Tri-Valley San Joaquin Valley
REGIONAL RAIL AUTHORITY

Board of Directors
Meeting Packet
May 12, 2021 at 2 p.m.

TRI-VALLEY – SAN JOAQUIN VALLEY REGIONAL RAIL AUTHORITY

AGENDA – BOARD OF DIRECTORS
May 12, 2021 at 2:00 p.m. via teleconference

CORONAVIRUS DISEASE (COVID-19) ADVISORY AND MEETING PROCEDURE

On March 16, 2020, the Health Officer of Alameda County issued an Order that has been continued through May 31, 2020, that directed that all individuals living in the county to shelter at their place of residence except that they may leave to provide or receive certain essential services or engage in certain essential activities and work for essential businesses and governmental services.

Under the Governor's Executive Order N-29-20, this meeting may utilize teleconferencing. As a precaution to protect the health and safety of staff, officials, and the general public. Councilmembers will not be physically in attendance, but will be available via video conference.

The regular meeting facilities for the meetings of the Board of Directors are currently closed to the public and will remain closed for the duration of the shelter-in-place order. Consequently, there will be no physical location for members of the public to participate in the meeting. We encourage members of the public to shelter in place and access the meeting online using the instructions listed on the agenda. Online attendees will have the opportunity to speak during Public Comment.

If you are would like to submit public comment via email, please do so by 11:00 a.m. on Wednesday, May 12, 2021 to comments@valleylinkrail.com. Please include "Public Comment May 12, 2021" and the agenda item in the subject line. In the body of the email please include your full name. Public comments submitted will be read during Public Comment and will be subject to the regular three-minute time restriction.

This Board of Directors meeting will be conducted on the web-video communication platform Zoom. To view and/or participate in this meeting, members of the public will need to either download Zoom from the website zoom.us. It is recommended that anyone wishing to participate in the meeting complete the download process before the start of the meeting. To listen without viewing, members of the public may also join the meeting by calling in via telephone. A live stream will also be available on our YouTube channel without the ability to make public comment. All public comments will be subject to the regular three-minute time restriction.

There will be zero tolerance for any person addressing the Board making profane, offensive and disruptive remarks, or engaging in loud, boisterous, or other disorderly conduct, that disrupts the orderly conduct of the public meeting.

TRI-VALLEY – SAN JOAQUIN VALLEY REGIONAL RAIL AUTHORITY

AGENDA – BOARD OF DIRECTORS
May 12, 2021 at 2:00 p.m. via teleconference

How to listen and view meeting online:

- From a PC, Mac, iPad, iPhone or Android device click the link below:
  https://zoom.us/j/93548110883
  Password: **ValleyLink**

- To supplement a PC, Mac, tablet or device without audio, please also join by phone:
  Dial: 1 (669) 900-6833
  Webinar ID: 935-4811-0883
  Password: **898381**

  To comment by video conference, click the "Raise Your Hand" button to request to speak when Public Comment is being taken on the Agenda item. You will then be unmuted when it is your turn to make your comment for up to 3 minutes. After the allotted time, you will be muted.

- Livestream online at: Valley Link Rail YouTube Channel

  No option to make Public Comment on YouTube live stream.

How to listen via telephone to the meeting:

- For audio access to the meeting by telephone, use the dial-in information below:
  Dial: 1 (669) 900-6833
  Webinar ID: 935-4811-0883
  Password: **898381**

  *Please note to submit public comment via telephone dial *9 to raise your hand. The meeting's host will be informed that you would like to speak. If you are chosen, you will be notified that your request has been approved and you will be allowed to speak. You will then need to press *6 to unmute yourself. Comments are limited to up to 3 minutes at the discretion of the board chair. After the allotted time, you will be muted by the host.*

To submit written comments:

- Send public comments prior to the meeting by email, to comments@valleylinkrail.com

  If you are submitting public comment via email, please do so by 11:00 a.m. on Wednesday, May 12, 2021 to comments@valleylinkrail.com

  Please include "Public Comment - May 12, 2021" and the agenda item to which your comment applies in the subject line. In the body of the email please include your full name. A list of the public comments submitted will be read during Public Comment and letters will be posted on the Authority's website along with other meeting material.

TRI-VALLEY – SAN JOAQUIN VALLEY REGIONAL RAIL AUTHORITY

AGENDA – BOARD OF DIRECTORS
May 12, 2021 at 2:00 p.m. via teleconference

1. Call to Order and Pledge of Allegiance
   a. Oath of Office – Dan Wright, Stockton City Council

2. Roll Call of Members

3. Public Comments:
   Members of the public may address the Board on any issues not listed on the agenda that are within the purview of the Authority. Comments on matters that are listed on the agenda may be made at the time the Board is considering each item. Time limits on public comments may be established by the Chair.

4. Consent Agenda – **ACTION**
   Recommend approval of all items on Consent Agenda as follows:

   a. Minutes of March 10, 2021 Board of Directors Meeting.
   b. Treasurer's Reports for February and March 2021.

5. Executive Director's Report – **INFORMATION**

6. Adoption of Resolutions Regarding Certification of the Final Environmental Impact Report and Project Approval of the Valley Link Project with Findings Required by the California Environmental Quality Act – **ACTION**

7. Consideration to Approve and Adopt a Disadvantaged Business Enterprise Program –**ACTION**

8. Resolution R06-2021 Authorizing the Executive Director to Execute a Contract Amendment with Rattray Program Management, LLC for Rail Program Management Consulting Services – **ACTION**

9. Directors' Discussion
   Comments, Questions and Agenda Requests

10. Next Meeting Details: June 9, 2021 at 2 p.m.

11. Adjourn

Upon request, the Tri-Valley-San Joaquin Valley Regional Rail Authority will provide written agenda materials in appropriate alternative formats, or disability-related modification or accommodation, including auxiliary aids or services, to enable individuals with disabilities to participate in public meetings. A speech-to-text option (live transcription) is now available on all Zoom meetings. Live transcription currently only supports English and the accuracy of the feature depends on many variables, such as but not limited to: background noise, volume and clarity of the speaker's voice, lexicons and dialects. Requests for any other reasonable accommodation should be submitted in writing, and must include; your name, mailing address, phone number and brief description of the requested materials and the preferred alternative format or auxiliary aid or service at least 2 days before the meeting. Requests should be sent to: comments@valleylinkrail.com.

AGENDA

ITEM 4 A

Tri-Valley San Joaquin Valley Regional Rail Authority (TVSJVRRA)
Minutes of March 10, 2020 meeting via Zoom Teleconference

---

1. Call to Order and Pledge of Allegiance
Meeting was called to order by Board Chair Veronica Vargas at 2:00 p.m.

2. Roll Call of Members
Members Present
Chair Veronica Vargas, City of Tracy
Director Melissa Hernandez, City of Dublin
Director Paul Akinjo, City of Lathrop
Director David Haubert, Alameda County
Director David Hudson, San Ramon
Director Brittni Kiick (Livermore), LAVTA
Director Bernice King Tingle, Mountain House
Director John McPartland (District 5), BART
Director Kathy Narum, City of Pleasanton
Director Robert Rickman, San Joaquin County
Director Karen Stepper, Town of Danville
Director Bob Woerner, City of Livermore
Director Leo Zuber (Ripon), ACE
Members Absent
Director Sol Jobrack, City of Stockton
Director Benjamin Cantu, City of Manteca

3. Public Comments
Public comment was heard from Alice English.

4. Consent Calendar – ACTION
Motion to approve all items on Consent Calendar as follows:

a. Minutes of February 10, 2021 Board of Directors Meeting.
b. Treasurer's Report for January 2021.

Motion: Stepper/McPartland
Aye: Akinjo, Haubert, Hernandez, Hudson, Kiick, King-Tingle, Narum, Rickman, Stepper, Vargas, Woerner, Zuber
Nay: None
Abstain: None
Absent: Jobrack, Cantu
Motion Passed

5. Executive Directors Report – INFORMATION
Executive Director Michael Tree gave a presentation and oral report

- **SB 548** – Michael updated the Board on SB 548.
- **EIR** – Staff is working on draft responses to the comments received during the comment period and revisions to the document. The final is expected to come before the board at the May 12th meeting for certification and adoption.

- **FTA Grantee Application** – Staff has been working to attain FTA Grantee status, which will allow the Authority to receive and manage federal funds. The details of this will be discussed today in agenda items 6 through 9.
- **TV Transportation Council** – Staff is keeping an eye on a nexus study being conducted by the group on developer fees for the future and auth has an estimated $40 million of fees packaged into this study.
- **Transportation Planning** – Staff is following:
    i. SJCOG and its update to the Regional Transportation Plan.
    ii. MTC as it expects to finalize the Plan Bay Area 2050 in the fall.
    iii. The State of California as it begins the process of updating the State Rail Plan.
- **Appropriation Requests** – The Authority has submitted appropriation requests. Staff is working with the offices of Congressmen Harder, Swalwell and McNerney to both submit and move forward requests for Valley Link.
- **Agenda Item 10** – Request to pull this agenda item if no objection. Tree advised the board that Program Manager Ric Rattray is retiring from BART so will not continue to serve as the projects program manager. Tree noted that Rattray would continue to do consulting work and would be utilized by the Authority while a job recruitment takes place. Tree thanked Rattray for all his work on the project.

Director McPartland also thanked Rattray for his extemporary work on the Valley Link Project. Chair Vargas noted that the City of Tracy has included Valley Link as a top priority for One Voice this year. The directors discussed ways to support SB 548 and advocacy regarding appropriation requests. There was no public comment.

6. Consideration of Authorizing Resolution R02-2021 for the Filing of Applications with the USDOT, FTA, and Execution of Certifications, Assurances and Grant Agreements Required to Receive Federal Financial Assistance – ACTION

Michael Conneran introduced the team charged with working on this and the following agenda items in regard to the Authority's FTA Grantee application; Jerry Kay-Phillips, Shayna Van Hoften; Title VI, Catherine Groves, upcoming federal requirements. Operations Consultant David Kutrosky gave a presentation on the overview of key legal requirements.

Directors discussed this item.

Motion: Haubert/Zuber
Aye: Akinjo, Haubert, Hernandez, Hudson, Kiick, King-Tingle, McPartland, Narum, Rickman, Stepper, Woerner, Vargas, Zuber
Nay: None
Abstain: None
Absent: Jobrack, Cantu
Motion Passed

7. Consideration to Approve Resolution R03-2021 and Adopt a Drug & Alcohol-Free Workplace Policy for the Authority Full-Time and Part-Time Employees and Contractors in Safety-Sensitive Positions – ACTION

Kay-Philips gave a presentation on the requirement for a Drug and Alcohol-Free Workplace Policy. Directors discussed this item.

Motion: McPartland/King-Tingle
Aye: Akinjo, Haubert, Hernandez, Hudson, Kiick, King-Tingle, McPartland, Narum, Rickman, Stepper, Woerner, Vargas, Zuber
Nay: None
Abstain: None
Absent: Jobrack, Cantu
Motion Passed

8. Approve Resolution R04-2021 to approve the following and authorize submittal of the 2021 Title VI Program to the Federal Transit Administration – ACTION

- Updated Equity Statement (with the understanding that and expanded statement will be made available on the Authority's website.)
- Public Participation Plan
- Language Assistance Plan for Individuals with Limited English Proficiency
- Title VI Program

Van Hoften gave a presentation on the requirement for submission and adoption of a Title VI policy. Directors discussed all sections of this item with focus on the language assistance plan and the posting of an expanded equity policy statement. There was no public comment.

Motion: Kiick/Narum
Aye: Akinjo, Haubert, Hernandez, Hudson, Kiick, King-Tingle, McPartland, Narum, Rickman, Stepper, Woerner, Vargas, Zuber
Nay: None
Abstain: None
Absent: Jobrack, Cantu
Motion Passed

9. Presentations on Upcoming Actions on Federal Grantee Requirements – INFORMATION

a. Disadvantaged Business Enterprise (DBE) Program
b. Equal Employment Opportunity (EEO) Program
c. Transit Asset Management (TAM) Plan
d. Public Transportation Agency Safety Plan (PTASP)
e. Cyber Security Policy
f. Rail Safety Training and Oversight

Groves gave a presentation on future federal grantee requirements noting that the DBE Program is in process and will be brought to the board at a subsequent meeting.

There was no Director discussion or public comment on this item.

10. Employment Agreement with Deputy Executive Director/Program Manager – ACTION
This item was pulled from the agenda with no objections.

