30 years of experience in the fields of land use economics, municipal finance, and real estate market analysis, among others. This analysis was informed by information provided by the JPA, Mark Thomas & Company (Mark Thomas), and Kimley Horn.

This BCA has been completed to the standards as set forth by the US Department of Transportation (USDOT) as described in the 2021 Benefit-Cost Analysis Guidance for Discretionary Grant Programs (BCA Guidance). In many ways, the BCA Guidance results in a conservative analysis of benefits. Where appropriate, EPS has included in this BCA a discussion of potential ranges of benefits for specific benefit categories beyond the USDOT-approved calculations.

## **Introduction and Executive Summary**

The Project is a 34-mile expressway, connecting Interstate 5 with Highway 50, resulting in reduced regional congestion and vehicle miles traveled (VMT) and enhanced goods movement, and the Connector supports the regionally significant rural economy. The Project will convert the existing 2-lane rural road into a modern 4-lane expressway. The existing roadway requires significant improvement and has several noted safety concerns. Development of the Project will improve roadway conditions and safety, reducing

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Oakland  
Sacramento  
Denver  
Los Angeles

vehicle crashes and improving access and response times for emergency response services.

Project development will improve roadway capacity and freight throughput, enhance traffic operations and safety, improve climate change adaptability and resilience, enhance transportation equity, and benefit the regional and national economy.

### **No Project—Baseline Conditions**

Under the No Project (also referred to as the No Build) alternative, the Project will not develop, including no further development of other roadway segments of the Connector beyond those already completed. It is assumed the existing roadway will remain under current conditions and no other alternative roadways are developed or other roadway improvements or replacement projects occur.

### **Proposed Project**

The Project will widen 34 miles of roadway from a narrow, 2-lane, rural or suburban road into a divided 4-lane expressway. The Project includes the construction of 4 continuous lanes from Interstate 5 and State Route 99 in Elk Grove to the new Silva Valley interchange at Highway 50 in El Dorado Hills, expanded at-grade intersections at all major access points, and a continuous path for pedestrians, bicyclists, and equestrians. Because of the condition of the existing roadway, development of the Project will greatly improve roadway capacity, allowing for improved freight movement through the region and additional economic development in the surrounding areas.

The existing roadway was constructed more than 60 years ago and is well beyond its useful life. The majority of the roadway was designed to service rural agricultural land use and not serve as a regional freight route. The Project will provide necessary improvements to the roadway, allowing for increased commercial and passenger vehicle and freight traffic and safer operating conditions. In addition to regional freight and economic benefits, the Project will enhance the quality of life of the region by providing access to a safe commuter and recreational bike path and a multimodal transit station.

Under the Project (also referred to as the Build) alternative, the entire Connector will develop.

### **Findings**

#### ***Project Effect on Long-Term Outcomes***

The Project is considered necessary to eliminate existing geometric deficiencies, enhance vehicle safety, provide cycle and multimodal transit access, and create additional roadway capacity, improving freight operations and throughput along the corridor. Completion of the Project will support the economic vitality of Sacramento and El Dorado Counties (Counties) and the surrounding region. The Project results in an overall positive benefit, as defined in the BCA Guidance. The Project supports each of the 5 long-term outcomes typically addressed by benefit-cost analyses, as required for many USDOT

grant applications: economic competitiveness, state of good repair, safety, quality of life, and environmental sustainability. One of the purposes for completion of this BCA is to provide a study that can be adapted for individual segments as the JPA seeks future grant funding for the development of individual segments of the Project.

The BCA attempts to quantify as many of the economic benefits and costs associated with the Project as is feasible, given available data, information resources, and time. The BCA finds a benefit-to-cost ratio of at least 2.81:1 at a discount factor of 7 percent, as recommended by OMB Circular A-94. Depending on the discount factor applied to the future stream of benefits and costs, this ratio could significantly increase, for example, this ratio rises to 3.94:1 at a discount rate of 3 percent.

As is described further in the section below, it is likely the analysis is conservative in its approach, and further monetization of benefits and costs would reveal a higher benefit-to-cost ratio.

### ***Sensitivity of Assumptions***

The findings of the BCA are dependent on key assumptions that drive the model. Changing these assumptions will affect the estimates of total costs and total benefits. The model uses assumptions that are as rigorous and specific to local conditions as possible. Sensitivity analyses could be performed by changing many of the assumptions used in the model; however, the model was built using the most conservative of assumptions, and it is assumed the BCA provides an estimate of the minimum benefit-cost ratio that could be achieved.

## **Benefit-Cost Analysis**

Development of the Project is anticipated to be completed in segments, with construction from 2026 through 2033. Costs and benefits are estimated for 20 years of Project operations, beginning in 2026 and ending in 2047. The proposed Project analysis results are presented in **Table 1** by benefit and cost category. Benefits and costs are shown undiscounted and discounted using both 7 percent and 3 percent year-end discount factors.

The BCA is intentionally limited and inherently conservative because of these factors:

- Benefits resulting from Reduced Freight Truck Miles Traveled are included based on the increased freight movement made possible with development of the Project. Reduction in VMT is estimated based on the distance traveled to reach the edge of the market area served by the quarry, located just outside the Project area, by trucks originating from the next best quarry alternatives, located in the nearby counties of Yolo and Yuba. The actual distance saved could be much greater depending on where trucks travel in the market area. To be conservative, this analysis further reduces the vehicle miles saved by a factor of 50 percent to account for aggregate needs located near the market area boundaries. As the majority of demand for the aggregate shipments is located near the Project area and further east, this adjustment most

likely results in a vehicle mile reduction below what will be experienced, resulting in a conservative benefit estimate. In addition, quarry benefits estimated in this BCA reflect the increased activity of existing quarries only. It is anticipated that development of the Project will facilitate additional quarries to develop. As the Build alternative does not reflect additional development beyond the Project, additional quarries are not assumed to develop.

- The BCA includes only avoided maintenance costs related to a one-time repair/replacement of the existing roadway. It is assumed that following this repair, additional maintenance would be required approximately every 7 years. As this maintenance is not being performed on the current roadway, no additional avoided rehabilitation costs are included.
- In addition to the roadway improvements, the Project is envisioned to contain a multimodal transit center, improving access to alternative transportation methods for nearby communities, including underserved communities. As benefits related to the multimodal transit center rely in part on future residential development surrounding the Project not reflected in the Build scenario, no transit center benefits are estimated in the analysis.
- Similar to the freight benefits estimated in this BCA, there is the existing Keifer Landfill, located adjacent to the Project. Access to Keifer Landfill is constrained by roadway access and available freight routes. Development of the Project will improve access to the landfill, allowing for increased waste transportation options. Estimated benefits of increased landfill activity could be estimated based on decreased VMT by waste management vehicles, similar to the estimate of increased freight activity included in this BCA. As specific data pertaining to waste management truck traffic patterns and the alternative landfill options are not available at this time, no landfill benefits are estimated.
- All non-fatal crash incidents eliminated through development of the Project resulting in personal injury are assumed to be moderate in nature, the lowest level of injury-causing incident included in the BCA Guidance. In reality, a portion of these incidents would be classified as severe, but as there is no available information as to the categorization of incidents reduced, this analysis conservatively assumes monetized benefits equivalent to moderate incidents only.
- The existing roadway facility is prone to flooding on bad weather days and as such traffic is frequently diverted to other roadways or is required to move at significantly lower speeds. The Project will greatly reduce flooding issues along the segment, potentially resulting in additional time-saving benefits. As detailed data related to required traffic diversions are not available at this time, and to avoid double counting of any reduced speed-related benefits that may be included in travel time savings benefits captured elsewhere in the BCA, no flood resiliency benefits are included in this analysis beyond any captured by the time travel savings benefits estimated for existing users.

- The grassland surrounding the Project is subject to frequent grass fires. In recent years, several significant fires have occurred in the area immediately adjacent to the Project, and more frequent fires are expected because of climate change. Completion of the Project will result in faster evacuation times and easier access for emergency response vehicles. These may result in significant benefits pertaining to avoided personal and property damage. Because of uncertainty inherent to fire data, no fire resiliency benefits are estimated in this analysis.

The benefit-cost ratio achieved in the analysis is significantly greater than one, even in the absence of potential additional calculations listed above, which are anticipated to increase the total net benefits of the Project. It should be noted that many data restrictions could be resolved with additional time to conduct market research needed to support the previously discussed items.

The sections below discuss the methodology used to estimate benefits and costs associated with the Project. All costs and benefits are reported in 2021 dollars in this analysis unless otherwise stated.

### Key Assumptions

The demand forecast used to calculate individual benefit categories varies based on the affected population and is detailed in the discussion of proposed Project benefits below. Listed below is a brief summary of key assumptions used to calculate multiple Project benefits:

- **Average Daily Trips.** Average Daily Trips (ADT) estimates are the demand factor used to estimate changes to VMT, vehicle hours traveled (VHT), and associated benefits. ADT estimates are based on information included in the Travel Demand Model (TDM) Update Summary, completed by Kimley Horn, dated October 13, 2021. The TDM update reflected ADT values across all segments, with a 2016 baseline through 2040. This analysis assumes linear growth in ADT through the Project development period. Daily trips are the average estimated daily trips of all roadway segments.
- **VMT.** Safety and emissions benefits are estimated using the estimated reductions in VMT resulting from Project development. These data were estimated by applying the ADT estimates for each year of the analysis to the full segment length of 34 miles. VMT estimates for the No Build Scenario are assumed to relate to existing users, and new user VMT is the estimated growth from the No Build Scenario to the Build Scenario.
- **VHT.** Travel Time Savings benefits are estimated based on the reductions in VHT. These data were calculated by applying the estimated VMT for new and existing users to average travel speeds for the existing roadway under the No Build Scenario and the Project under the Build Scenario. Average travel speed was estimated based on data provided by Kimley Horn in the October 2021 TDM update.



The sections to follow offer a detailed accounting of the methodological approach to calculating the different benefits generated by the proposed Project as compared to a No Project alternative.

### **Proposed Project Benefits**

Summarized in **Table 1**, this BCA evaluates a variety of benefits generated by the proposed Project. Each category of Project benefit is described below, with benefits reported reflecting the incremental benefit received over the No Build baseline alternative. All numbers reported are in 2021 dollars unless otherwise specified.