Tri-Valley San Joaquin Valley Regional Rail Authority (TVSJVRRA)
Minutes of March 10, 2020 meeting via Zoom Teleconference

---

11. Directors' Discussion

Director Hudson reminded everyone about the upcoming 2021 APTA's TRANSform Conference & Expo in August and urged all to attend.

12. Adjourn to **CLOSED SESSION** pursuant to Government Code Section 54957(b):

13. Reconvene to **OPEN SESSION**
Due to the removal of Agenda Item #10, Closed Session (Items # 12, 13) was not needed.

14. Next Meeting
April 14 10, 2021 at 2 p.m. – Via Teleconference

15. Adjourn (King-Tingle/McPartland – No objection)
Meeting adjourned at 4.08 p.m.

AGENDA

ITEM 4 B

Tri-Valley San Joaquin Valley
REGIONAL RAIL AUTHORITY

STAFF REPORT

SUBJECT: Treasurer's Report for February and March 2021

FROM: Tamara Edwards, Director of Finance

DATE: May 12, 2021

Action Requested
Staff requests that the Tri-Valley – San Joaquin Valley Regional Rail Authority Board accept the Treasurer's Report for February and March 2021.

Background/Discussion
The Treasurer's Report shows all expenses and revenues for the month of February and March as well as the year to date totals.

The fund balance reflected on both the balance sheet and the expense report is the difference between the revenue received and the expenses. As the Rail Authority's funding is all on a reimbursement basis this will be reflected as a negative amount (expenses higher than revenues) until year end when accruals are done at which time the fund balance will be zero. Additionally, as all of the Rail Authority's funding is on a reimbursement basis LAVTA continues to provide the cash flow for the Rail Authority which is reflected in the funds due to LAVTA line item.

Attachments:
1. February 2021 Treasurer's Report
2. March 2021 Treasurer's Report

ATTACHMENT 1

Tri-Valley San Joaquin Regional Rail Authority
BALANCE SHEET
FOR THE PERIOD ENDING:
February 28, 2021

ASSETS:

108	CASH-GENERAL CHECKING	1,881,268	
120	ACCOUNTS RECEIVABLE	(282)	
150	PREPAID EXPENSES	0	
	TOTAL ASSETS		**1,880,986**

LIABILITIES:

205	ACCOUNTS PAYABLE	0	
20501	DUE TO LAVTA	2,860,116	
211	PRE-PAID REVENUE	178,290	
	TOTAL LIABILITIES		**3,038,406**

FUND BALANCE:

301	FUND RESERVE	0	
304	GRANTS, DONATIONS, PAID-IN CAPITAL	0	
30401	SALE OF BUSES & EQUIPMENT	0	
	FUND BALANCE	(1,157,419)	
	TOTAL FUND BALANCE		**-1,157,419**
	TOTAL LIABILITIES & FUND BALANCE		**1,880,986**

Tri-Valley San Joaquin Regional Rail Authority
REVENUE REPORT
FOR THE PERIOD ENDING:
February 28, 2021

ACCOUNT	DESCRIPTION	BUDGET	CURRENT MONTH	YEAR TO DATE	BALANCE AVAILABLE	PERCENT BUDGET EXPENDED
	Caltrans	20,000	0	0	20,000	0.0%
	MTC-Bridge Tolls	9,308,657	0	1,211,667	8,096,990	13.0%
	Alameda County/Strategic Development	39,950	0	20,475	19,475	51.3%
	Government Relations/Community Engage	58,815	0	0	58,815	0.0%
	TOTAL REVENUE	**9,427,422**	**0**	**1,232,142**	**8,195,280**	**13.1%**

Tri-Valley San Joaquin Regional Rail Authority
EXPENDITURE REPORT
February 28, 2021

ACCOUNT	DESCRIPTION	BUDGET	CURRENT MONTH	YEAR TO DATE	BALANCE AVAILABLE	PERCENT BUDGET EXPENDED
Direct Labor and Benefits						
	Executive Director	149,310	25,151	90,460	58,850	60.59%
	Administrative Assistant	96,200	15,951	55,680	40,521	57.88%
	Finance Director	42,000	7,102	22,319	19,681	53.14%
	IT support	36,000	0	0	36,000	0.00%
	Marketing Director	30,432	5,073	12,681	17,751	41.67%
	TOTAL - Direct Labor	**353,942**	**53,276**	**181,139**	**172,803**	**51.18%**
Consultants/seconded staff						
	Program Manager	490,000	0	0	490,000	0.00%
	Project Management support- Civil	373,607	0	0	373,607	0.00%
	Rail Vehicle Specs/Design	118,267	0	0	118,267	0.00%
	Program Management Staff	2,295,681	282,440	1,225,405	1,070,276	53.38%
	General Engineering Consultants	2,285,000	16,275	16,275	2,268,725	0.71%
	Environmental/30% Design	2,191,344	0	763,671	1,427,673	34.85%
	Feasability Report	89,728	0	0	89,728	0.00%
	Strategic Development Dir	73,550	0	20,475	53,075	27.84%
	LTK	226,000	0	16,268	209,732	7.20%
	Government Relations/Community Engagement	15,000	0	16,775	(1,775)	111.83%
	TOTAL - Consultants	**8,158,176**	**298,715**	**2,058,868**	**6,099,308**	**25.24%**
Other Direct Costs						
	Legal	342,429	0	114,143	228,287	33.33%
	Insurance	10,000	0	7,624	2,376	76.24%
	Audits	25,000	0	5,395	19,605	21.58%
	Travel/Mileage/Mis	25,000	64	19,135	5,865	76.54%
	Office space/furnishings	145,000	1,122	1,122	143,878	0.77%
	ACE	20,000	0	0	20,000	0.00%
	BART	155,000	0	0	155,000	0.00%
	Caltrans Reimbursement	167,875	2,135	2,135	165,740	1.27%
	Union Pacific Reimbursement	25,000	0	0	25,000	0.00%
	TOTAL OTHER DIRECT COSTS	**915,304.22**	**3,320.49**	**149,553.81**	**765,750**	**16.34%**
	TOTAL OPERATING EXPENDITURES	**9,427,422**	**355,312**	**2,389,562**	**7,037,861**	**25.35%**
	LAVTA Expense		0	0		
	FUND BALANCE (OPERATING)	**(0.37)**	**(355,312)**	**(1,157,419)**		

ATTACHMENT 2

Tri-Valley San Joaquin Regional Rail Authority
BALANCE SHEET
FOR THE PERIOD ENDING:
March 31, 2021

ASSETS:

108	CASH-GENERAL CHECKING	1,638,482	
120	ACCOUNTS RECEIVABLE	(282)	
150	PREPAID EXPENSES	0	
	TOTAL ASSETS		**1,638,200**

LIABILITIES:

205	ACCOUNTS PAYABLE	0	
20501	DUE TO LAVTA	2,860,116	
211	PRE-PAID REVENUE	178,290	
	TOTAL LIABILITIES		**3,038,406**

FUND BALANCE:

301	FUND RESERVE	0	
304	GRANTS, DONATIONS, PAID-IN CAPITAL	0	
30401	SALE OF BUSES & EQUIPMENT	0	
	FUND BALANCE	(1,400,205)	
	TOTAL FUND BALANCE		**-1,400,205**
	TOTAL LIABILITIES & FUND BALANCE		**1,638,200**

Tri-Valley San Joaquin Regional Rail Authority
REVENUE REPORT
FOR THE PERIOD ENDING:
March 31, 2021

ACCOUNT	DESCRIPTION	BUDGET	CURRENT MONTH	YEAR TO DATE	BALANCE AVAILABLE	PERCENT BUDGET EXPENDED
	Caltrans	20,000	0	0	20,000	0.0%
	MTC-Bridge Tolls	9,308,657	262,487	1,474,154	7,834,503	15.8%
	Alameda County/Strategic Development	39,950	0	20,475	19,475	51.3%
	Government Relations/Community Engage	58,815	0	0	58,815	0.0%
	TOTAL REVENUE	**9,427,422**	**262,487**	**1,494,629**	**7,932,793**	**15.9%**

Tri-Valley San Joaquin Regional Rail Authority
EXPENDITURE REPORT
March 31, 2021

ACCOUNT	DESCRIPTION	BUDGET	CURRENT MONTH	YEAR TO DATE	BALANCE AVAILABLE	PERCENT BUDGET EXPENDED
Direct Labor and Benefits						
	Executive Director	149,310	12,576	103,035	46,275	69.01%
	Administrative Assistant	96,200	6,632	62,311	33,889	64.77%
	Finance Director	42,000	3,500	25,819	16,181	61.47%
	IT support	36,000	0	0	36,000	0.00%
	Marketing Director	30,432	2,536	15,218	15,215	50.00%
	TOTAL - Direct Labor	**353,942**	**25,243**	**206,383**	**147,559**	**58.31%**
Consultants/seconded staff						
	Program Manager	490,000	0	0	490,000	0.00%
	Project Management support- Civil	373,607	0	0	373,607	0.00%
	Rail Vehicle Specs/Design	118,267	0	0	118,267	0.00%
	Program Management Staff	2,295,681	158,284	1,383,688	911,993	60.27%
	General Engineering Consultants	2,285,000	0	16,275	2,268,725	0.71%
	Environmental/30% Design	2,191,344	0	763,671	1,427,673	34.85%
	Feasability Report	89,728	283,384	283,384	(193,656)	315.83%
	Strategic Development Dir	73,550	0	20,475	53,075	27.84%
	LTK	226,000	0	16,268	209,732	7.20%
	Government Relations/Community Engagement	15,000	0	16,775	(1,775)	111.83%
	TOTAL - Consultants	**8,158,176**	**441,668**	**2,500,536**	**5,657,640**	**30.65%**
Other Direct Costs						
	Legal	342,429	36,564	150,707	191,723	44.01%
	Insurance	10,000	0	7,624	2,376	76.24%
	Audits	25,000	0	5,395	19,605	21.58%
	Travel/Mileage/Mis	25,000	28	19,163	5,837	76.65%
	Office space/furnishings	145,000	0	1,122	143,878	0.77%
	ACE	20,000	0	0	20,000	0.00%
	BART	155,000	0	0	155,000	0.00%
	Caltrans Reimbursement	167,875	1,639	3,774	164,101	2.25%
	Union Pacific Reimbursement	25,000	0	0	25,000	0.00%
	TOTAL OTHER DIRECT COSTS	**915,304.22**	**38,230.95**	**187,784.76**	**727,519**	**20.52%**
	TOTAL OPERATING EXPENDITURES	**9,427,422**	**505,142**	**2,894,704**	**6,532,719**	**30.71%**
	LAVTA Expense		131	131		
	FUND BALANCE (OPERATING)	**(0.37)**	**(242,786)**	**(1,400,205)**		

AGENDA

ITEM 5

Tri-Valley San Joaquin Valley
REGIONAL RAIL AUTHORITY

STAFF REPORT

SUBJECT: Executive Director's Report

FROM: Michael Tree, Executive Director

DATE: May 12, 2021

SB 548
SB 548 (Eggman, Glazer, Bauer-Kahan, Villapudua) was unanimously approved in April by both the State Senate Transportation Committee and the full State Senate. The next stop for the legislation will be the Assembly Transportation Committee.

Job Recruitment at Rail Authority
At the last Board meeting it was mentioned that our Program Manager was soon to retire. Staff has advertised the job opening of Deputy Executive Director/Program Manager and has received several excellent candidates that are being interviewed. Staff anticipates that the Rail Authority Board of Directors will have an employment contract to consider at the June meeting for the preferred candidate, as well as other employment related action items.

Valley Link Executive Steering Committee
The Valley Link Executive Steering Committee comprised of executives from MTC, ACTC, SJCOG, BART, SJRRC/ACE, Caltrans and CalSTA has moved to quarterly meetings. The next meeting is May 18, 2021. At the meeting the committee will be reviewing Rail Authority plans with NEPA and Project Approval/Environmental Design with Caltrans.

Community Partners Funding and Reauthorization
The Valley Link project is included in the Community Partners Funding requests from Congressmen Swalwell and Harder in the amounts of $10 million and $5 million respectively. Additionally, Congressman Swalwell has forwarded to the Transportation and Infrastructure Committee the Valley Link project as his top priority for funding (in the amount of $20 million) in the upcoming reauthorization bill.

Additionally, Assembly members Bauer-Kahan and Villapudua have plans to include Valley Link in State Budget requests.

Update to Valley Link Funding Plan and Project Schedule
Staff has initiated a work directive to WSP/PGH Wong to update the Valley Link Funding Plan and Project Schedule, both of which are currently found in the Valley Link Feasibility Report. The update will take into consideration the recent changes made to the project to provide for 12-minute headways throughout the Phase 1 project area in 2040, and are being made in advance of entering into NEPA and applying for FTA Grantee status.

AGENDA

ITEM 6

Tri-Valley San Joaquin Valley
REGIONAL RAIL AUTHORITY

STAFF REPORT

SUBJECT: Adoption of Resolutions Regarding Certification of the Final Environmental Impact Report for and Project Approval of the Valley Link Project with Findings Required by the California Environmental Quality Act

FROM: Michael Tree, Executive Director, and Michael Conneran, General Counsel

DATE: May 12, 2021

ACTION REQUESTED

Staff recommends that the Board adopt resolutions to:

1. Certify the Final Environmental Impact Report; and

2. Adopt the California Environmental Quality Act Findings of Fact, Statement of Overriding Considerations, and Mitigation Monitoring and Reporting Program documents and approve the Preferred Alternative for the Valley Link Project.

Adoption of the resolutions and the Preferred Alternative will allow the Authority to proceed with preliminary engineering work while seeking funding for the construction and implementation of the Project.

BACKGROUND/DISCUSSION

Environmental Review Process

The Final Environmental Impact Report (EIR) has been prepared in compliance with the California Environmental Quality Act (CEQA) and consists of the Draft EIR; appendices; comments; response to comments; a list of persons, organizations, and public agencies that commended on the Draft EIR; revisions to the Draft EIR; and the Mitigation Monitoring and Reporting Plan (MMRP). The following actions were taken in the preparation of this Final EIR:

- The Authority published a Notice of Preparation for the Valley Link Project on September 13, 2018 and the public scoping period was open until October 15, 2018.
- Public scoping meetings were held on October 2, 2018 in Livermore at the Robert Livermore Community Center and in Tracy at the Tracy City Hall on October 3, 2018.
- A Draft EIR for the Valley Link Project was issued on December 2, 2020 for a 50-day public review period to receive written comments.
- Three online open house meetings were held on the dates and times listed below:
    - Saturday, December 12, 2020, from 9:00 am to 10:30 am.
    - Wednesday, December 16, 2020 from 11:30 am to 1:00 pm.
    - Thursday, December 17, 2020 from 5:00 pm to 6:30 pm.
- The Final EIR was completed on April 30, 2021 and posted to the Project website and sent to interested parties and stakeholders.

Final EIR and the Preferred Alternative
The Draft EIR identifies a Proposed Project, as well as station and alignment alternatives that were evaluated at a level equal to the elements of the Proposed Project. Based on the evaluation in the Draft EIR, as supplemented by the information in the Final EIR, the Authority staff has decided to recommend a "Preferred Alternative" that includes several of the alternatives considered in the Draft EIR instead of some of the proposed components. As such, the term “Preferred Alternative” will be used to identify the Project featuring the components that have been identified by the Authority staff as the preferred configuration of the Project to be adopted.

The Preferred Alternative includes the construction and operation of seven stations, listed from west to east:

- Dublin/Pleasanton (BART Intermodal)
- Isabel (Livermore)
- Southfront Road Station Alternative – in place of the Greenville Station proposed in the Draft EIR (Livermore)
- Mountain House Station Alternative – in place of the Mountain House Station proposed in the Draft EIR (San Joaquin County)
- Downtown Tracy Station (Tracy)
- River Islands Station (Lathrop)
- North Lathrop Station (ACE Intermodal)

In addition to these stations, the Preferred Alternative includes the Stone Cut Alignment Alternative and the Tracy Operation and Maintenance Facility (OMF) in the City of Tracy.

Full implementation of the Preferred Alternative would be subject to available funding as well as design and construction considerations and the Authority is considering two initial operating segments (IOS). If implemented, these initial operating segments would establish initial service from the Dublin/Pleasanton BART Station to either the Southfront Road Station Alternative or the Mountain House Station Alternative. The Southfront Road Station Alternative IOS would include an Interim OMF to be constructed on a 5-acre portion of the Alameda County Transportation Corridor ROW approximately 2,250 feet east of Dyer Road. The Mountain House Station Alternative IOS would include utilization of the proposed Tracy OMF in the City of Tracy.

KEY FINDINGS OF ENVIRONMENTAL REVIEW

The Preferred Alternative would have beneficial impacts to the following resources
Overall, the Preferred Alternative will provide an environmental benefit to the Northern California Megaregion and San Joaquin and Alameda Counties by providing:

- Improved rail service as an alternative to vehicle travel that will support air quality improvement and greenhouse gas (GHG) reduction goals (as expressed in the air quality standards of the San Francisco Bay Area Air Quality Management District, San Joaquin Valley Air Pollution Control District, and the Air Resources Board’s SB 32 Scoping Plan), as well as regional objectives for reducing traffic congestion and improving transportation sustainability (as expressed in the Regional Transportation Plans/Sustainable Communities Strategies adopted by the San Joaquin and Bay Area Metropolitan Planning Organizations).

The Preferred Alternative meets the following adopted goals:

- Improve connectivity within the Northern California Megaregion: connecting housing, people, and jobs.
- Establish rail connectivity between BART’s rapid transit system and the ACE commuter service in the Tri-Valley
- Pursue Project implementation that is fast, cost-effective, and responsive to the goals and objectives of the communities it will serve

- Be a model of sustainability in the design, construction, and operation of the system
- Support the vision of the California State Rail Plan to connect the Northern California Megaregion to the State rail system.

With mitigation measures identified in the Final EIR, the Preferred Alternative would have less than significant impacts to the following resources:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources (including Tribal Cultural Resources)
- Geology & Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use & Planning
- Noise & Vibration
- Population & Housing
- Recreation
- Transportation & Traffic
- Utilities & Service Systems

Even with mitigation measures identified in the Final EIR, the Preferred Alternative would have significant and unavoidable impacts to the following resources:

- Agricultural Resources
- Air Quality
- Noise & Vibration

Alternatives

As required by CEQA, a discussion of possible alternatives to the Proposed Project was included in the Draft EIR and Final EIR. The Preferred Alternative includes the Southfront Road Station Alternative, the Stonecut Alignment Alternative and the Mountain House Station Alternative. The following other alternatives were evaluated in the EIR and were found to be environmentally inferior to the Preferred Alternative for the reasons discussed in Section 5.8 of the Draft EIR:

- No Project
- Grenville Station
- Mountain House Station
- West Tracy OMF Alternative
- Downtown Tracy Station Parking Alternative 1
- Downtown Tracy Station Parking Alternative 2
- Bus/Bus Rapid Transit (BRT) with Managed Lanes Alternative
- Electric Multiple Unit/Overhead Catenary System (EMU/OCS) Alternative

A wide range of other alternatives were considered in the EIR, as discussed in Chapter 5 of the Draft EIR, but were dismissed from further evaluation (as discussed in Sections 5.8 and 5.9) because they either did not meet most of the Project objectives, were infeasible (from a technical, logistical, or financial perspective), did not avoid or substantially reduce one or more significant impacts of the Proposed Project (or the Preferred Alternative), or was beyond the scope of the Valley Link project and the responsibilities of the Authority. Alternatives considered, but dismissed from further evaluation are discussed in Chapter 5 of the Draft EIR, including other operating technologies, other modal options, other alignment options (including the Iron Horse Alternative among others), and other station options.

The Final EIR has fully disclosed potential environmental effects of four evaluated vehicle technology variants (Diesel Multiple Unit, Hybrid Multiple Unit, Battery Electric Multiple Unit, and Diesel Locomotive Haul) and has also disclosed potential environmental effects of several potential phasing options in the form of potential initial operating segments (IOS) including an IOS to Southfront and an IOS to Mountain House. No decision is needed on these elements at this time. The selection of vehicle technology or determination whether to implement an IOS or not will be made at a later date as part of detailed engineering design and planning.

Proposed CEQA Findings

Section 15091 of the CEQA Guidelines states that no public agency shall approve or carry out a project for which an EIR has been certified identifies one or more significant environmental effects of the project, unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. For each significant effect identified in the Final EIR, the enclosed Findings provide one the following conclusions and describe the supporting substantial evidence in the record:

- Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.
- Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
- Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.

Proposed Statement of Overriding Considerations

Pursuant to Section 15093 of the State CEQA Guidelines, in determining to approve the project the Authority must balance the benefits of the Preferred Alternative against its unavoidable environmental impacts. The proposed Statement of Overriding Considerations documents the economic, environmental, and social benefits, including region-wide and statewide environmental benefits, of the Preferred Alternative against its unavoidable environmental impacts. As described in the proposed Statement, the specific benefits, including region-wide and statewide environmental benefits, of the Preferred Alternative are considered to outweigh the unavoidable adverse environmental effects, and thus the adverse environmental effects may be considered “acceptable” per Section 15093 of the CEQA Guidelines.

Proposed Mitigation Monitoring and Reporting Program

CEQA also requires that a Lead Agency establish a program to monitor and report on mitigation measures that it has adopted as part of the environmental review process, and that this program must be adopted at the time that the agency determines to carry out a project for which the environmental review process has been conducted (Public Resources Code Section 21081.6 (a) (1)). The proposed MMRP is recommended for adoption to ensure that mitigation measures identified in the Final (EIR) are fully implemented during project implementation.

Next Steps

If the Board certifies the EIR and approves the Preferred Alternative, within five days a Notice of Determination will be filed with the State Clearinghouse and the County Clerks of Alameda and San Joaquin Counties. Adoption of the resolutions and the Preferred Alternative will allow the Authority to proceed with preliminary engineering work while seeking funding for the construction and implementation of the Project.

FISCAL IMPACT

There is no immediate fiscal impact from this action. If the Authority proceeds with the construction of the Project, the costs for the mitigation measures included as part of the MMRP will be included in the overall Project cost. The estimated cost for the Project is between $2.4 and $2.9 billion.

RECOMMENDED ACTION

Adoption of the following attached resolutions:

- Resolution of the Board of Directors of the Tri-Valley – San Joaquin Valley Regional Rail Authority Certifying the Final Environmental Impact Report for the Valley Link Project

- Resolution of the Board of Directors of the Tri-Valley – San Joaquin Valley Regional Rail Authority Adopting CEQA Findings of Fact, Statement of Overriding Considerations and Mitigation Monitoring and Reporting Plan and Approving the Valley Link Project

ATTACHMENTS

1. Resolution R07-2021 Certifying the Final EIR for the Valley Link Project
2. Valley Link Final Environmental Impact Report (not attached. This document is available online at www.valleylinkrail.com/deir
3. Resolution R08-2021 Adopting Findings, MMRP and Approving the Valley Link Project
4. Draft Findings of Fact and Statement of Overriding Considerations
5. Draft Mitigation Monitoring and Reporting Program (MMRP)

ATTACHMENT 1

Tri-Valley San Joaquin Valley
REGIONAL RAIL AUTHORITY

RESOLUTION NO. R07-2021

* * *

RESOLUTION OF THE BOARD OF DIRECTORS OF THE TRI-VALLEY-SAN JOAQUIN VALLEY REGIONAL RAIL AUTHORITY CERTIFYING THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE VALLEY LINK PROJECT

WHEREAS, the Tri-Valley-San Joaquin Valley Regional Rail Authority ("Authority") has prepared, in conformance with CEQA, a new Environmental Impact Report ("EIR") for the Project; and

WHEREAS, the Project analyzed in the EIR consists of the establishment of a new passenger rail service along a 42-mile corridor between the existing Dublin/Pleasanton Bay Area Rapid Transit ("BART") Station and the proposed Altamont Corridor Express ("ACE") North Lathrop Station; and

WHEREAS, a Notice of Preparation for the Project EIR was issued on September 13, 2018; and

WHEREAS, the Draft EIR was released on December 2, 2020 for a 50-day public review and comment period; and

WHEREAS, the Authority held three on-line open house public meetings; and

WHEREAS, the Authority received comments from interested individuals, organizations and agencies on the Draft EIR; and

WHEREAS, responses to comments on the Draft EIR were prepared and released on April 30, 2021; and

WHEREAS, the Draft EIR, as revised, together with the responses to comments, constitute the Final EIR on the Project; and

WHEREAS, the Board has reviewed and considered the Final EIR for the Project and desires to certify the FEIR for the Project in conformance with CEQA law and Guidelines.