#### ***Travel Time Savings***

If the Project is developed, the new roadway will facilitate improved traffic flow and more direct traffic routes, resulting in reduced VHT and travel time estimates, despite increased daily trips and higher VMT. The Travel Time Savings benefit was estimated using the following data:

- VHT reduction data for existing and new users.
- Average vehicle occupancy factors and hourly travel time values from the BCA Guidance.
- US gross domestic product (GDP) price deflators, as provided by the Bureau of Economic Analysis, current as of July 2021.

#### **Existing Users**

Existing users are defined in this BCA as users who would continue to use the existing roadway absent any improvements. VMT and VHT estimates for existing users are based on the ADT estimates assuming a No Build Scenario as reported in the TDM.

Travel Time Savings are estimated beginning with the first year of operations, 2026, through the end of the BCA analysis, 2047, representing 20 years following buildout of the Project. The estimated VHT reduction resulting from the following scenarios are used in calculating the Travel Time Savings:

- **No Build.** Conditions assuming the Project is not built.
- **Build.** Conditions assuming the Project is built, and the trip length estimates remain the same as for the No Build Scenario. Only the roadway improvements and associated average speed estimates change from the No Build Scenario.

This approach focuses on the VHT reduction benefitting existing and future roadway users impacted by development of the Project based on ADT estimates provided in the TDM as described in the previous section. Estimated percentages of passenger and commercial vehicles under the Build and No Build Scenarios were provided in the TDM. These percentages were applied to the VHT estimates for both existing and new users to estimate appropriate Travel Time Savings benefits for each user type.

Daily VHT estimates for passenger and commercial vehicles are used to calculate the reduction in daily VHT for the Build Scenario as compared to the No Build Scenario for each type of vehicle. The VHT reduction is based on a current average speed of 37 miles per hour and a Project speed following Project construction of 51 miles per hour applied to the total daily VMT. The annual travel time in person-hours saved is calculated for passenger vehicles and for commercial vehicles as follows:

- Daily VHT reduction for years 2026 through 2047.
- Annual VHT reduction = Daily VHT reduction \* 250 travel days per year (excluding weekends and holidays).
- Annual person VHT reduction = Annual VHT reduction \* Average vehicle occupancy.

For each type of vehicle, the BCA Guidance provides a time savings value per person-hour that is applied to the annual person-hours saved to estimate the average annual Travel Time Savings values.

The total value of time saved to existing users is estimated at \$1.2 billion in undiscounted 2021 dollars and \$428.3 million when discounted using a 7 percent discount factor.

New Users

Daily VHT reductions for new users are estimated using the same methodology as described in the above section but isolating only the growth in ADT related to users who would not be willing to use the existing roadway under current conditions, defined as the difference in ADT from the No Build Scenario to the Build Scenario. Similar to existing users, the annual travel time in person-hours saved is calculated for passenger vehicles and commercial vehicles as follows:

- Daily VHT reduction for years 2026 through 2045.
- Annual VHT reduction = Daily VHT reduction \* 250 travel days per year (excluding weekends and holidays).
- Annual person VHT reduction = Annual VHT reduction \* Average vehicle occupancy.

For each type of vehicle, the BCA Guidance provides a time savings value per person-hour that is applied to the annual person-hours saved to estimate the average annual Travel Time Savings values. According to the BCA Guidance, the time savings per value figure for new users is equal to one-half of the value for existing users.

The total value of time saved to new users is estimated at \$204.3 million in undiscounted 2021 dollars and \$83.1 million when discounted using a 7 percent discount factor.

**Table 2** through **Table 5** detail the Travel Time Savings and annual VHT reduction calculations for existing and new users.

### Value of Time Saving Sensitivity

While the BCA is based on the value of time saved assumptions as dictated by the BCA Guidance, more region-specific assumptions are estimated by the California Department of Transportation. These assumptions are slightly higher than those included in the BCA Guidance and result in an increased Travel Time Savings benefit to new and existing users of \$1.46 billion in undiscounted 2021 dollars, an increase of \$77 million, and \$540.1 million when discounted using a 7 percent discount factor.

### **Vehicle Operations Cost Savings of Freight Traffic**

The Project will allow for additional movement of aggregate from local quarries throughout the region. Based on estimates included in the East Sacramento Region Aggregate Mining Truck Management Plan Final Technical Report (Freight Report), prepared by DKS Associates Transportation Solutions, dated December 2011, existing quarry facilities located near the Project are producing below optimal efficiency and are not meeting aggregate demands within the regional market area. The market area, as defined in the Freight Report, includes Sacramento County and a portion of El Dorado County terminating east of Pollock Pines.

Under current conditions, the existing quarry in the market area is not operating at peak efficiency because of transportation constraints and cannot meet demand for aggregate in the market area. To meet existing aggregate demand, aggregate is being transported to the market area from quarries located in the Cities of Woodland and Marysville in Yolo and Yuba Counties, respectively. Approximately one-half of all demand not met by the existing quarry in the market area is being provided from each outside quarry. These facilities are considered to be the next best alternative for delivery of aggregate to the market area.

The existing roadway was not designed for freight activity and is not in a state of good repair. As such, development of the Project will result in increased roadway capacity for existing facilities, allowing for additional production, meeting demand needs in the market area. Trucks providing aggregate would experience a significant reduction in trip lengths as they will originate from the facility located in the area as opposed to those outside.

Based on information included in the Freight Report, development of the Project would allow for at least 419,000 tons of aggregate to travel through the Project. For estimation of benefits, the BCA considers the trucks containing this aggregate to be new users, and any associated benefits are discounted by 50 percent as dictated by the BCA Guidance, resulting in a conservative estimate of benefits.

To arrive at an estimate of the growth in annual trips, the BCA applies a factor of 5.8 tons of aggregate per truck to the anticipated annual output, based on information provided in the Freight Report. Trip length reduction has been estimated based on the average distances traveled by trucks from existing facilities in Yolo and Yuba Counties to enter the market area served by the Project. On average, a truck coming from a facility outside of the market area travels approximately 21 miles to access the market area. Although the majority of demand for aggregate is located within the area immediately surrounding the

Project, an additional adjustment of 50 percent was applied to the average miles traveled to enter the market area to account for any demand needed near the market area boundary to arrive at the number of miles saved per trip.

Using methodologies included in the BCA Guidance, the benefit of travel time reduction is estimated based on a vehicle cost savings factor for commercial vehicles applied to the total annual vehicle mile reduction.

**Table 6** details the calculation of freight vehicle mile reduction and the associated cost savings calculations.

The total vehicle operations cost saving is estimated at \$7.9 million in undiscounted 2021 dollars and \$3.0 million when discounted using a 7 percent discount factor.

### ***Avoided Rehabilitation Costs***

The existing roadway was constructed more than 60 years ago and is well beyond its useful life. The roadway has failing pavement with a current pavement condition index of below 60, based on the County of Sacramento Pavement Condition Report, completed in 2019. Under current conditions, it is anticipated an ongoing investment of \$39 per square yard would be required to maintain the current roadway condition. Because of budgetary constraints, Sacramento County is unable to perform the required maintenance, and the condition of the roadway continues to deteriorate. As a result, it was estimated at the time of completion of the Pavement Condition Report, that in 5 to 10 years, Sacramento County would be required to perform deferred maintenance/replacement of the existing roadway at an increased one-time cost of \$54 per square yard.

At this point, the roadway would require additional maintenance to maintain a state of good repair, but the actual performance of any additional maintenance is uncertain at this time. To remain conservative, the BCA assumes the one-time cost will be incurred only when Sacramento County has no further ability to defer maintenance, and no further maintenance to the existing road is assumed following the initial remediation. Estimates of the benefits related to avoided rehabilitation costs are computed in **Table 7**.

At the end of the analysis period, the estimated avoided rehabilitation cost-benefit is \$25.9 million in undiscounted 2021 dollars and \$15.0 million when applying a 7 percent discount factor.

### ***Residual Value of Improvements***

Because the Project improvements are expected to have a useful life beyond the analysis timeframe, the residual value of the improvements is included as a Project benefit, computed in **Table 8**. The value of the Project improvements is apportioned over the identified useful life using a straight-line depreciation approach. The residual value of the improvements is calculated by subtracting accumulated depreciation at the end of the analysis period from the original Project cost.

At the end of the analysis period, the estimated residual value of the improvements is \$189.0 million in undiscounted 2021 dollars and \$32.5 million when applying a 7 percent discount factor.

### ***Improved Safety Benefit***

The existing geometrics of roadway through the Project area are primarily a 2-lane, undivided, unlit, rural roadway on rolling terrain, with a non-engineered alignment following natural contours. The corridor has minimal to no shoulders, steep roadside ditches, and non-standard clear recovery zones caused by the proximity of obstructions such as trees, utility poles, and steep side slopes. The result of these conditions is an alignment consisting of short vertical curves, creating unsafe driving conditions because of limited decision and stopping sight distances and inadequate design speeds.

An estimate of the reduction in fatalities, injury, and property damage incidents along the Project from the No Build Scenario to the Build Scenario is determined using the California Life-Cycle Benefit/Cost Analysis Model, as provided by the California Department of Transportation (CAL-B/C Sketch) Version 7.2 Corridor.

Using the methodology as defined in the BCA Guidance, the annual incident reduction was multiplied by the monetized unit value for a MAIS-level fatal (Not Survivable) incident for fatalities, MAIS-level 2 (Moderate) for incidents resulting in injury, and property damage-only events benefit for property damage incidents.

The total safety benefit is estimated at \$43.5 million in undiscounted 2021 dollars and \$17.0 million when discounted using a 7 percent discount factor. **Table 9** details the safety benefit calculations.

### ***Cyclist Benefits***

The Project will create access to bicycle facilities that may induce new users that were previously sedentary to exercise. It is well documented that increased physical activity has many health benefits, while inactivity results in higher medical and related costs. The East Carolina University College of Health and Human Performance developed an inactivity calculator to estimate the cost of inactivity. Physical inactivity contributes to injuries and illnesses and leads to higher medical and lost productivity costs. A document entitled "How the Physical Inactivity Cost Calculator Was Developed" was prepared by Active Living Leadership at San Diego State University to document how the inactivity calculator estimates costs. The steps in this document were followed to estimate the inactivity costs per person that will be avoided if the Project is built.

This cost per person serves as the benefit value to apply to the annual number of people to receive the benefit. In this analysis, persons receiving this benefit are defined as new cyclists who have new access to safe, reliable bike paths included in the Project, which will allow for access to existing regional bike paths where there are little to no safe connecting routes, therefore inducing these new users to exercise.

As shown in **Table 11**, the health savings costs consist of medical and lost productivity costs. The medical cost savings per person are increased annually by the difference in the

average medical Consumer Price Index for all Urban Consumers (CPI-U) from 2000 to 2021 and the average general CPI-U for the same time period. This annual increase is estimated in **Table 11** and acknowledges that medical costs typically outstrip the rate of inflation.

In addition to the avoided physical inactivity benefits to cyclists, the BCA estimates the monetized value of improved journey quality benefits. Journey quality benefits, as defined by the California Department of Transportation, are the perceived benefit due to an enhanced quality of the trip for pedestrians and cyclists that arise from a greater feeling of safety, comfort, aesthetics, and other types of improvements. Quality of journey benefits are estimated using the California Department of Transportation California Active Transportation Benefit/Cost Analysis Model Version 7.2.

Estimates of the number of both recreational and commuter cyclists anticipated to use the new facilities are calculated based on the California Department of Transportation California Active Transportation Benefit/Cost Analysis Model Version 7.2.

The annual health and quality benefits for the new groups of people described above are estimated by multiplying the number of new people receiving health benefits each year by the calculated benefit value per person and then discounting by 50 percent, pursuant to the BCA Guidance and to conservatively estimate new cyclists. The benefit value per cyclist is based on the avoided medical and lost productivity costs per person adjusted for inflation in the Inactivity Cost Calculator document discussed above, as well as the estimated journey quality monetized benefit.

**Table 10** provides the calculation of the annual cyclist benefits, as described above.

The total avoided physical inactivity cost and journey quality benefits are estimated at \$20.6 million in undiscounted 2021 dollars and \$5.9 million when discounted using a 7 percent discount factor.

### ***Reduction in Vehicle Emissions***

As the Project results in a diversion of traffic from congested roadways elsewhere in the Sacramento Region, the Project is anticipated to result in a net decrease in most harmful vehicle emissions. Calculation of the change in emissions in metric tons from the No Build Scenario to the Build Scenario is estimated using the California Life-Cycle Benefit/Cost Analysis Model (CAL-B/C Sketch) Version 7.2 Corridor, as provided by the California Department of Transportation. Annual benefit per unit applied to the estimated annual change in metric tons of emissions is based on monetized benefit factors included in the BCA Guidance. To the extent that any emissions are anticipated to increase because of development of the Project, a negative benefit is estimated. The benefit related to the growth of annual emissions is computed in **Table 12**.

In addition to the decrease in emissions resulting from improved travel speeds and diversion from congested highways, the Project includes a protected bike path, allowing for commuters to cycle to work in lieu of taking an automobile. The increase in commuter

cyclists will result in a decrease in emissions as estimated by the California Active Transportation Benefit/Cost Analysis Model Version 7.2 and shown in **Table 13**.

The total value of the benefit related to vehicle emissions is estimated at \$16.0 million in undiscounted 2021 dollars and \$5.9 million when discounted using a 7 percent discount factor for automobile users. The total value of the benefit related to reduced emissions is estimated at \$75,000 in undiscounted 2021 dollars and \$24,000 when discounted using a 7 percent discount factor for cyclists.

### **Proposed Project Costs**

Project costs consist of the one-time construction costs of the Project and the ongoing operations and maintenance costs incurred to maintain the new roadway. As with the benefits of the Project, only costs that are particular to this Project (such that this Project demonstrates independent utility) are included in the BCA. **Table 14** summarizes the total construction costs for the Project, which are estimated to total approximately \$315 million in 2021 dollars.

**Table 15** summarizes the anticipated operation and maintenance costs throughout the analysis period, based on the per-mile annual road maintenance cost factor calculated by the Counties. It is anticipated that the Project will require slurry seal maintenance every 7 years and a full overlay in Year 21. As this analysis encompasses the first 20 years of Project operations, slurry seal repair is assumed to happen twice during the BCA time period, and no overlay repair and maintenance is assumed.

The total estimated Project cost is \$343.7 million in undiscounted 2021 dollars and \$188.7 million when applying a 7 percent discount factor.

### **BCA Conclusions**

Construction of the Project will generate benefits totaling \$1.69 billion in undiscounted 2021 dollars and \$590.6 million using a 7 percent discount factor. Total Project costs, inclusive of operations and maintenance, amount to approximately \$343.7 million in undiscounted 2021 dollars, and \$188.7 million using a 7 percent discount factor.

After applying the 7 percent discount factor to both Project benefits and costs, the Project generates a BCA ratio of 2.81:1. When applying the 3 percent discount factor, this ratio increases to 3.94:1. Because of the conservative nature of the benefits calculated in this analysis, it is anticipated that this ratio reflects the lower bounds of the achievable benefit-to-cost ratio and monetization of additional benefits would result in improved outcomes over this baseline.

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**Table 1**  
**Southeast Connector**  
**Benefit Cost Analysis**  
**Summary of VMT Related Benefits and Costs**

Year	Project Year	PROJECT BENEFITS										PROJECT COSTS						
		Travel Time Savings - Existing Users	Travel Time Savings - New Users	Reduced Freight Truck Miles Traveled	Avoided Rehabilitation Costs	Residual Value of Improvements	Safety Benefits	Cyclist and Pedestrian Benefits	Reduced Vehicle Emissions: Auto	Reduced Vehicle Emissions: Cyclists	Total Project Benefits	Construction	Operations and Maintenance	Total Project Costs	Discounted at 7% Benefits	Discounted at 7% Costs	Discounted at 3% Benefits	Discounted at 3% Costs
<b>Table Reference:</b>		<b>Table 2</b>	<b>Table 3</b>	<b>Table 6</b>	<b>Table 7</b>	<b>Table 8</b>	<b>Table 9</b>	<b>Table 10</b>	<b>Table 12</b>	<b>Table 13</b>		<b>Table 14</b>	<b>Table 15</b>					
2021	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
2022	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
2023	2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
2024	3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
2025	4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
2026	5	\$41,380,539	\$7,973,263	\$358,102	\$0	\$0	\$2,133,723	\$48,650	\$327,348	\$513	\$52,222,137	\$24,000,000	\$0	\$24,000,000	\$37,233,662	\$17,111,668	\$45,047,274	\$20,702,611
2027	6	\$42,677,034	\$8,586,591	\$358,102	\$0	\$0	\$2,127,975	\$96,059	\$389,210	\$1,019	\$54,235,988	\$75,500,000	\$0	\$75,500,000	\$36,139,729	\$50,308,838	\$45,421,786	\$63,230,061
2028	7	\$43,973,529	\$9,199,918	\$358,102	\$0	\$0	\$2,111,469	\$183,879	\$462,032	\$1,524	\$56,290,453	\$31,500,000	\$0	\$31,500,000	\$35,054,865	\$19,616,617	\$45,769,290	\$25,612,383
2029	8	\$45,270,024	\$9,813,246	\$358,102	\$25,850,880	\$0	\$2,094,963	\$271,700	\$537,895	\$2,030	\$84,198,839	\$51,500,000	\$0	\$51,500,000	\$49,004,491	\$29,973,469	\$66,467,341	\$40,654,576
2030	9	\$46,566,520	\$10,426,574	\$358,102	\$0	\$0	\$2,078,457	\$359,520	\$616,798	\$2,535	\$60,408,506	\$69,500,000	\$0	\$69,500,000	\$32,858,225	\$37,803,395	\$46,298,090	\$53,265,963
2031	10	\$47,863,015	\$11,039,902	\$358,102	\$0	\$0	\$2,061,951	\$447,340	\$698,742	\$3,041	\$62,472,093	\$15,000,000	\$0	\$15,000,000	\$31,757,644	\$7,625,239	\$46,485,104	\$11,161,409
2032	11	\$49,159,510	\$11,653,230	\$358,102	\$0	\$0	\$2,045,445	\$535,161	\$783,727	\$1,998	\$64,537,173	\$24,000,000	\$0	\$24,000,000	\$30,661,146	\$11,402,227	\$46,623,027	\$17,338,111
2033	12	\$50,456,006	\$12,266,558	\$358,102	\$0	\$0	\$2,028,939	\$622,981	\$871,753	\$2,283	\$66,606,621	\$24,000,000	\$0	\$24,000,000	\$29,574,136	\$10,656,287	\$46,716,544	\$16,833,117
2034	13	\$51,752,501	\$12,879,886	\$358,102	\$0	\$0	\$2,012,434	\$710,801	\$503,987	\$2,568	\$68,220,278	\$0	\$0	\$0	\$28,308,990	\$0	\$46,454,690	\$0
2035	14	\$53,048,996	\$13,493,214	\$358,102	\$0	\$0	\$1,995,928	\$798,622	\$549,764	\$2,853	\$70,247,478	\$0	\$0	\$0	\$27,243,183	\$0	\$46,441,858	\$0
2036	15	\$54,345,491	\$14,106,542	\$358,102	\$0	\$0	\$1,979,422	\$886,442	\$596,653	\$3,138	\$72,275,789	\$0	\$0	\$0	\$26,196,072	\$0	\$46,391,079	\$0
2037	16	\$55,641,987	\$14,719,869	\$358,102	\$0	\$0	\$1,962,916	\$974,262	\$644,653	\$3,423	\$74,305,212	\$0	\$0	\$0	\$25,169,746	\$0	\$46,304,552	\$0
2038	17	\$56,938,482	\$15,333,197	\$358,102	\$0	\$0	\$1,946,410	\$1,062,083	\$693,765	\$3,708	\$76,335,747	\$0	\$0	\$0	\$24,165,942	\$0	\$46,184,382	\$0
2039	18	\$58,234,977	\$15,946,525	\$358,102	\$0	\$0	\$1,929,904	\$1,149,903	\$743,989	\$3,993	\$78,367,393	\$0	\$14,361,600	\$14,361,600	\$23,186,084	\$4,249,079	\$46,032,584	\$8,435,926
2040	19	\$55,641,987	\$2,456,819	\$358,102	\$0	\$0	\$1,913,398	\$1,237,724	\$795,324	\$4,277	\$62,407,631	\$0	\$0	\$0	\$17,256,230	\$0	\$35,590,200	\$0
2041	20	\$56,938,482	\$3,070,147	\$358,102	\$0	\$0	\$1,896,893	\$1,325,544	\$847,771	\$4,562	\$64,441,501	\$0	\$0	\$0	\$16,652,908	\$0	\$35,679,697	\$0
2042	21	\$58,234,977	\$3,683,475	\$358,102	\$0	\$0	\$1,880,387	\$1,413,364	\$901,330	\$4,847	\$66,476,482	\$0	\$0	\$0	\$16,054,940	\$0	\$35,734,385	\$0
2043	22	\$59,531,472	\$4,296,803	\$358,102	\$0	\$0	\$1,863,881	\$1,501,185	\$956,000	\$5,132	\$68,512,575	\$0	\$0	\$0	\$15,464,190	\$0	\$35,756,199	\$0
2044	23	\$60,827,968	\$4,910,131	\$358,102	\$0	\$0	\$1,847,375	\$1,589,005	\$949,304	\$5,417	\$70,487,302	\$0	\$0	\$0	\$14,869,077	\$0	\$35,715,334	\$0
2045	24	\$62,124,463	\$5,523,459	\$358,102	\$0	\$0	\$1,830,869	\$1,676,825	\$1,003,375	\$5,422	\$72,522,516	\$0	\$0	\$0	\$14,297,569	\$0	\$35,676,272	\$0
2046	25	\$63,420,958	\$6,136,787	\$358,102	\$0	\$0	\$1,814,363	\$1,811,195	\$1,058,533	\$5,439	\$74,605,377	\$0	\$14,361,600	\$14,361,600	\$0	\$0	\$35,631,944	\$6,859,180
2047	26	\$64,717,454	\$6,750,115	\$358,102	\$0	\$189,000,000	\$1,924,764	\$1,857,745	\$1,058,659	\$5,444	\$265,672,283	\$0	\$0	\$0	\$0	\$0	\$123,190,837	\$0
<b>Total</b>		<b>\$1,178,746,371</b>	<b>\$204,266,252</b>	<b>\$7,878,234</b>	<b>\$25,850,880</b>	<b>\$189,000,000</b>	<b>\$43,481,866</b>	<b>\$20,559,991</b>	<b>\$15,990,613</b>	<b>\$75,167</b>	<b>\$1,685,849,375</b>	<b>\$315,000,000</b>	<b>\$28,723,200</b>	<b>\$343,723,200</b>	<b>\$531,148,831</b>	<b>\$188,746,820</b>	<b>\$1,039,612,469</b>	<b>\$264,093,336</b>
<b>Discounted Total (7% discount rate)</b>		<b>\$428,450,208</b>	<b>\$83,112,032</b>	<b>\$3,021,864</b>	<b>\$15,045,448</b>	<b>\$32,544,948</b>	<b>\$17,014,002</b>	<b>\$5,941,936</b>	<b>\$5,488,213</b>	<b>\$23,729</b>	<b>\$590,642,380</b>	<b>\$184,497,741</b>	<b>\$4,249,079</b>	<b>\$188,746,820</b>				
<b>Discounted Total (3% discount rate)</b>		<b>\$490,532,643</b>	<b>\$95,154,966</b>	<b>\$3,459,732</b>	<b>\$17,225,533</b>	<b>\$37,260,711</b>	<b>\$19,479,331</b>	<b>\$6,802,922</b>	<b>\$6,283,455</b>	<b>\$27,167</b>	<b>\$676,226,461</b>	<b>\$269,269,954</b>	<b>\$13,186,532</b>	<b>\$282,456,486</b>				
<b>Benefit to Cost Ratio</b>																	<b>2.81</b>	<b>3.94</b>