NOW, THEREFORE, BE IT RESOLVED BY the Board of Directors ("Board") of the Tri-Valley-San Joaquin Valley Regional Rail Authority hereby certifies the Final Environmental Impact Report for the Valley Link Project (hereinafter "Project") based upon the following findings and the foregoing recitals, which are incorporated herein by reference:

1) The Tri-Valley-San Joaquin Valley Regional Rail Authority has complied with the requirements of the California Environmental Quality Act (Cal. Pub. Res. Code Sections 21000 et seq., hereinafter "CEQA") and the State CEQA Guidelines (Cal. Admin. Code Title 14, Sections 15000 et. seq., (hereinafter "CEQA Guidelines").

2) Three on-line public open house meetings were held on said Draft EIR in December, 2020. The period for acceptance of written comments ended on January 21, 2021.

3) The Authority prepared responses to comments on environmental issues received at the public meetings and in writing during the 50-day public review period for the DEIR, prepared revisions to the text of the DEIR in response to comments received or based on additional information, and corrected errors in the DEIR. This material was presented in a Final EIR document, published on April 30, 2021, which was distributed to the Board and to all parties who commented on the DEIR, and was made available to others upon request at the Valley Link offices.

4) The Final Environmental Impact Report has been prepared by the Authority, as the lead agency, and consists of the materials identified in Guidelines § 15132, including the DEIR, any comments received during the review process, any additional information that became available, the responses to comments, a list of persons, organizations, and public agencies commenting on the draft EIR, and revisions to the text of the DEIR, all as required by law.

5) Project environmental files and the record of proceedings have been made available for review by the Board and the public. These files are available for public review at the Valley Link Offices, 1362 Rutan Court, Suite 100, Livermore, California and are part of the record before the Board.

6) At its meeting of May 12, 2021, the Board has reviewed and considered the Final EIR and hereby finds that the contents of said report and the procedures through which the Final EIR was prepared, publicized and reviewed are consistent with the provisions of CEQA and the CEQA Guidelines.

7) The Board has reviewed and considered the contents of the FEIR and hereby does find that the Final EIR reflects the independent judgment and analysis of the Authority, is adequate, accurate and objective, and that the Final EIR documents contain no significant new information to the DEIR that would require recirculation under CEQA Guideline Section 15088.5, and hereby does certify the completion of said Final Environmental Impact Report in compliance with CEQA and the CEQA Guidelines.

Regularly passed and adopted this 12th day of May, 2021 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
Veronica Vargas, Chair

ATTEST:

_____
Michael Tree, Executive Director

Tri-Valley San Joaquin Valley
REGIONAL RAIL AUTHORITY

CERTIFICATION

The undersigned duly qualified Executive Director, acting on behalf of Tri-Valley-San Joaquin Valley Regional Rail Authority, certifies that the foregoing is a true and correct copy of a resolution adopted at a legally convened meeting of the Tri-Valley-San Joaquin Valley Regional Rail Authority Board of Directors held on May 12, 2021.

_____
Michael Tree, Executive Director

_____
Date

ATTACHMENT 3

Tri-Valley San Joaquin Valley
REGIONAL RAIL AUTHORITY

RESOLUTION NO. R08-2021

* * *

RESOLUTION OF THE BOARD OF DIRECTORS OF THE TRI-VALLEY — SAN JOAQUIN VALLEY REGIONAL RAIL AUTHORITY ADOPTING CEQA FINDINGS OF FACT, STATEMENT OF OVERRIDING CONSIDERATIONS AND MITIGATION MONITORING AND REPORTING PLAN AND APPROVING THE VALLEY LINK PROJECT

WHEREAS, pursuant to Resolution R08-2021, the Tri-Valley-San Joaquin Valley Regional Rail Authority ("Authority") has certified, in conformance with the California Environmental Quality Act ("CEQA"), the Final Environmental Impact Report ("FEIR") for the Valley Link Project ("Project") and hereby incorporates by reference the defined terms and statements contained in that Resolution.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors ("Board") of the Tri-Valley-San Joaquin Valley Regional Rail Authority hereby takes the following actions:

(a) The Board has reviewed and considered the information contained in the FEIR and in the CEQA Findings of Fact attached hereto as Exhibit "A" and supporting documentation. The Board determines that the CEQA Findings of Fact document identifies the significant environmental impacts and mitigation measures associated with the Project. The Board further finds that the CEQA Findings of Fact have been completed in compliance with CEQA and the State CEQA Guidelines. The Board hereby approves and adopts the CEQA Findings of Fact attached hereto as Exhibit "A."

(b) The Board hereby finds that the Statement of Overriding Considerations was completed in accordance with Public Resources Code section 21081 and State CEQA Guidelines Section 15093, subdivision (a), which state that CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project. The Statement of Overriding Considerations is included in the Findings of Fact attached hereto as Exhibit "A" and sets forth significant environmental

effects that are found to be unavoidable but are acceptable due to the overriding considerations and benefits expected to result from implementing the Project. The Board hereby approves and adopts the Statement of Overriding Considerations included in the Findings of Fact attached hereto as Exhibit "A."

(c) Pursuant to Public Resources Code section 21081.6, and State CEQA Guidelines Section 15091, subdivision (d), the Board hereby adopts the Mitigation Monitoring and Reporting Program ("MMRP") attached hereto as Exhibit "B," which ensures that required mitigation is implemented for the Project.

(d) Based on and in consideration of all of the foregoing, the Board hereby approves the Project as described in more detail in the FEIR (incorporated herein), along with the project design features which have been incorporated into the project and the mitigation measures described in the Findings of Fact attached hereto as Exhibit A and reflected in the MMRP attached hereto as Exhibit B, and which MMRP shall be a condition of the approved project.

(e) The Board hereby directs staff to file a CEQA Notice of Determination with the State Clearinghouse and appropriate County Clerks and to take any other necessary steps to obtain all additional permits, approvals and rights that would allow construction and operation of the Project.

Regularly passed and adopted this 12th day of May, 2021 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
Veronica Vargas, Chair

ATTEST:

_____
Michael Tree, Executive Director

Tri-Valley San Joaquin Valley
REGIONAL RAIL AUTHORITY

CERTIFICATION

The undersigned duly qualified Executive Director, acting on behalf of Tri-Valley-San Joaquin Valley Regional Rail Authority, certifies that the foregoing is a true and correct copy of a resolution adopted at a legally convened meeting of the Tri-Valley-San Joaquin Valley Regional Rail Authority Board of Directors held on May 12, 2021.

_____
Michael Tree, Executive Director

_____
Date

ATTACHMENT 4

FINDINGS OF FACT AND STATEMENT OF OVERRIDING CONSIDERATIONS VALLEY LINK

PREPARED FOR:

Tri-Valley–San Joaquin Valley Regional Rail Authority
1362 Rutan Court #100
Livermore, CA 94551
Contact: Michael Tree
Email: mtree@valleylinkrail.com

PREPARED BY:

ICF
201 Mission Street, Suite 1500
San Francisco, CA 94105
Contact: Rich Walter

April 2021

ICF. 2021. Valley Link. Findings of Fact and Statement of Overriding Considerations for the Valley Link Project. April. (ICF 00004.19) San Francisco, CA. Prepared for Tri-Valley–San Joaquin Valley Regional Rail Authority, Livermore, CA

Section 1
Introduction

1.1 Introduction

The Tri-Valley—San Joaquin Valley Regional Rail Authority (Authority) has prepared for certification a Final Environmental Impact Report (EIR) for the Valley Link Project (Project). The Authority proposes to establish new passenger rail service along a 42-mile corridor between the existing Dublin/Pleasanton Bay Area Rapid Transit (BART) Station and the proposed Altamont Corridor Express (ACE) North Lathrop Station included in the ACE Extension Lathrop to Ceres/Merced project. The Proposed Project would provide regular service throughout the day in both directions with timed connections with both BART and ACE services. The overall travel time from North Lathrop to the Dublin/Pleasanton BART Station would be approximately 65 minutes. The 2040 service plan includes 12-minute peak period headways and 48-minute off-peak headways (from Dublin/Pleasanton BART Station to the North Lathrop Station) with more limited service on the weekend.

The alignment of the Project is described in three segments: the Tri-Valley segment would be located within the Interstate (I-)580 median; the Altamont segment within the Alameda County Transportation Corridor right-of-way (ROW) and existing UPRR ROW; and the Tracy to North Lathrop segment within existing UPRR ROW.

The Final EIR identifies a Proposed Project, as well as alternatives that were considered. For the reasons identified in this document, the Authority has decided to pursue some of the alternatives considered in the Final EIR instead of some of the proposed facilities. As such, this document uses the term "Preferred Alternative" to identify the Project components that have been identified is preferred by the Authority.

The Preferred Alternative would include the construction and operation of seven stations, listed from west to east:

- Dublin/Pleasanton (BART Intermodal)
- Isabel (Livermore)
- Southfront Road Station Alternative - in place of the Greenville Station proposed in the Draft EIR (Livermore)
- Mountain House Station Alternative – in place of the Mountain House Station proposed in the Draft EIR (San Joaquin County)
- Downtown Tracy Station (Tracy)
- River Islands Station (Lathrop)
- North Lathrop Station (ACE Intermodal)

In addition to these stations, the Preferred Alternative would include the Stone Cut Alignment Alternative and the Tracy Operation and Maintenance Facility (OMF) in the City of Tracy.

Full implementation of the Preferred Alternative would be subject to available funding and design and construction considerations. The Authority is considering two initial operating segments (IOS). It would establish initial service from the Dublin/Pleasanton BART Station to the Southfront Road Station Alternative or Mountain House Station Alternative. The Southfront Road Station Alternative IOS would include an Interim OMF to be constructed on a 5-acre portion of the Alameda County Transportation Corridor ROW approximately 2,250 feet east of Dyer Road. The Mountain House Station Alternative IOS would include the proposed Tracy OMF in the City of Tracy.

For a detailed description of the Project, see Chapter 2, *Project Description*, of the Draft EIR and Chapter 4, *Text Revisions to the Draft EIR*, of the Final EIR.

Section 1 of this document provides a summary of the environmental review process. Section 2 describes the alternatives considered in the 2021 Final EIR. Section 3 contains the Authority's findings for each significant environmental effect of the Preferred Alternative identified in the Final EIR, as required by CEQA. Section 3 also describes the reasons why the project alternatives analyzed in the Final EIR ultimately have been rejected. Section 4 consists of a statement of overriding considerations, as required by State CEQA Guidelines Section 15093, stating the specific circumstances that support the Authority's determination that the unavoidable significant environmental effects of the Preferred Alternative are acceptable because specific benefits of the Preferred Alternative outweigh those effects.

1.2 CEQA Process

The Authority analyzed the Preferred Alternative based on the California Environmental Quality Act (CEQA, Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (14 CCR 15000, et seq.). The Final EIR prepared by the Authority determined that the Preferred Alternative could have potentially significant effects on the environment, including significant effects that cannot be avoided.

Consistent with CEQA's requirements, the Project's Draft EIR was circulated for a 50-day public review period beginning on December 2, 2020 and ending on January 21, 2021. All written comments received during the public review period were responded to in Chapter 3, *Responses to Comments* of the Final EIR.

Prior to approving the Preferred Alternative, the Authority must certify that it has considered the Final EIR, that the Final EIR adequately meets the requirements of CEQA, and that the Final EIR reflects the independent judgment of the Authority. Upon approving the Preferred Alternative, the Authority must adopt the following findings of fact regarding the significant effects identified in the Final EIR, the range of alternatives analyzed in the Final EIR, and statement of overriding considerations explaining the benefits that outweigh the significant unavoidable effects identified in the Final EIR.

Pursuant to Public Resources Code (PUB. RES. CODE) Section 21081.6, the Authority is also adopting a mitigation monitoring and reporting program (MMRP) for the mitigation measures that are the Authority's responsibility to implement. The MMRP establishes a program to ensure that the adopted mitigation measures identified in the Final EIR will be implemented.