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Source: EPS

**Table 2**  
**Southeast Connector**  
**Benefit Cost Analysis**  
**Annual Travel Time Savings - Existing Users**

Year	Passenger Vehicles				Commercial Vehicles			
	Daily Vehicle Hour Reduction [1]	Annual Vehicle Hour Reduction	Total Annual Person Hours Saved	Monetized Value	Daily Vehicle Hour Reduction [1]	Annual Vehicle Hour Reduction	Total Annual Person Hours Saved	Monetized Value
<b>Travel Days per Year [2]</b>		250				250		
<b>Vehicle Occupancy [3]</b>			1.67				1.00	
<b>Hourly Value per Person Hour [4]</b>				\$ 18.13				\$ 31.20
<b>2021</b>	0	0	0	\$ 0	0	0	0	\$ 0
<b>2022</b>	0	0	0	\$ 0	0	0	0	\$ 0
<b>2023</b>	0	0	0	\$ 0	0	0	0	\$ 0
<b>2024</b>	0	0	0	\$ 0	0	0	0	\$ 0
<b>2025</b>	0	0	0	\$ 0	0	0	0	\$ 0
<b>2026</b>	5,075	1,268,670	2,118,679	\$ 38,411,682	381	95,169	95,169	\$ 2,968,857
<b>2027</b>	5,234	1,308,419	2,185,059	\$ 39,615,160	393	98,150	98,150	\$ 3,061,874
<b>2028</b>	5,393	1,348,168	2,251,440	\$ 40,818,637	405	101,132	101,132	\$ 3,154,892
<b>2029</b>	5,552	1,387,916	2,317,820	\$ 42,022,115	416	104,114	104,114	\$ 3,247,909
<b>2030</b>	5,711	1,427,665	2,384,201	\$ 43,225,593	428	107,095	107,095	\$ 3,340,926
<b>2031</b>	5,870	1,467,414	2,450,581	\$ 44,429,071	440	110,077	110,077	\$ 3,433,944
<b>2032</b>	6,029	1,507,163	2,516,961	\$ 45,632,549	452	113,059	113,059	\$ 3,526,961
<b>2033</b>	6,188	1,546,911	2,583,342	\$ 46,836,027	464	116,041	116,041	\$ 3,619,978
<b>2034</b>	6,347	1,586,660	2,649,722	\$ 48,039,505	476	119,022	119,022	\$ 3,712,996
<b>2035</b>	6,506	1,626,409	2,716,103	\$ 49,242,983	488	122,004	122,004	\$ 3,806,013
<b>2036</b>	6,665	1,666,158	2,782,483	\$ 50,446,461	500	124,986	124,986	\$ 3,899,031
<b>2037</b>	6,824	1,705,906	2,848,864	\$ 51,649,939	512	127,968	127,968	\$ 3,992,048
<b>2038</b>	6,983	1,745,655	2,915,244	\$ 52,853,417	524	130,949	130,949	\$ 4,085,065
<b>2039</b>	7,142	1,785,404	2,981,624	\$ 54,056,895	536	133,931	133,931	\$ 4,178,083
<b>2040</b>	6,824	1,705,906	2,848,864	\$ 51,649,939	512	127,968	127,968	\$ 3,992,048
<b>2041</b>	6,983	1,745,655	2,915,244	\$ 52,853,417	524	130,949	130,949	\$ 4,085,065
<b>2042</b>	7,142	1,785,404	2,981,624	\$ 54,056,895	536	133,931	133,931	\$ 4,178,083
<b>2043</b>	7,301	1,825,153	3,048,005	\$ 55,260,372	548	136,913	136,913	\$ 4,271,100
<b>2044</b>	7,460	1,864,901	3,114,385	\$ 56,463,850	560	139,894	139,894	\$ 4,364,117
<b>2045</b>	7,619	1,904,650	3,180,766	\$ 57,667,328	572	142,876	142,876	\$ 4,457,135
<b>2046</b>	7,778	1,944,399	3,247,146	\$ 58,870,806	583	145,858	145,858	\$ 4,550,152
<b>2047</b>	7,937	1,984,148	3,313,526	\$ 60,074,284	595	148,840	148,840	\$ 4,643,170

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Source: Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021); Bureau of Economic Analysis, National Income and Product Accounts, Table 1.1.9, "Implicit Price Deflators for Gross Domestic Product" (March 2021); Capital Southeast Connector, Travel Demand Model (TDM) Update Summary, completed by Kimley Horn, Dated October 13, 2021; EPS.

[1] Refer to Table 5 for details.

[2] Excludes weekends and 10 holidays per year.

[3] Obtained from the Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021).

[4] Obtained from the Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021) and escalated to 2021 dollars using the Q4 GDP price deflator for 2019 and 2021 as provided by the Bureau of Economic Analysis.

**Table 3**  
**Southeast Connector**  
**Benefit Cost Analysis**  
**Annual Travel Time Savings - New Users**

Year	Passenger Vehicles				Commercial Vehicles			
	Daily Vehicle Hour Reduction [1]	Annual Vehicle Hour Reduction	Total Annual Person Hours Saved	Monetized Value	Daily Vehicle Hour Reduction [1]	Annual Vehicle Hour Reduction	Total Annual Person Hours Saved	Monetized Value
<b>Travel Days per Year [2]</b>		250				250		
<b>Vehicle Occupancy [3]</b>			1.67				1.00	
<b>Hourly Value per Person Hour [4]</b>				\$ 18.13				\$ 31.20
<b>Adjustment for New Users [3]</b>				50%				50%
<b>2021</b>	0	0	0	\$ 0	0	0	0	\$ 0
<b>2022</b>	0	0	0	\$ 0	0	0	0	\$ 0
<b>2023</b>	0	0	0	\$ 0	0	0	0	\$ 0
<b>2024</b>	0	0	0	\$ 0	0	0	0	\$ 0
<b>2025</b>	0	0	0	\$ 0	0	0	0	\$ 0
<b>2026</b>	1,956	488,898	816,460	\$ 7,401,219	147	36,674	36,674	\$ 572,044
<b>2027</b>	2,106	526,506	879,265	\$ 7,970,543	158	39,496	39,496	\$ 616,047
<b>2028</b>	2,256	564,114	942,070	\$ 8,539,868	169	42,317	42,317	\$ 660,050
<b>2029</b>	2,407	601,721	1,004,874	\$ 9,109,193	181	45,138	45,138	\$ 704,054
<b>2030</b>	2,557	639,329	1,067,679	\$ 9,678,517	192	47,959	47,959	\$ 748,057
<b>2031</b>	2,708	676,936	1,130,484	\$ 10,247,842	203	50,780	50,780	\$ 792,060
<b>2032</b>	2,858	714,544	1,193,288	\$ 10,817,166	214	53,601	53,601	\$ 836,064
<b>2033</b>	3,009	752,151	1,256,093	\$ 11,386,491	226	56,422	56,422	\$ 880,067
<b>2034</b>	3,159	789,759	1,318,897	\$ 11,955,815	237	59,243	59,243	\$ 924,071
<b>2035</b>	3,309	827,367	1,381,702	\$ 12,525,140	248	62,064	62,064	\$ 968,074
<b>2036</b>	3,460	864,974	1,444,507	\$ 13,094,464	260	64,886	64,886	\$ 1,012,077
<b>2037</b>	3,610	902,582	1,507,311	\$ 13,663,789	271	67,707	67,707	\$ 1,056,081
<b>2038</b>	3,761	940,189	1,570,116	\$ 14,233,113	282	70,528	70,528	\$ 1,100,084
<b>2039</b>	3,911	977,797	1,632,921	\$ 14,802,438	293	73,349	73,349	\$ 1,144,087
<b>2040</b>	603	150,645	251,578	\$ 2,280,554	45	11,301	11,301	\$ 176,265
<b>2041</b>	753	188,253	314,382	\$ 2,849,879	56	14,122	14,122	\$ 220,268
<b>2042</b>	903	225,861	377,187	\$ 3,419,203	68	16,943	16,943	\$ 264,272
<b>2043</b>	1,054	263,468	439,992	\$ 3,988,528	79	19,764	19,764	\$ 308,275
<b>2044</b>	1,204	301,076	502,796	\$ 4,557,853	90	22,585	22,585	\$ 352,279
<b>2045</b>	1,355	338,683	565,601	\$ 5,127,177	102	25,406	25,406	\$ 396,282
<b>2046</b>	1,505	376,291	628,406	\$ 5,696,502	113	28,227	28,227	\$ 440,285
<b>2047</b>	1,656	413,898	691,210	\$ 6,265,826	124	31,048	31,048	\$ 484,289