Section 2
Alternatives Considered

2.1 Introduction

The Authority considered a range of alternatives before selecting the alternatives analyzed in Final EIR. Alternatives were identified through input from the public, agencies, and stakeholders during scoping (in 2018). Appendix A, *Scoping Report*, of the Draft EIR contains the scoping report detailing the scoping process, including the notification and scoping activities undertaken. As discussed in Chapter 5, *Other Alternatives Considered*, of the Draft EIR, the Authority chose to examine five alternatives at the same level of detail as the Proposed Project and three alternatives (including the No Project Alternative) at a lesser level of detail. Alternatives determined to be infeasible, to not avoid or substantially reduce one or more significant impacts of the Proposed Project, or to not meet all or most of the Project's objectives were dismissed from further analysis.

Based on the screening process results, the Draft EIR analyzed the following alternatives at a level of detail equal to the Proposed Project with detailed description of these alternatives in Chapter 2, *Project Description*, and environmental analysis in Chapter 3, *Environmental Impact Analysis,* and in Chapter 4, *Other CEQA-Required Analysis:*

- Stone Cut Alignment Alternative
- Southfront Road Station Alternative
- Mountain House Station Alternative
- West Tracy OMF Alternative
- Downtown Tracy Parking Alternatives 1 and 2

Draft EIR Section 5.4, *Description and Analysis of Alternatives Analyzed at a Lesser Level of Detail*, describes the three alternatives that were analyzed at a lesser level of detail than the Proposed Project and provides that environmental analysis:

- No Project Alternative
- Bus/Bus Rapid Transit (BRT) with Managed Lanes Alternative
- Electric multiple unit (EMU) with overhead catenary system (OCS)

The alternatives are summarized below, beginning with the alternatives described at an equal level of detail to the Proposed Project. In addition, due to stakeholder interest, one additional alternative that was considered in the EIR, but not analyzed (the Iron Horse Trail Alternative) is also summarized below as this document provides findings as to why this alternative is not feasible.

2.2 Stone Cut Alignment Alternative

The Stone Cut Alignment Alternative has been selected in place of a portion of the Altamont Alignment.

The Stone Cut Alignment Alternative is an approximately 2.25-mile-long bypass of the existing railroad tunnel which passes under westbound I-580 along the Altamont Alignment (see Figure 2-21 in the Draft EIR). With the Stone Cut Alignment Alternative, a short segment of the Altamont Alignment would transition from the Alameda County Transportation Corridor ROW to the UPRR ROW, parallel the existing UPRR tracks to cross I-580, and transition back to the Alameda County Transportation Corridor ROW. The entire length of the Stone Cut Alignment Alternative would be double tracked.

The Stone Cut Alignment Alternative includes a new single-span bridge approximately 180 feet long over eastbound I-580 east of the existing UPRR bridge. The proposed alignment would then cross under westbound I-580 parallel to and east of the existing UPRR tracks. Two retaining walls (one approximately 200 feet long and one approximately 140 feet long, each 10 to 20 feet high) would be constructed along the alignment where its crosses under westbound I-580.

No changes to the existing UPRR track are proposed as part of the Stone Cut Alignment Alternative. Valley Link trains would not operate on any UPRR freight tracks along the bypass. Construction of the Stone Cut Alignment Alternative would require the acquisition of ROW (see Draft EIR Appendix C, *Preliminary Right of Way Requirements*).

2.3 Southfront Road Station Alternative

The Southfront Road Station Alternative has been selected to take the place of the Greenville Station.

It would be constructed south of I-580 on a 7.3-acre site along Southfront Road between McGraw Avenue and Franklin Lane in Livermore. Access to the station would be provided from Southfront Road. The Southfront Road Station Alternative would include the same passenger amenities and sustainable design features as described for the Proposed Project. As shown in Draft EIR Figures 2-16A and 2-16B, improvements that would be constructed as part of the Southfront Road Station Alternative include:

- A 400-foot-long by 30-foot-wide double-track at-grade Valley Link station platform in the median of a widened I-580.
- A surface parking lot providing up to approximately 680 parking spaces and 4 bus bays.
- Areas designated for future surface parking expansion of the station on an adjacent 3.3-acre site to meet 2040 parking demand for a total of up to approximately 1,070 parking spaces.
- A pedestrian overcrossing from the parking lots over Southfront Road and eastbound I-580 to the median station platform, including elevators and stairs at both ends of the bridge.
- Realignment of Southfront Road to accommodate the I-580 median widening, including new driveways for buses and vehicles into the station.
- If an IOS to the Southfront Road Station Alternative is implemented, then the parking be constructed would include 3,310 parking spaces.

Access to the parking lot would be provided from Southfront Road. Construction of the Southfront Road Station Alternative would require the acquisition of ROW (see Draft EIR Appendix C, *Preliminary Right of Way Requirements*). Construction of the Southfront Road Station Alternative

would also require the following changes to I-580 and the roadways in the vicinity of the proposed station:

- Widening of the I-580 freeway median and realignment of the eastbound lanes.
- Realignment of the eastbound I-580 on-ramp from First Street and the eastbound I-580 off-ramp to Vasco Road.
- Construction of new concreate barriers and retaining walls along eastbound I-580 in the vicinity of the station.
- Realignment of Southfront Road in the vicinity of the station.

2.4 Mountain House Station Alternative

The Mountain House Station Alternative has been selected to take the place of the Mountain House Station.

The Mountain House Station Alternative would be constructed on an approximately 8-acre site (6 acres of UPRR property) west of Hansen Road between the Owens-Illinois Industrial Lead and the California Aqueduct. Access to the station would be provided by new station driveways along Hansen Road. The Mountain House Station Alternative would include the same passenger amenities and sustainable design features as described for the Proposed Project. As shown in Figure 2-17A (Owens-Illinois Industrial Lead Variant 1, Single Track) and Figure 2-17B (Owens-Illinois Industrial Lead Variant 2, Double Track) of the Draft EIR, improvements that would be constructed as part of the Mountain House Station Alternative include:

- A 400-foot-long by 20-foot-wide at-grade Valley Link station platform.
- A Valley Link mainline track with an additional station track for passing.
- A surface parking lot south of the tracks providing up to approximately 890 parking spaces and three bus bays.
- Areas designated for future surface parking expansion north of the tracks to meet 2040 parking demand for a total of up to approximately 1,060 parking spaces on a 2.5-acre site (UPRR property).
- At-grade pedestrian crossings on both ends of the platform across the southern Valley Link track, including stairs and ADA-compliant ramps to access the platform from the parking lot.
- Improvements to the existing Hansen Road at-grade crossing, including roadway concrete crossing panels, signal house, railroad signal guards and gates on both sides of the crossing, and stop bar striping.
- If an IOS to Mountain House is implemented, then the parking be constructed would include 1,650 parking spaces.

Other than the above-described station driveways and upgrades to the existing at-grade crossing, no roadway improvements to Hansen Road are included in this alternative.

Most improvements at the Mountain House Station Alternative would be constructed within existing UPRR ROW. However, construction of the station would require acquisition of property from adjacent parcels (see Appendix C, *Preliminary Right of Way Requirements*).

2.5 West Tracy OMF Alternative

The West Tracy OMF Alternative is an alternative to the proposed Tracy OMF but has not been selected as part of the Preferred Alternative.

It would be constructed on an approximately 27-acre site south of Patterson Pass Road west of the originally proposed Mountain House Station. Access to the West Tracy OMF would be provided from Via Nicolo Road. As shown in Figure 2-20 of the Draft EIR, the West Tracy OMF Alternative would include tracks, buildings, and maintenance services like those described above for the proposed Tracy OMF. However, the West Tracy OMF Alternative would likely include a septic system for sewage disposal. This alternative would require significant site grading due to the rolling topography of the site.

Some of the improvements at the West Tracy OMF Alternative would be constructed within the existing UPRR ROW. However, construction of the West Tracy OMF Alternative would require acquisition of property from adjacent parcels (see Draft EIR Appendix C, *Preliminary Right of Way Requirements*).

Like the Tracy OMF, the design of the West Tracy OMF Alternative would accommodate the anticipated 2040 Valley Link Service Plan. However, construction of the West Tracy OMF Alternative would be phased over time as service increases between 2025 and 2040.

2.6 Downtown Tracy Parking Alternatives 1 and 2

These two parking alternatives in Downtown Tracy have not been selected as part of the Preferred Alternative.

The Downtown Tracy Station Parking Alternative 1 would include construction of a three-level parking structure at the site of the existing Tracy Transit Center surface parking lot (4-acre site) at the corner of North Central Avenue and West 4th Street, providing approximately 1,040 parking spaces for a net increase of approximately 925 spaces over the existing 115-space surface lot (see Figure 2-18 of the Draft EIR). This alternative does not include the construction of a surface parking lot at the southwest corner of the North Central Avenue/West 6th Street intersection; parking for the station would only be provided at the new parking structure. Construction of this alternative is not part of baseline project funding and is dependent on completion of station area plans and funding from the City of Tracy or other local funding partners.

The Downtown Tracy Station Parking Alternative 2 would include the construction of a three-level parking structure (5-acre site) at the southwest corner of the North Central Avenue/West 6th Street intersection providing approximately 930 parking spaces. No changes to the existing Tracy Transit Center parking lot are proposed as part of this alternative (see Figure 2-19 of the Draft EIR). Construction of this alternative is not part of baseline project funding and is dependent on completion of station area plans and funding from the City of Tracy or other local funding partners.

2.7 No-Project Alternative

The No Project Alternative has not been selected.

CEQA Guidelines Section 15126.6(e) requires the analysis of a No Project Alternative. The No Project Alternative analysis must discuss the existing conditions as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved.

The No Project Alternative would result in no new rail transit or other transit connection being established between the Central Valley and Bay Area. Existing transit services between the Central Valley and Bay Area would continue, including Altamont Corridor Express (ACE) between Stockton and San Jose, Bay Area Rapid Transit (BART), and the various existing bus connections to BART. The No Project Alternative assumes that Phase I of the ACE Extension, which would extend ACE service to Ceres, would be operational by 2023.

In addition, the No Project Alternative assumes the continuation of public commuter bus services operated by the San Joaquin Regional Transit District (San Joaquin RTD). The No Project Alternative also assumes that the existing roadway system connecting the Central Valley and Bay Area (the central artery being Interstate [I-]580) will undergo maintenance but no capacity expansion projects.

2.8 Bus/Bus Rapid Transit (BRT) with Managed Lanes Alternative

The Bus/BRT Alternative has not been selected as part of the Preferred Alternative.

The Authority received comments during scoping suggesting the consideration of a non-rail alternative to the Proposed Project, namely a bus-based alternative that would make use of existing highway facilities. Prior CEQA documents prepared for the BART Extension to Livermore also considered bus-based alternatives. The prior concepts were adapted for use in developing a bus-based alternative to the Proposed Project. A Bus/Bus Rapid Transit (BRT) Alternative would require less new infrastructure than a rail project since it would use existing roadways to a large extent. Also, a Bus/BRT Alternative would have substantially lower upfront capital costs than a rail project.

Starting in the east, the Bus/BRT Alternative would have express buses originate in Manteca, near State Route 120 and Airport Way, and then travel along local streets to the (planned) North Lathrop ACE Station, and then have bus stations at the River Islands community, the Tracy Transit Center, West Tracy, Mountain House, Greenville Road, Vasco Road, Isabel Avenue, and the BART Dublin/Pleasanton Station.

Dublin/Pleasanton bound buses would travel along portions of I-5, I-205, and I-580, operating on the right-side shoulders during heavy traffic conditions (when traffic speeds fall below 35 mph) at a maximum speed of 35 mph. To accommodate bus operations, stretches of the shoulder would need to be widened by either restriping the highway lanes or expanding the shoulder itself to ensure at least 12 feet of width required for bus-on-shoulder operations.

Between Greenville Road and Dublin/Pleasanton BART Station, buses would operate in the existing I-580 Express Lanes. Passenger platforms at Dublin/Pleasanton BART Station and at Isabel Avenue would be in the median of I-580, adjacent to the existing Express Lanes. Figure 5-2 shows a conceptual design for a platform connection at the Dublin/Pleasanton BART Station. A pedestrian bridge over eastbound and westbound lanes of I-580 would provide access for riders between eastbound and westbound bus stops and a parking lot on the north side of I-580.

The Bus/BRT Alternative would require construction of widened shoulder lanes, parking areas, and bus stations. Overall, this alternative would require less construction than the Proposed Project.

The Bus/BRT Alternative would include major modifications to the Dublin/Pleasanton BART Station to provide for bus access from the I-580 Express Lanes including modifications to I-580, the BART Station, and adjacent areas. Based on the design for the Bus/BRT in the BART to Livermore EIR, to accommodate bus movement at the Dublin/Pleasanton BART station, approximately 210 surface parking spaces would need to be relocated, either to a garage or another surface parking area.