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Source: Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021); Bureau of Economic Analysis, National Income and Product Accounts, Table 1.1.9, "Implicit Price Deflators for Gross Domestic Product" (March 2021); Capital Southeast Connector, Travel Demand Model (TDM) Update Summary, completed by Kimley Horn, Dated October 13, 2021; EPS.

- [1] Refer to Table 5 for details.
- [2] Excludes weekends and 10 holidays per year.
- [3] Obtained from the Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021).
- [4] Obtained from the Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021) and escalated to 2021 dollars using the Q4 GDP price deflator for 2019 and 2021 as provided by the Bureau of Economic Analysis.

**Table 4**  
**Southeast Connector**  
**Benefit Cost Analysis**  
**Daily VMT Estimates**

Year	Average Daily Trips [1]			Daily Vehicle Miles Traveled (VMT)		
	No Build	Build	Growth	No Build	Build	Growth
<b>Segment Length:</b>				34 miles	34 miles	
2021	0	0	0	0	0	0
2022	0	0	0	0	0	0
2023	0	0	0	0	0	0
2024	0	0	0	0	0	0
2025	0	0	0	0	0	0
2026	21,627	29,961	8,334	735,304	1,018,663	283,359
2027	22,304	31,279	8,975	758,342	1,063,497	305,156
2028	22,982	32,598	9,616	781,380	1,108,332	326,953
2029	23,659	33,917	10,257	804,417	1,153,167	348,749
2030	24,337	35,235	10,898	827,455	1,198,001	370,546
2031	25,015	36,554	11,540	850,493	1,242,836	392,343
2032	25,692	37,873	12,181	873,531	1,287,671	414,140
2033	26,370	39,191	12,822	896,569	1,332,505	435,937
2034	27,047	40,510	13,463	919,607	1,377,340	457,734
2035	27,725	41,829	14,104	942,644	1,422,175	479,530
2036	28,402	43,147	14,745	965,682	1,467,009	501,327
2037	29,080	44,466	15,386	988,720	1,511,844	523,124
2038	29,758	45,785	16,027	1,011,758	1,556,679	544,921
2039	30,435	47,103	16,668	1,034,796	1,601,513	566,718
2040	29,080	31,648	2,568	988,720	1,076,032	87,312
2041	29,758	32,967	3,209	1,011,758	1,120,867	109,109
2042	30,435	34,285	3,850	1,034,796	1,165,701	130,906
2043	31,113	35,604	4,491	1,057,834	1,210,536	152,703
2044	31,790	36,923	5,132	1,080,871	1,255,371	174,499
2045	32,468	38,241	5,773	1,103,909	1,300,205	196,296
2046	33,146	39,560	6,414	1,126,947	1,345,040	218,093
2047	33,823	40,879	7,056	1,149,985	1,389,875	239,890

*ann vmt*

Source: Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021); Bureau of Economic Analysis, National Income and Product Accounts, Table 1.1.9, "Implicit Price Deflators for Gross Domestic Product" (March 2021); Capital Southeast Connector, Travel Demand Model (TDM) Update Summary, completed by Kimley Horn, Dated October 13, 2021; EPS.

[1] Based on information included in the Travel Demand Model (TDM) Update Summary, completed by Kimley Horn dated October 13, 2021. The TDM update reflected average daily trip values across all segments with a 2016 baseline through 2040. This analysis assumes a linear growth in average daily trips through the Project development period. Daily trips are the average estimated daily trips of all roadway segments.

**Table 5**  
**Southeast Connector**  
**Benefit Cost Analysis**  
**Daily VHT Reduction by User Type**

Year	Existing Users						New Users					
	Daily Vehicle Miles Traveled (VMT)	Daily Vehicle Hours (VHT)		Increase/(Decrease) in VHT			Daily Vehicle Miles Traveled (VMT)	Daily Vehicle Hours (VHT)		Increase/(Decrease) in VHT		
		No Build	Build	Passenger Vehicles	Commercial Vehicles	Total		No Build	Build	Passenger Vehicles	Commercial Vehicles	Total
<b>Average User Speed [1]:</b>		37 mph	51 mph					37 mph	51 mph			
<b>Percent of All Users [2]:</b>				93.0%	7.0%					93.0%	7.0%	
<b>2021</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>2022</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>2023</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>2024</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>2025</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>2026</b>	735,304	19,873	14,418	(5,075)	(381)	(5,455)	283,359	7,658	5,556	(1,956)	(147)	(2,102)
<b>2027</b>	758,342	20,496	14,869	(5,234)	(393)	(5,626)	305,156	8,247	5,983	(2,106)	(158)	(2,264)
<b>2028</b>	781,380	21,118	15,321	(5,393)	(405)	(5,797)	326,953	8,837	6,411	(2,256)	(169)	(2,426)
<b>2029</b>	804,417	21,741	15,773	(5,552)	(416)	(5,968)	348,749	9,426	6,838	(2,407)	(181)	(2,587)
<b>2030</b>	827,455	22,364	16,225	(5,711)	(428)	(6,139)	370,546	10,015	7,266	(2,557)	(192)	(2,749)
<b>2031</b>	850,493	22,986	16,676	(5,870)	(440)	(6,310)	392,343	10,604	7,693	(2,708)	(203)	(2,911)
<b>2032</b>	873,531	23,609	17,128	(6,029)	(452)	(6,481)	414,140	11,193	8,120	(2,858)	(214)	(3,073)
<b>2033</b>	896,569	24,232	17,580	(6,188)	(464)	(6,652)	435,937	11,782	8,548	(3,009)	(226)	(3,234)
<b>2034</b>	919,607	24,854	18,032	(6,347)	(476)	(6,823)	457,734	12,371	8,975	(3,159)	(237)	(3,396)
<b>2035</b>	942,644	25,477	18,483	(6,506)	(488)	(6,994)	479,530	12,960	9,403	(3,309)	(248)	(3,558)
<b>2036</b>	965,682	26,100	18,935	(6,665)	(500)	(7,165)	501,327	13,549	9,830	(3,460)	(260)	(3,719)
<b>2037</b>	988,720	26,722	19,387	(6,824)	(512)	(7,335)	523,124	14,138	10,257	(3,610)	(271)	(3,881)
<b>2038</b>	1,011,758	27,345	19,838	(6,983)	(524)	(7,506)	544,921	14,728	10,685	(3,761)	(282)	(4,043)
<b>2039</b>	1,034,796	27,967	20,290	(7,142)	(536)	(7,677)	566,718	15,317	11,112	(3,911)	(293)	(4,205)
<b>2040</b>	988,720	26,722	19,387	(6,824)	(512)	(7,335)	87,312	2,360	1,712	(603)	(45)	(648)
<b>2041</b>	1,011,758	27,345	19,838	(6,983)	(524)	(7,506)	109,109	2,949	2,139	(753)	(56)	(809)
<b>2042</b>	1,034,796	27,967	20,290	(7,142)	(536)	(7,677)	130,906	3,538	2,567	(903)	(68)	(971)
<b>2043</b>	1,057,834	28,590	20,742	(7,301)	(548)	(7,848)	152,703	4,127	2,994	(1,054)	(79)	(1,133)
<b>2044</b>	1,080,871	29,213	21,194	(7,460)	(560)	(8,019)	174,499	4,716	3,422	(1,204)	(90)	(1,295)
<b>2045</b>	1,103,909	29,835	21,645	(7,619)	(572)	(8,190)	196,296	5,305	3,849	(1,355)	(102)	(1,456)
<b>2046</b>	1,126,947	30,458	22,097	(7,778)	(583)	(8,361)	218,093	5,894	4,276	(1,505)	(113)	(1,618)
<b>2047</b>	1,149,985	31,081	22,549	(7,937)	(595)	(8,532)	239,890	6,484	4,704	(1,656)	(124)	(1,780)

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Source: Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021); Bureau of Economic Analysis, National Income and Product Accounts, Table 1.1.9, "Implicit Price Deflators for Gross Domestic Product" (March 2021); Capital Southeast Connector, Travel Demand Model (TDM) Update Summary, completed by Kimley Horn, Dated October 13, 2021; EPS.

[1] Average user speed change based on information included in the Capital Southeast Connector, Travel Demand Model (TDM) Update Summary, completed by Kimley Horn, Dated October 13, 2021.

[2] Based on information included in the Capital Southeast Connector, Travel Demand Model (TDM) Update Summary, completed by Kimley Horn, Dated October 13, 2021.

**Table 6**  
**Southeast Connector**  
**Benefit Cost Analysis**  
**Annual Automobile Operations and Maintenance Cost Savings From Increased Quarry Capacity**

Year	Additional Annual Roadway Capacity (Tons of Aggregate) [1]	Annual Truck Trips	Annual VMT Reduction	Annual Cost Savings	Total Cost Savings
Tons of Aggregate per Trip [1]		5.8			
Vehicle Mile Reduction per Trip [2]			10.5		
Operations and Maint. Cost per Mile [3]				\$ 0.94	
Adjustment for New Users [4]				50%	
<b>2021</b>	0	0	0	\$0	<b>\$0</b>
<b>2022</b>	0	0	0	\$0	<b>\$0</b>
<b>2023</b>	0	0	0	\$0	<b>\$0</b>
<b>2024</b>	0	0	0	\$0	<b>\$0</b>
<b>2025</b>	0	0	0	\$0	<b>\$0</b>
<b>2026</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2027</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2028</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2029</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2030</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2031</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2032</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2033</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2034</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2035</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2036</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2037</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2038</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2039</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2040</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2041</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2042</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2043</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2044</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2045</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2046</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>2047</b>	419,000	72,241	760,341	\$358,102	<b>\$358,102</b>
<b>Total</b>	<b>9,218,000</b>	<b>1,589,310</b>	<b>16,727,491</b>	<b>\$7,878,234</b>	<b>\$ 7,878,234</b>

*auto*

Source: Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021); Bureau of Economic Analysis, National Income and Product Accounts, Table 1.1.9, "Implicit Price Deflators for Gross Domestic Product" (March 2021); Mark Thomas & Company; EPS.

- [1] Based on estimates included in the East Sacramento Region Aggregate Mining Truck Management Plan Final Technical Report, prepared by DKS Associates Transportation Solutions.
- [2] Any regional existing demand for aggregate beyond that which can be met by current quarries located adjacent to the project is currently being met by facilities located within Yuba and Yolo Counties, outside of the market area served by quarries within the project. Development of the Project will result in increased roadway capacity for the existing facility, allowing for additional production and shorter trip lengths for truck traffic. Trip length reduction has been estimated based on average distances traveled by freight trucks from existing facilities to enter the market area served by the project.
- [3] Obtained from the Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021) and escalated to 2021 dollars using the Q4 GDP price deflator for 2019 and 2021 as provided by the Bureau of Economic Analysis.
- [4] Per the Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021), benefits associated with new roadway users require an adjustment factor of 50%. Although not all roadway freight users will be new users, to maintain a conservative analysis, the BCA assumes a 50% adjustment factor would apply to all users.

**Table 7**  
**Southeast Connector**  
**Benefit Cost Analysis**  
**Avoided Rehabilitation Costs**

Item	Assumption	Avoided Rehabilitation Cost
<b>Existing Roadway Repair/Replacement Cost [1]</b>		
State of Repair of Current Road in Year of Improvement [1]	Poor	
Cost of Road Repair/Replacement (Per Sq. Yard)	\$54	
Segment Length (Miles)	34.0	
Number of Lanes (12 ft lanes)	2	
Total Sq. Yards	478,720	
Year of Improvement	2029	
<b>Cost of Roadway Repair and Replacement</b>		<b>\$25,850,880</b>

*avoid*

Source: Mark Thomas; Sacramento County Pavement Condition Report, January 2019; EPS.

[1] Based on the Pavement Condition Report, completed by Sacramento County in 2019, existing roadway facilities are in poor/fair condition and are continuing to deteriorate. Based on existing funding gaps experienced by the County, it is not anticipated that roadway repairs will be made prior to roadway replacement is required in 5-10 years from completion of the Pavement Condition Report. To remain conservative, this analysis assumes that existing facilities would be replaced in year 10. No additional avoided roadway rehabilitation costs are assumed following initial repair as the roadway will be considered in good repair and additional improvements are uncertain at this time. It is anticipated that additional maintenance will be required beyond those shown herein.

**Table 8**  
**Southeast Connector**  
**Benefit Cost Analysis**  
**Residual Value of Project in 2047**

Item	Formula	Project Costs (2021\$)
<b>Assumptions</b>		
Installation Date	a	2027
End of Analysis Period	b	2047
Useful Service Life (Years)	c	50
Remaining Useful Life at End of Analysis Period (Years)	$d = c - (b - a)$	30
<b>Project Cost (2021\$)</b>	<b>e</b>	<b>\$315,000,000</b>
Annual Depreciation	$f = e / c$	\$6,300,000
Accumulated Depreciation in 2045	$g = f * (b - a)$	\$126,000,000
<b>Residual Value in 2047</b>	<b><math>h = e - g</math></b>	<b>\$189,000,000</b>

*resid*

Source: Capital Southeast Connector JPA; Mark Thomas; Sacramento County; EPS.



Table 9  
Southeast Connector  
Benefit Cost Analysis  
Annual Reduced Incident Safety Savings

Year	Annual Fatalities				Annual Injuries				Annual Property Damage Only Events				Total Monetized Benefit
	Events per Year			Monetized Benefit	Events per Year			Monetized Benefit	Events per Year			Monetized Benefit	
	No Build	Build	Annual Reduction		No Build	Build	Annual Reduction		No Build	Build	Annual Reduction		
<b>Monetized Benefit [3]</b>				\$ 11,040,065				\$ 518,883				\$ 4,558	
2021	0.00	0.00	0.00	\$ 0	0.00	0.00	0.00	\$ 0	0.00	0.00	0.00	\$ 0	\$ 0
2022	0.00	0.00	0.00	\$ 0	0.00	0.00	0.00	\$ 0	0.00	0.00	0.00	\$ 0	\$ 0
2023	0.00	0.00	0.00	\$ 0	0.00	0.00	0.00	\$ 0	0.00	0.00	0.00	\$ 0	\$ 0
2024	0.00	0.00	0.00	\$ 0	0.00	0.00	0.00	\$ 0	0.00	0.00	0.00	\$ 0	\$ 0
2025	0.00	0.00	0.00	\$ 0	0.00	0.00	0.00	\$ 0	0.00	0.00	0.00	\$ 0	\$ 0
2026	0.27	0.21	0.06	\$ 711,775	11.62	8.95	2.67	\$ 1,386,848	32.46	24.76	7.70	\$ 35,100	\$ 2,133,723
2027	0.28	0.21	0.06	\$ 706,296	11.62	8.95	2.67	\$ 1,386,848	33.24	25.59	7.64	\$ 34,830	\$ 2,127,975
2028	0.28	0.22	0.06	\$ 700,818	11.90	9.25	2.65	\$ 1,376,091	34.02	26.43	7.58	\$ 34,559	\$ 2,111,469
2029	0.29	0.23	0.06	\$ 695,340	12.17	9.54	2.63	\$ 1,365,334	34.79	27.27	7.52	\$ 34,289	\$ 2,094,963
2030	0.30	0.24	0.06	\$ 689,861	12.44	9.83	2.61	\$ 1,354,577	35.57	28.11	7.46	\$ 34,019	\$ 2,078,457
2031	0.30	0.24	0.06	\$ 684,383	12.71	10.12	2.59	\$ 1,343,820	36.35	28.95	7.40	\$ 33,749	\$ 2,061,951
2032	0.31	0.25	0.06	\$ 678,904	12.99	10.42	2.57	\$ 1,333,062	37.13	29.79	7.35	\$ 33,479	\$ 2,045,445
2033	0.32	0.26	0.06	\$ 673,426	13.26	10.71	2.55	\$ 1,322,305	37.91	30.63	7.29	\$ 33,209	\$ 2,028,939
2034	0.32	0.26	0.06	\$ 667,947	13.53	11.00	2.53	\$ 1,311,548	38.69	31.46	7.23	\$ 32,938	\$ 2,012,434
2035	0.33	0.27	0.06	\$ 662,469	13.80	11.30	2.51	\$ 1,300,791	39.47	32.30	7.17	\$ 32,668	\$ 1,995,928
2036	0.34	0.28	0.06	\$ 656,990	14.08	11.59	2.49	\$ 1,290,033	40.25	33.14	7.11	\$ 32,398	\$ 1,979,422
2037	0.34	0.28	0.06	\$ 651,512	14.35	11.88	2.47	\$ 1,279,276	41.03	33.98	7.05	\$ 32,128	\$ 1,962,916
2038	0.35	0.29	0.06	\$ 646,033	14.62	12.18	2.44	\$ 1,268,519	41.81	34.82	6.99	\$ 31,858	\$ 1,946,410
2039	0.36	0.30	0.06	\$ 640,555	14.90	12.47	2.42	\$ 1,257,762	42.59	35.66	6.93	\$ 31,588	\$ 1,929,904
2040	0.36	0.31	0.06	\$ 635,076	15.17	12.76	2.40	\$ 1,247,004	43.37	36.49	6.87	\$ 31,318	\$ 1,913,398
2041	0.37	0.31	0.06	\$ 629,598	15.44	13.06	2.38	\$ 1,236,247	44.15	37.33	6.81	\$ 31,047	\$ 1,896,893
2042	0.38	0.32	0.06	\$ 624,120	15.71	13.35	2.36	\$ 1,225,490	44.92	38.17	6.75	\$ 30,777	\$ 1,880,387
2043	0.38	0.33	0.06	\$ 618,641	15.99	13.64	2.34	\$ 1,214,733	45.70	39.01	6.69	\$ 30,507	\$ 1,863,881
2044	0.39	0.33	0.06	\$ 613,163	16.26	13.94	2.32	\$ 1,203,976	46.48	39.85	6.63	\$ 30,237	\$ 1,847,375
2045	0.40	0.34	0.06	\$ 607,684	16.53	14.23	2.30	\$ 1,193,218	47.26	40.69	6.57	\$ 29,967	\$ 1,830,869
2046	0.40	0.35	0.05	\$ 602,206	16.80	14.52	2.28	\$ 1,182,461	48.04	41.53	6.52	\$ 29,697	\$ 1,814,363
2047	0.41	0.35	0.06	\$ 712,606	16.80	14.52	2.28	\$ 1,182,461	48.04	41.53	6.52	\$ 29,697	\$ 1,924,764
<b>Total</b>				\$ 14,509,403				\$ 28,262,405				\$ 710,058	\$ 43,481,866

safety

Source: Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021); Bureau of Economic Analysis, National Income and Product Accounts, Capital Southeast Connector, Travel Demand Model (TDM) Update Summary, completed by Kimley Horn, Dated October 13, 2021; EPS

- [1] Events per year estimates calculated using the California Life-Cycle Benefit/Cost Analysis Model (Cal-B/C) Version 7.2 Corridor published by California Department of Transportation.
- [2] Obtained from the Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021) and escalated to 2021 dollars using the Q4 GDP price deflator for 2019 and 2021 as provided by the Bureau of Economic Analysis.