This alternative would also include construction of an Isabel Avenue bus facility in the median of I-580, accessed from the I-580 Express Lanes including a parking lot to the south side of the freeway and a pedestrian bridge linking the bus facility to the parking lot. The Bus/BRT alternative would include construction of a reduced version of the Tracy OMF (that would be needed for a rail project), assuming the lesser space will be required handling and storage of buses versus DMUs.

2.9 Electric Multiple Unit/Overhead Catenary System (EMU/OCS) Alternative

The EMU/OCS Alternative has not been selected as part of the Preferred Alternative.

The EMU/OCS Alternative would generally be the same as the Proposed Project in terms of alignment, stations, frequency, ridership, and general operations. However, instead of one of the four multiple unit technologies described in Chapter 2 and analyzed in Chapter 3 (DMU, HBMU, BEMU, and DLH), the EMU/OCS Alternative would employ EMU trainsets that would receive electric power from an overhead catenary system (OCS) consisting of wires running continuously above the alignment, supported by a series of poles placed immediately along the rail alignment (assumed to be within the same footprint as the Proposed Project).

While some EMU trains are powered by a third rail, a third-rail system requires a completely enclosed right-of-way for safety purposes. Tracks with a third rail are not safe to be crossed by pedestrians and must be sealed with fencing or other enclosures. An EMU powered by a third rail was considered but dismissed from further analysis due to such concerns.

The EMU/OCS Alternative would require unique supporting traction power facilities (TPFs), such as train control houses, traction power substations and paralleling stations, and a switching station. While preliminary engineering plans have not been developed for the EMU/OCS, the following elements are envisioned based on the spacing of supporting facilities for the Caltrain Electrification:

- Tri-Valley: one train control house, one traction power substation, and one to two paralleling stations would need to be constructed in the immediate vicinity of the proposed alignment, potentially collocated with stations and/or OMF options.
- Altamont: one to two paralleling stations in the immediate vicinity of the proposed alignment, potentially collocated with stations and/or OMF options.
- Tracy to Lathrop: one train control house, one traction power substations, and one to two paralleling stations would need to be constructed in the immediate vicinity of the proposed alignment, potentially collocated with stations and/or OMF options.

A switching station would also be likely to be required that could be at the eastern end of the Altamont segment or the western end of the Tracy to Lathrop segment to isolate separate portions of the system in the event of an outage on one segment. In addition, this alternative could require additional grading beneath existing overpasses on I-580 in the Tri-Valley area to accommodate the height of catenary poles/wires.

2.10 Iron Horse Trail Alternative

The Iron Horse Trail Alternative has not been selected as part of the Preferred Alternative.

This alternative, suggested in scoping, would utilize the Iron Horse Trail alignment in Pleasanton to connect the BART Dublin/Pleasanton Station to rail services along the UPRR Oakland Subdivision or Alameda County Transportation Corridor ROW through Livermore and eastern Pleasanton. Figure 5-6 of the Draft EIR shows the approximately alignment of this alternative in the Tri-Valley.

One variant of this alternative would only include a connection between ACE and BART and not necessarily any increase in ACE service. In concept, this would mean that ACE would not increase the amount of trains it operates, which would mean that it would need to have at least one or more of its trains depart from its current route, travel to and from BART and then continue its normal service pattern. This would mean that inbound and outbound ACE service between the San Joaquin Valley, Livermore, and the inner Bay Area would be delayed substantially by the transit to and from BART for one or more trains, which would extend service times and decrease through ridership, while resulting in some increase in ridership for those accessing BART. However, service to the BART station that would be much slower and much less frequent than the Proposed Project and would degrade ACE through service which would result in inferior transportation outcomes compared to the Proposed Project and inferior environmental benefits related to reduction in VMT, criteria pollutants, and GHG emissions.

Thus, for an Iron Horse Alternative to be an equivalent alternative to the Proposed Project with operations either on the UPRR Oakland subdivision and/or or upon new/upgraded tracks along the former SP alignment, there would be need for substantial investment in new tracks to support equivalent transit service unlike asserted in the comment received for the Draft EIR.

The use of the UPRR Oakland Subdivision through Livermore and eastern Pleasanton would require the installation of additional tracks to accommodate the additional train service and to obtain UPRR approval and UPRR would control dispatch of passenger trains. ACE service is currently limited by UPRR to four round trip trains per day along the Oakland Subdivision and UPRR has indicated to ACE that service could only be expanded if the Oakland Subdivision capacity were increased to accommodate increased passenger rail service. Passenger service on lines shared with freight operations can be subject to delays when priority is given the freight service.

The Alameda County Transportation Corridor ROW is available from Greenville to eastern Livermore and from west Livermore to Pleasanton as it is owned by Alameda County, but the tracks have been out of service for many years. As a result, to use the ROW for Valley Link, new tracks would need to be constructed. In addition, in downtown Livermore, the only available location for rail is the existing UPRR ROW, so even if the Alameda County Transportation Corridor were used for Valley Link in other locations, there would still be a need to use the UPRR ROW in downtown Livermore.

This alternative would also cross roadways between the UPRR or former SP ROW and the BART Dublin/Pleasanton Station and would require crossing improvements and/or grade separations as described in the Final EIR.

Section 3
Findings

3.1 CEQA Requirements

CEQA requires the lead agency to make written findings about the disposition of the project's effects whenever it decides to approve a project for which an EIR has been certified (PUB. RES. CODE Section 21081). Regarding these findings, Section 15091 of the State CEQA Guidelines states, in part:

> No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:
>
> (1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
>
> (2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
>
> (3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.
>
> (b) The findings required by subsection (a) shall be supported by substantial evidence in the record.

The "changes or alterations" referred to in the State CEQA Guidelines may be mitigation measures, alternatives to the project, or changes to the project by the project proponent. The Final EIR for the Project identifies mitigation measures that will reduce significant effects of the Project or mitigate other potential effects that may not be, strictly speaking, environmental effects under CEQA. These mitigation measures will be incorporated into the design of the Project. An MMRP will also be adopted by the Authority to ensure that the mitigation measures identified in the Final EIR and these findings will be implemented.

The documents and other materials that constitute the record upon which the Authority's decision and these findings are based can be reviewed in person at the following location[1]:

Tri-Valley–San Joaquin Valley Regional Rail Authority
1362 Rutan Court #100
Livermore, CA 94551

[1] Because of current COVID-19 social distancing requirements, including the order from Alameda County to adhere to social distancing requirements, printed copies of the Draft EIR and the Final EIR are available for public viewing by appointment only at the Tri-Valley–San Joaquin Valley Regional Rail Authority office in Livermore, California. Email or call the information request number to arrange an appointment.

- Information Line: For more information, please email info@valleylinkrail.com or call the information request line at (925) 455-7591 and leave a message.

3.2 Findings Regarding Independent Review and Judgment

Each member of the Authority was provided a complete copy of the Final EIR for the Project in advance of the hearing on the Project. The Authority hereby finds that the Final EIR reflects its independent judgment. The Authority also finds that it has independently reviewed and analyzed the Final EIR prior to taking final action with respect to the Project.

3.3 Findings Regarding the Project

3.3.1 Findings Regarding Significant and Unavoidable Effects

The Authority determines that the following significant effects cannot be avoided. Feasible mitigation measures included in the Final EIR will lessen the effects but will not result in complete mitigation of the effects to a less-than-significant level. The full text of each of the mitigation measures cited below is found in the Final EIR and that text is hereby incorporated by reference. The titles/numbers of the effects are the same as those in the Final EIR. The following identifies the pertinent mitigation measures by number and summary title.

See the next section for those effects for which mitigation measures have been adopted and that are thereby reduced below the level of significance.

3.3.1.1 Agricultural Resources

Significant Effect: Impact AG-1b. Construction of the Preferred Alternative could result in direct permanent conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance to nonagricultural use.

Findings: The Authority hereby makes findings (a)1 and (a)(3) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Permanent conversion would occur within the railroad ROW where land categorized as Important Farmland (i.e., Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance) occurs. The cause of permanent conversion of Important Farmland, direct use of the land, is a direct impact on Important Farmland. Appendix K-1, *Important Farmland Impacts by Parcel* of the Draft EIR, provides the list of parcels containing Important Farmland that could be permanently converted by implementation of the Preferred Alternative.

The Preferred Alternative would traverse a combination of urban lands, grazing lands, and lands with Important Farmland. As summarized in Table 3.2-7, the following alignments, stations, and OMF would result in the conversion of Important Farmland to nonagricultural uses: Isabel Station; Altamont Alignment; Tracy OMF; Tracy to Lathrop Alignment Variant 1, Single Track; Tracy to Lathrop Alignment Variant 2, Double Track; and River Islands Station. The impact of the Preferred Alternative is potentially significant.

The selected Southfront Road Station Alternative, Stone Cut Alignment Alternative, and Mountain House Station Alternative would not be located on areas identified as Important Farmland. Therefore, these alternatives would not permanently convert Important Farmland and would by themselves have no impact on Important Farmland from construction of these alternatives.

The following measure mitigates this impact to the extent feasible, but not to a less than significant level.

- AG-1.2: Conserve Important Farmlands (Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland)

Mitigation Measure AG-1.2 would reduce impacts from permanent conversion of Important Farmland because of direct use of the land within the rail ROW by requiring purchase of agricultural conservation easements at a ratio of 1:1 for direct use of Important Farmland. This mitigation measure would be effective in minimizing the overall permanent conversion of Important Farmland to a nonagricultural use because it would preserve Important Farmland in an amount commensurate with the quantity and quality of the converted farmlands and within the same agricultural regions where the impacts would occur. However, because mitigation would not prevent conversion of Important Farmland, the impact from the Preferred Alternative would be significant and unavoidable due to the Isabel Station; Altamont Alignment; Tracy OMF; Tracy to Lathrop Alignment Variant 1, Single Track; Tracy to Lathrop Alignment Variant 2, Double Track; and River Islands Station.

Selection of the Mountain House Station Alternative in place of the originally proposed Mountain House Station would also reduce, but not avoid, the significant unavoidable impact.

Significant Effect: Impact AG-1c. Construction of the Preferred Alternative could convert Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance to nonagricultural use because of parcel severance or creation of remnant parcels.

Findings: The Authority hereby makes finding (a)1 (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Construction would result in indirect permanent conversion of Important Farmland to nonagricultural use because of parcel severance or creation of remnant parcels. This conversion would occur where the Preferred Alternative would (1) sever access to parcels of Important Farmland or (2) create smaller parcels of Important Farmland that would be too small to farm. Appendix K-2, *Potential Severed and Remnant Parcels*, of the Draft EIR provides a list of parcels showing property-specific permanent indirect impacts, both severed parcels and remnant parcels that would be too small to farm. More specifically, Table 3.2-8 of the Draft EIR shows the acreage of Important Farmland and number of parcels that would be indirectly permanently converted to nonagricultural use because of the creation of severed or remnant parcels by the Preferred Alternative.

The following measure mitigates this impact to the extent feasible, but not to a less than significant level.

- AG-1.2: Conserve Important Farmlands (Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland)

Implementation of Mitigation Measure AG-1.2 would reduce impacts from permanent conversion of Important Farmland because of the creation of severed or remnant parcels by requiring the purchase of agricultural conservation easements at a ratio of 0.5:1 for remnant parcels. This mitigation measure would be effective in minimizing the overall permanent conversion of Important Farmland to a nonagricultural use because it would preserve Important Farmland in an amount commensurate with the quantity and quality of the affected farmlands and within the same agricultural regions where the impacts occur. However, it would not avoid a net loss in farmland. The analysis has taken the approach that the loss of any Important Farmland is significant, and mitigation would not prevent conversion of Important Farmland. The impact from the Preferred Alternative would be significant and unavoidable due to the proposed Altamont Alignment (including the Owens-Illinois Industrial Lead Variant 1, Single Track and the Owens-Illinois Industrial Lead Variant 2, Double Track).

Significant Effect: Impact C-AG-1. Implementation of the Preferred Alternative, in combination with other foreseeable projects in the surrounding area, could result in a significant cumulative impact on agricultural resources.

Findings: The Authority hereby makes findings (a)1 and (a)(3) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: As documented in Section 3.2, *Agricultural Resources* and discussed in Section 5.2.5.4, *Agricultural Resources*, a trend toward conversion of agricultural land to nonagricultural uses exists throughout the Valley Link agricultural resources study area. Accordingly, in locations where the Preferred Alternative in combination with other projects would convert agricultural land to nonagricultural uses, a cumulative impact exists.

The following measures mitigate the Preferred Alternative's impact, but not to a less than significant level.

- AG-1.1: Restore Important Farmlands used for temporary staging areas
- AG-1.2: Conserve Important Farmlands (Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland)
- AG-3.1: Notify agricultural property owners or leaseholders
- AG-3.2: Coordinate with utility and energy service providers
- AG-3.3: Verify new irrigation facilities are operational before disconnecting the original facility
- AG-3.4: Maintain access to Important Farmlands
- AG-3.5: Provide permanent equipment crossings on affected access roads.
- Select the Mountain House Station Alternative

Implementation of the Preferred Alternative would result in the direct conversion of approximately 383 acres of Important Farmland.

The Preferred Alternative's operation will result in non-agricultural uses occurring on these lands. It is reasonably estimated that some of the projects listed in Tables 4-3, 4-4, and 4-5 of the Draft EIR, especially those located within the Livermore Valley, Altamont Hills, and San Joaquin Valley, would also result in some direct and/or indirect Important Farmland conversion. Therefore, the Preferred

Alternative's direct conversion of up to approximately 383 acres of Important Farmland would constitute a cumulatively considerable contribution to this impact. With implementation of Mitigation Measure AG-1.2 and with selection of the Mountain House Station Alternative instead of the Mountain House Station, the Preferred Alternative's operational cumulative contribution to Important Farmland conversion would be reduced; however, the Preferred Alternative's permanent operational contribution to cumulative impacts on Important Farmland would remain considerable with mitigation.

3.3.1.2 Air Quality

Significant Effect: Impact AQ-2a: Construction of the Preferred Alternative could result in a cumulatively considerable net increase of criteria pollutants for which the San Joaquin Valley Air Pollution Control District (SJVAPCD) is designated a nonattainment area under the applicable federal and state ambient air quality standards (including releasing emissions that exceed quantitative thresholds for ozone precursors).

Findings: The Authority hereby makes findings (a)1 and (a)(3) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Construction of the Preferred Alternative has the potential to create air quality impacts due to emissions from heavy-duty construction equipment, worker vehicle trips, truck hauling trips, and train trips. In addition, fugitive emissions would result from site grading, asphalt paving, and demolition. Table 3.3-12 of the Draft EIR summarize estimated unmitigated construction-related emissions in the San Joaquin Valley Air Pollution Control District (SJVAPCD), respectively, in pounds per day and tons per year. The Preferred Alternative would exceed established thresholds for criteria pollutants in the SJVAPCD.

The following measures mitigate the Preferred Alternative's impact, but not to a less than significant level within the SJVAPCD.

- AQ-2-1: Implement advanced emissions controls for off-road equipment during construction.
- AQ-2-2: Implement off-road equipment engine maintenance and idling restrictions during construction
- AQ-2-3: Implement advanced emissions controls for trains during construction
- AQ-2-4: Utilize modern fleet for on-road material delivery and haul trucks during construction
- AQ-2-5: Implement fugitive dust controls during construction
- AQ-2.7: Enter into a Voluntary Emissions Reduction Agreement for Project Construction Emissions over SJVAPCD emissions in the San Joaquin Valley Air Basin (SJVAB)

As shown in Table 3.3-15, Mitigation Measures AQ-2.1 though AQ-2.4 would reduce NO_X emissions in SJVAPCD below the applicable significance threshold, and NO_X and PM2.5 emissions below the AAQA triggers. However, CO and PM10 emissions would exceed the AAQA triggers, even with implementation of all feasible onsite mitigation. Pursuant to SJVAPCD's GAMAQI, a dispersion analysis was performed to evaluate if CO and PM10 concentrations would exceed the CAAQS. CO concentrations from construction activity would not violate CAAQS (see Table 3.3-19) and construction of the Preferred Alternative would not violate a CO standard or contribute substantially to an existing or projected CO violation However, as shown in Table 3.3-17, dispersion

modeling confirms that PM10 emissions from construction activity would contribute to violations of the 24-hour PM10 CAAQS. This impact would be significant and unavoidable.

Significant Effect: Impact AQ-3g: The Preferred Alternative could expose sensitive receptors to cumulative health risks from increased exposure to DPM and PM2.5 concentrations.

Findings: The Authority hereby makes findings (a)(1) and (a)(3) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Multiple existing sources of cumulative emissions are located within 1,000 feet of the Valley Link alignment and sensitive receptors. When combined with DPM emissions from construction and operation, receptors may be exposed to cumulative health risks more than air district thresholds. BAAQMD has established cumulative risk thresholds, whereas SJVAPCD considers risks more than project-level thresholds to result in a cumulatively considerable impact.

As shown in Tables 3.3-28 and 3.3-29 of the Draft EIR, total cumulative health risks to sensitive receptors located near the Preferred Alternative during construction and operations would not exceed BAAQMD's cumulative health risk thresholds for the Altamont segment, but would exceed the thresholds for cancer risk and PM2.5 for the Tri-Valley segment. Preferred Alternative operational emissions would be less with the DMU or HBMU technology variants compared to the DLH technology variant. Without the criteria pollutant mitigation, the Preferred Alternative contribution would be higher. These impacts are a result of ambient background concentrations that exceed BAAQMD significance thresholds and a contribution of additional DPM emissions-related health risks due to the Project.

As discussed in Impacts AQ-3b through AQ-3f of the Draft EIR, neither construction nor operation of the Preferred Alternative Proposed Project would result in health risks to sensitive receptors more than SJVAPCD's thresholds of significance. SJVAPCD considers risks greater than project-level thresholds to result in a cumulatively considerable impact. Accordingly, since the Preferred Alternative Proposed Project would not exceed SJVAPCD's project-level thresholds, cumulative health risks within the SJVAPCD would be less than significant.

The following measures mitigate this impact, but not to a less than significant level.

- AQ-2-1: Implement advanced emissions controls for off-road equipment during construction.
- AQ-2-2: Implement off-road equipment engine maintenance and idling restrictions during construction
- AQ-2-3: Implement advanced emissions controls for trains during construction
- AQ-2-4: Utilize modern fleet for on-road material delivery and haul trucks during construction

The Authority does not have the jurisdiction to address existing and future sources of pollution other than those related to the Preferred Alternative. The Preferred Alternative contributions to the cumulative impacts are limited and thus there is no feasible mitigation that would reduce this impact to a less-than-significant level for the DMU, HBMU, or DLH technology variants for construction and operation, or for the BEMU technology variant for construction. This impact within the Tri-Valley segment in the BAAQMD is therefore considered significant and unavoidable for the Tri-Valley segment for construction and for operation of the DMU, HBMU, and DLH technology variants.

This impact is less than significant for the Preferred Alternative relative to BEMU operations within the Tri-Valley segment, and construction and operation outside the Tri-Valley segment, as discussed below under Less Than Significant Impacts.

Significant Effect: Impact C-AQ-1: Implementation of the Preferred Alternative, in combination with other foreseeable projects in the surrounding area, would not result in a significant cumulative impact on air quality. However, construction of the Preferred Alternative would contribute diesel particulate matter and PM2.5 emissions to a significant and unavoidable cumulative health risk impact in the Tri-Valley segment due to ambient conditions exceeding cumulative thresholds after mitigation and this could be exacerbated due to construction of other cumulative projects in the same area. Construction would also result in a significant and unavoidable impact in the San Joaquin Valley portions of Valley Link (including proposed and alternative facilities) due to the effect on localized PM10 ambient air quality conditions after mitigation.

Findings: The Authority hereby makes findings (a)(1) and (a)(3) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: The following measures mitigate this impact, but not to a less than significant level.

- AQ-2-1: Implement advanced emissions controls for off-road equipment during construction.
- AQ-2-2: Implement off-road equipment engine maintenance and idling restrictions during construction
- AQ-2-3: Implement advanced emissions controls for trains during construction
- AQ-2-4: Utilize modern fleet for on-road material delivery and haul trucks during construction
- AQ-2-5: Implement fugitive dust controls during construction
- AQ-2-6: Enter into a Voluntary Emissions Reduction Agreement for Project Construction Emissions over BAAQMD emissions in the San Francisco Bay Area Air Basin (SFBAAB)
- AQ-2-7: Enter into a Voluntary Emissions Reduction Agreement for Project Construction Emissions over SJVAPCD emissions in the San Joaquin Valley Air Basin (SJVAB)

With implementation of Mitigation Measures AQ-2.1, AQ-2.2, AQ-2.3, AQ-2.4, AQ-2.5, AQ-2.6, and AQ-2.7, construction equipment, including vehicles that would transport equipment to construction sites, would be selected and maintained in a manner that minimizes criteria pollutant emissions. Furthermore, construction fugitive dust controls and construction emissions offsets would further reduce the Preferred Alternative's construction emissions, and construction of the Preferred Alternative would have a less than considerable contribution to criteria pollutants, with mitigation.

Operation of the DLH, diesel multiple unit (DMU), or hybrid battery multiple unit (HBMU) technology variants would contribute to significant cumulative health risks to sensitive receptors at certain locations along the Tri-Valley segment (including proposed and alternative facilities in the Tri-Valley segment) due to existing risks exceeding the cumulative thresholds already. If the battery-electric multiple unit (BEMU) technology variant is chosen, then the Preferred Alternative (including facilities in the Tri-Valley segment) would not contribute to cumulative health risks due to train operations.

This impact is less than significant for criteria pollutant emissions, as discussed below under *Findings Regarding Significant Effects Mitigated to Less-Than-Significant Levels*.

3.3.1.3 Noise and Vibration

Significant Effect: Impact NOI-1a. Construction of the Preferred Alternative would expose sensitive receptors to substantial temporary increases in ambient noise levels.

Findings: The Authority hereby makes findings (a)(1) and (a)(3) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Construction of the Preferred Alternative would include three basic activities: (1) site work, (2) rail work, and (3) structures work. Site work is expected to occur over periods of 1 to 36 months, rail work is expected to occur over periods of 1 to 36 months, and structures work is expected to occur over periods of 6 to 24 months. Generally, construction of the Preferred Alternative could last anywhere from 8 to 48 months, depending on the element. Construction work could occur during the nighttime along portions of the alignment that are on active freight rail lines. The local noise ordinances for the cities and counties along the Valley Link corridor generally limit construction noise to time periods during the weekday, weekend, and holiday daytime hours. Nighttime construction work is generally prohibited, but some jurisdictions allow for variance.

Construction activities would be considered to have a significant impact if they would generate noise exposure more than the FTA thresholds. As shown in Table 3.12-9 of the Draft EIR, the operation of certain construction equipment and construction activities could generate noise exposure more than FTA thresholds. Nighttime construction near residential uses would have larger impacts than daytime construction would have and would also result in a potentially significant impact.

The following measure mitigates this impact, but not to a less than significant level.

- NOI-1.1a: Implement a construction noise control plan

The measures specified in Mitigation Measure NOI-1.1a would generally reduce the construction noise levels. However, the measures would not necessarily guarantee that all sensitive residential receptors in the vicinity of the construction area would not be exposed to noise levels exceeding the 80 dBA limit during the day or the 70 dBA limit at night. It is probable that construction near some residential areas will have to be conducted at night to avoid disruption of active freight and passenger rail operation and to complete construction on schedule. Furthermore, although a temporary sound wall may be effective in certain locations, in many cases, the nature of the construction work makes use of such sound walls infeasible. Construction-related noise would be short-term and would cease after construction is completed. Still, even with mitigation, the impact of temporary construction-related noise on nearby noise-sensitive receptors would remain a significant and unavoidable impact of the Preferred Alternative, where heavy construction would occur immediately adjacent to residences and where construction would occur at night near residences.

Significant Effect: Impact NOI-1b. Operation of the Preferred Alternative would result in a substantial permanent increase in ambient noise levels.

Findings: The Authority hereby makes findings (a)(1) and (a)(3) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: As presented in Table 3.12-10 for DMU and Table 3.12-12 for DLH (2025); and Table 3.12-11 for DMU and Table 3.12-13 for DLH (2040) of the Draft EIR, FTA model calculations show that operation of the Preferred Alternative within the Tri-Valley segment would result in no impacts. However, operation of the Preferred Alternative within the Altamont segment and the Tracy to Lathrop segment would result in moderate and severe impacts at existing residential receptors. These impacts would be related to horn noise from trains approaching the at-grade crossings and station platforms.