**Table 10**  
**Southeast Connector**  
**Benefit Cost Analysis**  
**Annual Avoided Physical Inactivity Benefits - Bike Users**

Year	New Cyclists [1]	Avoided Physical Inactivity Benefit	Journey Quality Benefits [2]	Total Monetized Benefit
<b>Avoided Physical Inactivity Benefit per User [3]</b>		\$ 1,752		
<b>Adjustment for New Users [4]</b>		50%		
<b>2021</b>	0	\$0	\$0	<b>\$0</b>
<b>2022</b>	0	\$0	\$0	<b>\$0</b>
<b>2023</b>	0	\$0	\$0	<b>\$0</b>
<b>2024</b>	0	\$0	\$0	<b>\$0</b>
<b>2025</b>	0	\$0	\$0	<b>\$0</b>
<b>2026</b>	53	\$46,549	\$2,100	<b>\$48,650</b>
<b>2027</b>	106	\$93,099	\$2,960	<b>\$96,059</b>
<b>2028</b>	159	\$139,648	\$44,231	<b>\$183,879</b>
<b>2029</b>	213	\$186,198	\$85,502	<b>\$271,700</b>
<b>2030</b>	266	\$232,747	\$126,773	<b>\$359,520</b>
<b>2031</b>	319	\$279,296	\$168,044	<b>\$447,340</b>
<b>2032</b>	372	\$325,846	\$209,315	<b>\$535,161</b>
<b>2033</b>	425	\$372,395	\$250,586	<b>\$622,981</b>
<b>2034</b>	478	\$418,945	\$291,857	<b>\$710,801</b>
<b>2035</b>	531	\$465,494	\$333,128	<b>\$798,622</b>
<b>2036</b>	585	\$512,043	\$374,399	<b>\$886,442</b>
<b>2037</b>	638	\$558,593	\$415,670	<b>\$974,262</b>
<b>2038</b>	691	\$605,142	\$456,941	<b>\$1,062,083</b>
<b>2039</b>	744	\$651,692	\$498,212	<b>\$1,149,903</b>
<b>2040</b>	797	\$698,241	\$539,483	<b>\$1,237,724</b>
<b>2041</b>	850	\$744,790	\$580,754	<b>\$1,325,544</b>
<b>2042</b>	903	\$791,340	\$622,024	<b>\$1,413,364</b>
<b>2043</b>	956	\$837,889	\$663,295	<b>\$1,501,185</b>
<b>2044</b>	1,010	\$884,439	\$704,566	<b>\$1,589,005</b>
<b>2045</b>	1,063	\$930,988	\$745,837	<b>\$1,676,825</b>
<b>2046</b>	1,169	\$1,024,087	\$787,108	<b>\$1,811,195</b>
<b>2047</b>	1,222	\$1,070,636	\$787,109	<b>\$1,857,745</b>

bike

Source: Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021); Bureau of Economic Analysis, U.S. Bureau of Labor Statistics; Physical Inactivity Cost Calculator - How the Physical Inactivity Cost Calculator was Developed (Active Living Leadership, SDSU); Capital Southeast Connector, Travel Demand Model (TDM) Update Summary, completed by Kimley Horn, Dated October 13, 2021; California Department of Transportation California Active Transportation Benefit/Cost Analysis Model Version 7.2.EPS.

[1] Development of the Southeast Connector will provide significant opportunities for both bike commuters and recreational cyclists. This analysis reflects the monetized health benefits related to avoided physical inactivity for all users. Cyclist count estimates are based on data provided in the Travel Demand Model (TDM) Update Summary, completed by Kimley Horn, Dated October 13, 2021.

[2] Quality of Journey benefits are the monetized value of benefit due to an enhanced quality of the trip for pedestrians and cyclists that arise from a greater feeling of safety, comfort, aesthetics, and other types of improvements. Quality of Journey Benefits are estimated using the California Department of Transportation California Active Transportation Benefit/Cost Analysis Model Version 7.2.

[3] Refer to Table 11 for details.

[4] Obtained from the Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021).

**Table 11**  
**Southeast Connector**  
**Benefit Cost Analysis**  
**Estimated Physical Inactivity Cost per Capita**

Item	California Physical Inactivity Cost [1]		
	Base Year	Cost Increase Factor [2]	2021 Dollars
<b>Per Capita Inactivity Costs</b>			
<b>Medical Costs (2004 \$)</b>			
Cost per Claim	\$ 3,257		
Claims per Capita	0.084106		
<b>Cost per Capita</b>	<b>\$ 274</b>	<b>1.75</b>	<b>\$ 479</b>
<b>Lost Productivity Costs (2001 \$)</b>			
Lost Productivity per Worker	\$ 2,933		
Percent Physically Inactive	50%		
<b>Cost per Employee</b>	<b>\$ 1,466</b>		
Employees per Capita	43%		
<b>Cost per Capita</b>	<b>\$ 632</b>	<b>2.01</b>	<b>\$ 1,273</b>
<b>Total Inactivity Cost per Capita</b>	<b>\$ 906</b>		<b>\$ 1,752</b>

*inactivity*

Source: U.S. Bureau of Labor Statistics, Physical Inactivity Cost Calculator - How the Physical Inactivity Cost Calculator was Developed ( Active Living Leadership, SDSU), and EPS.

[1] Base year costs from Physical Inactivity Cost Calculator - How the Physical Inactivity Cost Calculator was Developed. 2021 costs inflated by the change in the CPI for medical care.

[2] CPI Factors - Medical Care in San Francisco-Oakland-San Jose

April 2004	293.500
April 2021	555.675
Average Annual Percentage Increase	4.07%
<b>Cost Increase Factor</b>	<b>1.748</b>
April 2001	254.100
April 2021	555.675
Average Annual Percentage Increase	4.20%
<b>Cost Increase Factor</b>	<b>2.014</b>

**Table 12**  
**Southeast Connector**  
**Benefit Cost Analysis**  
**Estimated Change in Emissions Because of Vehicle Travel Time Reductions**

Year	Emissions Reductions [1]								Total Monetized Value of All Reductions
	Carbon Dioxide (CO <sub>2</sub> )		Nitrogen Oxides (NO <sub>x</sub> )		Particulate Matter (PM <sub>2.5</sub> )		Sulfur Dioxide (SO <sub>2</sub> )		
	Annual Reduction	Monetized Value	Annual Reduction	Monetized Value	Annual Reduction	Monetized Value	Annual Reduction	Monetized Value	
<b>Unit of Measure</b>	Metric Ton		Metric Ton		Metric Ton		Metric Ton		
<b>Annual Benefit per Unit Reduction [2]:</b>		\$52.00		\$15,900		\$742,300		\$41,300	
2021	0	\$0	0.00	\$0	0.00	\$0	0.00	\$0	\$0
2022	0	\$0	0.00	\$0	0.00	\$0	0.00	\$0	\$0
2023	0	\$0	0.00	\$0	0.00	\$0	0.00	\$0	\$0
2024	0	\$0	0.00	\$0	0.00	\$0	0.00	\$0	\$0
2025	0	\$0	0.00	\$0	0.00	\$0	0.00	\$0	\$0
2026	6,455	\$335,663	(0.66)	(\$10,415)	(0.00)	(\$782)	0.07	\$2,882	\$327,348
2027	7,645	\$397,525	(0.66)	(\$10,415)	(0.00)	(\$782)	0.07	\$2,882	\$389,210
2028	8,834	\$459,387	(0.33)	(\$5,274)	0.01	\$4,583	0.08	\$3,337	\$462,032
2029	10,041	\$522,139	0.06	\$1,004	0.01	\$10,955	0.09	\$3,798	\$537,895
2030	11,265	\$585,780	0.53	\$8,418	0.02	\$18,335	0.10	\$4,266	\$616,798
2031	12,506	\$650,311	1.07	\$16,968	0.04	\$26,722	0.11	\$4,741	\$698,742
2032	13,764	\$715,732	1.68	\$26,655	0.05	\$36,117	0.13	\$5,223	\$783,727
2033	15,039	\$782,042	2.36	\$37,479	0.06	\$46,520	0.14	\$5,711	\$871,753
2034	10,854	\$564,383	(7.94)	(\$126,285)	0.08	\$60,208	0.14	\$5,680	\$503,987
2035	11,748	\$610,909	(8.45)	(\$134,327)	0.09	\$67,056	0.15	\$6,126	\$549,764
2036	12,657	\$658,179	(8.95)	(\$142,344)	0.10	\$74,239	0.16	\$6,578	\$596,653
2037	13,581	\$706,195	(9.45)	(\$150,333)	0.11	\$81,755	0.17	\$7,036	\$644,653
2038	14,518	\$754,956	(9.96)	(\$158,295)	0.12	\$89,605	0.18	\$7,499	\$693,765
2039	15,470	\$804,463	(10.45)	(\$166,231)	0.13	\$97,790	0.19	\$7,967	\$743,989
2040	16,437	\$854,715	(10.95)	(\$174,140)	0.14	\$106,308	0.20	\$8,441	\$795,324
2041	17,418	\$905,712	(11.45)	(\$182,022)	0.16	\$115,161	0.22	\$8,920	\$847,771
2042	18,413	\$957,454	(11.94)	(\$189,877)	0.17	\$124,347	0.23	\$9,405	\$901,330
2043	19,422	\$1,009,942	(12.43)	(\$197,705)	0.18	\$133,868	0.24	\$9,896	\$956,000
2044	19,655	\$1,022,039	(14.68)	(\$233,333)	0.21	\$152,391	0.20	\$8,208	\$949,304
2045	20,659	\$1,074,282	(15.26)	(\$242,566)	0.22	\$163,037	0.21	\$8,622	\$1,003,375
2046	21,678	\$1,127,264	(15.84)	(\$251,798)	0.23	\$174,025	0.22	\$9,041	\$1,058,533
2047	21,679	\$1,127,316	(15.84)	(\$251,798)	0.23	\$174,100	0.22	\$9,041	\$1,058,659
<b>Total</b>	<b>298,059</b>	<b>\$15,499,073</b>	<b>(143.70)</b>	<b>(\$2,284,836)</b>	<b>2.13</b>	<b>\$1,581,459</b>	<b>3.30</b>	<b>\$136,258</b>	<b>14,931,954</b>

emissions

Source: Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021); Bureau of Economic Analysis, National Income and Product Accounts, Table 1.1.9, "Implicit Price Deflators for Gross Domestic Product" (March 2021); Capital Southeast Connector, Travel Demand Model (TDM) Update Summary, completed by Kimley Horn, Dated October 13, 2021; California Department of Transportation California Life-Cycle Benefit/Cost Analysis Model for 2021 INFRA Applications; EPS.

[1] Emissions calculations estimated using the California Life-Cycle Benefit/Cost Analysis Model for Corridors as provided by the California Department of Transportation (CAL-B/C Sketch) Version 7.2. Negative Annual Emissions reductions equate to an increase in annual emissions and a negative benefit to the project. Emissions benefits include emissions reductions related to diversion of traffic from congested roadways throughout the Sacramento Region.

[2] Obtained from the Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021) and escalated to 2021 dollars using the Q4 GDP price deflator for 2019 and 2021 as provided by the Bureau of Economic Analysis.

Table 13  
 Southeast Connector  
 Benefit Cost Analysis  
 Estimated Change in Emissions Because of Commuter Cyclists

Year	Emissions Reductions [1]								Total Monetized Value of All Reductions
	Carbon Dioxide (CO <sub>2</sub> )		Nitrogen Oxides (NO <sub>x</sub> )		Particulate Matter (PM <sub>2.5</sub> )		Sulfur Dioxide (SO <sub>2</sub> )		
	Annual Reduction	Monetized Value	Annual Reduction	Monetized Value	Annual Reduction	Monetized Value	Annual Reduction	Monetized Value	
<b>Unit of Measure</b>	Metric Ton		Metric Ton		Metric Ton		Metric Ton		
<b>Annual Benefit per Unit Reduction [2]:</b>		\$52.00		\$15,900		\$742,300		\$41,300	
2021	0	\$0	0.00	\$0	0.00	\$0	0.00	\$0	\$0
2022	0	\$0	0.00	\$0	0.00	\$0	0.00	\$0	\$0
2023	0	\$0	0.00	\$0	0.00	\$0	0.00	\$0	\$0
2024	0	\$0	0.00	\$0	0.00	\$0	0.00	\$0	\$0
2025	0	\$0	0.00	\$0	0.00	\$0	0.00	\$0	\$0
2026	8	\$421	0.00	\$49	0.00	\$40	0.00	\$3	\$513
2027	16	\$836	0.01	\$98	0.00	\$79	0.00	\$7	\$1,019
2028	24	\$1,250	0.01	\$146	0.00	\$117	0.00	\$10	\$1,524
2029	32	\$1,665	0.01	\$195	0.00	\$156	0.00	\$13	\$2,030
2030	40	\$2,080	0.02	\$243	0.00	\$195	0.00	\$17	\$2,535
2031	48	\$2,494	0.02	\$292	0.00	\$234	0.00	\$20	\$3,041
2032	34	\$1,776	0.01	\$81	0.00	\$128	0.00	\$14	\$1,998
2033	39	\$2,029	0.01	\$93	0.00	\$146	0.00	\$16	\$2,283
2034	44	\$2,282	0.01	\$104	0.00	\$164	0.00	\$18	\$2,568
2035	49	\$2,535	0.01	\$116	0.00	\$182	0.00	\$20	\$2,853
2036	54	\$2,788	0.01	\$127	0.00	\$200	0.00	\$22	\$3,138
2037	58	\$3,041	0.01	\$139	0.00	\$219	0.00	\$24	\$3,423
2038	63	\$3,294	0.01	\$150	0.00	\$237	0.00	\$26	\$3,708
2039	68	\$3,548	0.01	\$162	0.00	\$255	0.00	\$28	\$3,993
2040	73	\$3,801	0.01	\$173	0.00	\$273	0.00	\$30	\$4,277
2041	78	\$4,054	0.01	\$185	0.00	\$291	0.00	\$32	\$4,562
2042	83	\$4,307	0.01	\$196	0.00	\$309	0.00	\$34	\$4,847
2043	88	\$4,560	0.01	\$208	0.00	\$328	0.00	\$36	\$5,132
2044	93	\$4,813	0.01	\$220	0.00	\$346	0.00	\$38	\$5,417
2045	93	\$4,813	0.01	\$220	0.00	\$350	0.00	\$40	\$5,422
2046	93	\$4,813	0.01	\$220	0.00	\$365	0.00	\$41	\$5,439
2047	93	\$4,813	0.01	\$220	0.00	\$369	0.00	\$43	\$5,444
<b>Total</b>	<b>1,269</b>	<b>\$66,012</b>	<b>0.23</b>	<b>\$3,636</b>	<b>0.01</b>	<b>\$4,983</b>	<b>0.01</b>	<b>\$536</b>	<b>69,723</b>

emissions bike

Source: Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021); Bureau of Economic Analysis, National Income and Product Accounts, Table 1.1.9, "Implicit Price Deflators for Gross Domestic Product" (March 2021); Capital Southeast Connector, Travel Demand Model (TDM) Update Summary, completed by Kimley Horn, Dated October 13, 2021; California Department of Transportation California Life-Cycle Benefit/Cost Analysis Model for 2021 INFRA Applications; EPS.

[1] Emissions calculations estimated using the California Department of Transportation California Active Transportation Benefit/Cost Analysis Model Version 7.2. Negative Annual Emissions reductions equate to an increase in annual emissions and a negative benefit to the project.

[2] Obtained from the Benefit-Cost Analysis Guidance for Discretionary Grant Programs (US Department of Transportation, February 2021) and escalated to 2021 dollars using the Q4 GDP price deflator for 2019 and 2021 as provided by the Bureau of Economic Analysis.

**Table 14**  
**Southeast Connector**  
**Benefit Cost Analysis**  
**Project Cost Estimates**

Year	Construction Cost by Segment									
	Segment A1	Segment B3	Segment C	Segment D1	Segment D2A	Segment D2B	Segment D3B	Segment E1	Segment E2	Total
2021	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2022	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2023	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2024	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2025	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2026	\$18,000,000	\$0	\$0	\$0	\$6,000,000	\$0	\$0	\$0	\$0	\$24,000,000
2027	\$37,000,000	\$0	\$0	\$0	\$13,000,000	\$0	\$22,500,000	\$3,000,000	\$0	\$75,500,000
2028	\$0	\$0	\$0	\$0	\$6,000,000	\$0	\$22,500,000	\$3,000,000	\$0	\$31,500,000
2029	\$0	\$0	\$16,500,000	\$0	\$0	\$35,000,000	\$0	\$0	\$0	\$51,500,000
2030	\$0	\$14,000,000	\$16,500,000	\$0	\$0	\$35,000,000	\$0	\$0	\$4,000,000	\$69,500,000
2031	\$0	\$11,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$4,000,000	\$15,000,000
2032	\$0	\$0	\$0	\$24,000,000	\$0	\$0	\$0	\$0	\$0	\$24,000,000
2033	\$0	\$0	\$0	\$24,000,000	\$0	\$0	\$0	\$0	\$0	\$24,000,000
2034	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2035	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2036	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2037	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2038	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2039	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2040	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2041	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2042	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2043	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2044	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2045	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2046	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2047	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$55,000,000</b>	<b>\$25,000,000</b>	<b>\$33,000,000</b>	<b>\$48,000,000</b>	<b>\$25,000,000</b>	<b>\$70,000,000</b>	<b>\$45,000,000</b>	<b>\$6,000,000</b>	<b>\$8,000,000</b>	<b>\$315,000,000</b>

*const cost*

Source: Capital Southeast Connector; EPS.

[1] Construction costs excludes approximately \$235 million in constructions costs already incurred related to segments already constructed or currently being developed.

**Table 15**  
**Southeast Connector**  
**Benefit Cost Analysis**  
**Estimated Annual Maintenance Costs**

<b>Item</b>	<b>Assumption</b>	<b>Estimated Annual Maintenance Expenditures</b>
Total Roadway Miles	34 Miles	
Slurry Seal (Years 7 and 14) [1]	\$14,361,600	
Overlay Replacement Cost [2]	\$0	
<b>Estimated Annual Maintenance Costs</b>		<b>\$2,051,657</b>

*an maint*

Source: Mark Thomas & Company; Sacramento County; EPS.

[1] Assumes slurry seal performed once every 7 years at a cost of \$5/square yard.

[2] The proposed roadway is designed to not require overlay maintenance and repair for the first 20 year of roadway operations. As such, estimated overlay costs are not anticipated to occur until the end of the period captured within this analysis.

**Table 16**  
**Southeast Connector**  
**Benefit Cost Analysis**  
**Cost and Benefit Discount Factors**

Year	Project Year	Year-End Discount Factors			
		7%		3%	
		Value	Factor	Value	Factor
2021	0	1.00	<b>1.00</b>	1.00	<b>1.00</b>
2022	1	1.07	<b>0.93</b>	1.03	<b>0.97</b>
2023	2	1.14	<b>0.87</b>	1.06	<b>0.94</b>
2024	3	1.23	<b>0.82</b>	1.09	<b>0.92</b>
2025	4	1.31	<b>0.76</b>	1.13	<b>0.89</b>
2026	5	1.40	<b>0.71</b>	1.16	<b>0.86</b>
2027	6	1.50	<b>0.67</b>	1.19	<b>0.84</b>
2028	7	1.61	<b>0.62</b>	1.23	<b>0.81</b>
2029	8	1.72	<b>0.58</b>	1.27	<b>0.79</b>
2030	9	1.84	<b>0.54</b>	1.30	<b>0.77</b>
2031	10	1.97	<b>0.51</b>	1.34	<b>0.74</b>
2032	11	2.10	<b>0.48</b>	1.38	<b>0.72</b>
2033	12	2.25	<b>0.44</b>	1.43	<b>0.70</b>
2034	13	2.41	<b>0.41</b>	1.47	<b>0.68</b>
2035	14	2.58	<b>0.39</b>	1.51	<b>0.66</b>
2036	15	2.76	<b>0.36</b>	1.56	<b>0.64</b>
2037	16	2.95	<b>0.34</b>	1.60	<b>0.62</b>
2038	17	3.16	<b>0.32</b>	1.65	<b>0.61</b>
2039	18	3.38	<b>0.30</b>	1.70	<b>0.59</b>
2040	19	3.62	<b>0.28</b>	1.75	<b>0.57</b>
2041	20	3.87	<b>0.26</b>	1.81	<b>0.55</b>
2042	21	4.14	<b>0.24</b>	1.86	<b>0.54</b>
2043	22	4.43	<b>0.23</b>	1.92	<b>0.52</b>
2044	23	4.74	<b>0.21</b>	1.97	<b>0.51</b>
2045	24	5.07	<b>0.20</b>	2.03	<b>0.49</b>
2046	25	5.43	<b>0.18</b>	2.09	<b>0.48</b>
2047	26	5.81	<b>0.17</b>	2.16	<b>0.46</b>

*factors*

Source: Discount Factors - OMB Circular A-94 Revised October 29, 1992.