Therefore, operation of the Preferred Alternative would result in moderate and severe noise impacts. Because operation would cause an increase in ambient noise levels that exceed the FTA severe impact criteria, this is considered a significant impact.

The following measure mitigates this impact, but not to a less than significant level.

- NOI-1.1b: Implement a phased program to reduce train noise along the Valley Link corridor as necessary to address noise increases of FTA's severe impact thresholds.

The Authority will work with other parties when implementing this measure to apply the relevant mitigation measures identified in the Final EIR during implementation of future noise mitigation improvements. The Authority is only responsible for that portion of the cumulative increases caused by the Preferred Alternative. Other sources of cumulative increases, including other rail and non-rail sources near the Valley Link corridor, also bear responsibility for cumulative noise increases. However, some measures included in NOI-1.1b may not be feasible due to cost and site limitations or meet effectiveness or acceptability criteria. Therefore, this impact for the Preferred Alternative would remain significant and unavoidable.

Significant Effect: Impact C-NOI-1. Implementation of the Preferred Alternative, in combination with other foreseeable projects in the surrounding area, would result in a significant cumulative impact from noise.

Findings: The Authority hereby makes findings (a)(1) and (a)(3) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: During construction, an increase in noise and vibration levels would affect sensitive receptors along the Preferred Alternative corridor. Noise and vibration impacts during construction would primarily result from simultaneous construction of different projects in the same location at the same time; however, where construction occurs in quick succession in the same area, there could also be a cumulative impact due to the extended duration of construction-related noise. As shown in Tables 4-3 and 4-4 of the Draft EIR, construction of the Preferred Alternative may overlap in time or location with several rail and other regional transportation projects. There are also numerous land development projects with planned or potential construction periods that would also overlap with construction of the Preferred Alternative, as shown in Table 4-5 of the Draft EIR.

As described in Section 3.12, *Noise and Vibration* of the Draft EIR, construction noise impacts would be limited to residences within 135 to 270 feet from any given Valley Link construction site.

Construction noise impacts would be greatest during work at locations where pile driving is required for bridge construction, such as at Paradise Cut and across the San Joaquin River. Because most of the Preferred Alternative would be on an existing rail line, and in some cases within the I-580 median, construction work could occur during nighttime. Nighttime construction near residential uses in the Tracy to Lathrop segment would have larger impacts than daytime construction, because local permissible noise thresholds are lower during nighttime than they are during daytime. Disruptive nighttime construction in exceedance of local permissible noise thresholds would result in a potentially significant impact contributing to the cumulative impact of numerous projects occurring concurrently.

As shown in Table 4- 3 of the Draft EIR, if identified rail projects are implemented, there would be an increase in the number of daily trains within the Preferred Alternative corridor. Operation of Freight Future Rail Plans (reference 1) would result in an increase in daily freight trains in the Altamont and Tracy to Lathrop segments and an increase of daily passenger trains near the North Lathrop Station. Increases in passenger and freight rail service at these locations, in combination with Valley Link passenger train operation, would increase noise levels along the Valley Link corridor as well as at any shared stations or operational facilities. Although the identified rail projects would be the largest contributors to noise increases, other regional transportation and land development projects would also contribute to increased noise levels that could affect sensitive receptors in the vicinity. Land development projects along the Valley Link corridor could also introduce more sensitive receptors to the cumulative noise impacts resulting from increased rail service. Operation of other identified regional transportation and land development projects would increase noise levels by introducing more people, activities, and traffic into the vicinity of the Valley Link corridor. This combined effect would result in the potential for significant cumulative operational noise impacts.

As described in Section 3.12, *Noise and Vibration* of the Draft EIR, the Preferred Alternative would result in adverse moderate noise effects compared with existing conditions due to the introduction of new passenger rail service in the Preferred Alternative corridor. The Preferred Alternative would generate both train engine and wheel noise, as well as train horn noise for at-grade crossings and at the approach to stations. Operation of the Preferred Alternative, including operation of track improvements, would result in moderate noise impacts at locations where existing ambient noise levels are generally low, and moderate to severe impacts at locations where ambient noise levels are higher. Valley Link stations and OMF facilities would result in elevated operational noise beyond current conditions at these sites, but noise levels are expected to be less than those of passenger trains traveling along tracks.

The following measure mitigates this impact, but not to a less than significant level.

- NOI-1.1a: Implement a construction noise control plan
- NOI-1.1b: Implement a phased program to reduce train noise along the Valley Link corridor as necessary to address noise increases of FTA's severe impact thresholds

Mitigation Measure NOI-1.1a, which would require preparation of a noise control plan, would reduce potential daytime and nighttime construction noise impacts, but not necessarily to a less than significant level at all times and locations. Because there could be other projects simultaneously under construction adjacent to the Valley Link corridor, the Preferred Alternative could result in a considerable contribution to cumulative noise impacts during construction, even with mitigation.

Mitigation Measure NOI-1b would require development and implementation of a program to reduce train noise along the Valley Link corridor, as necessary. Therefore, if it is determined that

operational noise should be attenuated either at stations or elsewhere along the Preferred Alternative corridor, such strategies would be required to be implemented.

Because the Preferred Alternative would share its corridor with other identified rail projects, most notably at North Lathrop Station, it is anticipated that the strategies implemented as-needed as part of mitigation measure NOI-1b would attenuate operational noise from any identified rail projects, not just Valley Link. Such strategies may include design adjustments, installations, or speed limits, and would attenuate noise from any operating train in the corridor. It is expected that these strategies would be effective in attenuating noise resulting from single train operations. However, regular, concurrent operation of multiple trains from various operators are expected to occur at the stations along the Tracy to Lathrop segment and at nearby portions of the Tracy to Lathrop Alignment, both of which are located next to numerous sensitive receptors. It is, therefore, possible that these noise attenuation strategies will not fully mitigate noise emissions when multiple trains (Valley Link and other) are operating concurrently at this location. Therefore, at the stations along the Tracy to Lathrop segment and at nearby portions of the Tracy to Lathrop Alignment, the Preferred Alternative would result in a cumulatively considerable contribution to noise impacts, even with mitigation.

3.3.2 Findings Regarding Significant Effects Mitigated to Less-Than-Significant Levels

The Authority has determined that, for the following effects, mitigation measures included in the Final EIR will mitigate the effects of the Preferred Alternative to a less-than-significant level. The following identifies the pertinent mitigation measures by number and summary title. The full text of each of the mitigation measures cited below is found in the Draft EIR and that text is hereby incorporated by reference.

3.3.2.1 Aesthetics

Significant Effect: Impact AES-1: Construction of the Preferred Alternative could substantially degrade the existing visual character or quality of public views of the site and its surroundings, including scenic vistas and scenic highways, and create a new source of substantial light or glare that would adversely affect daytime or nighttime views.

Finding: The Authority hereby makes finding (a)(1) (described in Section 3.1 above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Visual changes resulting from introducing construction activities and equipment into the viewsheds of all user groups would be temporary for the Preferred Alternative. Construction of the alignments would generally occur in a linear fashion and migrate along the corridor. Construction would affect all viewers adjacent to or in the construction corridor. Impacts would be greater where there are more viewers and where larger portions of the Preferred Alternative would be visible. Construction may be visible from some locations with scenic vista views, such as elevated roadways and bridges that cross or parallel the existing rail corridor or adjacent multilevel buildings.

Construction activities involving heavy equipment use, soil and material transport, and land clearing in the right-of-way, along public roadways, and at construction staging areas would create fugitive

dust and introduce noise. The aesthetic disruptions would be less pronounced in urban areas where there would be less soil disruption, such as along the Tri-Valley Alignment, but more pronounced in rural areas where there would be more soil disruption.

The following measures mitigate this impact to a less than significant level.

- AES-1.1: Install visual barriers between construction work areas and sensitive residential and recreational receptors
- AES-1.2: Limit construction near residences to daylight hours
- AES-1.3: Minimize fugitive light from portable sources used for construction
- AQ-2.5: Implement fugitive dust controls during construction

Residential viewers could have construction activities occurring adjacent to their homes, or nearby, evoking a sense of invaded privacy and resulting in a potentially significant impact. Implementation of Mitigation Measures AES-1.1, AES-1.2, AES-1.3, and AQ-2.5, which call for installing visual barriers between construction and sensitive receptors, limiting work to daylight hours adjacent to sensitive receptors, limiting construction lighting near sensitive receptors, and limiting fugitive dust, would reduce this impact from the Preferred Alternative to a less-than-significant level.

For the same reasons listed above, implementation of Mitigation Measures AES-1.1, AES-1.2, AES 1.3, and AQ-2.5 would reduce the impact from construction of the Southfront Road Station Alternative, Stone Cut Alignment Alternative, and Mountain House Station Alternative to a less-than-significant level.

Significant Effect: Impact AES-2. Operation of the Preferred Alternative could substantially degrade the existing visual character or quality of public views of the site and its surroundings in non-urbanized areas, including scenic vistas.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Visual changes resulting from operation would affect residential viewers, roadway travelers, and recreationists adjacent to the Preferred Alternative. The intensity of the impact would vary, depending on the number of viewers present; proximity of viewers to the Preferred Alternative; degree of physical change in the landscape; visibility of the physical change; volume of train traffic; and required maintenance.

Many of the new stations would require the installation of utility lines to carry electricity to power the facilities. This would introduce new vertical utility features that would disrupt the visual landscape from sensitive vantages. The stations would also require fence installation as well as other barriers and railings for safety. Chain link fencing, railings, and similar barriers are often light gray, a color that detracts from views.

The following measures mitigate this impact to a less than significant level.

- AES-2.1: Landscape parking facilities at stations
- AES-2.2: Apply aesthetic design treatments to parking structures, pedestrian overcrossings, Interim OMF, viaduct structures, and retaining walls with high visibility along I-580 and from roadways within the Altamont Hills

- AES-2.3: Utilize selective grading and planting techniques in the Altamont Hills
- AES-2.4: Underground new electric transmission lines in visually sensitive areas
- AES-2.5: Apply aesthetic surface treatments to certain structures in visually sensitive areas

Implementation of Mitigation Measures AES-2.1, AES-2.2, AES-2.3, AES-2.4, and AES-2.5 would reduce impacts associated with the Preferred Alternative due to the following proposed stations and OMFs to a less-than-significant level: the Interim OMF, Mountain House Station Alternative, Tracy OMF, the River Islands Station and any TPSS installed between Greenville Road and the Tracy OMF (except if a TPSS is placed at the Mountain House Station Alternative). This is because selective grading would ensure that new landforms would preserve and blend with hilly terrain and pedestrian overcrossings would blend with and complement the surrounding landscape. In addition, darker fencing would improve visibility through the barrier compared with standard gray metal surfaces, dark-colored overhead light standards would recede into the view, and undergrounding would prevent visual intrusions from new utilities. In addition, ancillary rail features would not stand out in the landscape and detract from views. Implementation of Mitigation Measures AES-2.3 and AES-2.5 would reduce the impact from operation of the Altamont Alignment and the Stone Cut Alignment Alternative to a less-than-significant level.

Significant Effect: Impact AES-3: Operation of the Preferred Alternative could conflict with applicable zoning and other regulations governing scenic quality in urbanized areas, including scenic vistas.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Visual changes resulting from operation have the potential to conflict with local regulations in urbanized areas if they conflict with the policies identified in local policy documents, such as city general plans. General plans for urbanized areas include those guiding the development of Alameda County, Dublin, Livermore, Tracy, and Lathrop. In general, these plans include policies to facilitate community character, land use, the protection of hillsides, and lighting. The Preferred Alternative would potentially conflict with these plans.

The Tri-Valley Alignment (within post miles 10.22–10.82, 14.97–15.63, and 17.55–18.31) would directly affect vegetation along landscaped freeway segments. This vegetation would be affected by modifications to the edge of I-580 and result in the removal of a few trees or shrubs as well as groundcover at each location. Because these removals could affect the classification of each segment as a landscaped freeway, the impact from the Tri-Valley Alignment is considered potentially significant.

The following measures mitigate this impact to a less than significant level.

- AES-2.1: Landscape parking facilities at stations
- AES-2.2: Apply aesthetic design treatments to parking structures, pedestrian overcrossings, Interim OMF, viaduct structures, and retaining walls with high visibility along I-580 and from roadways within the Altamont Hills
- AES-2.3: Utilize selective grading and planting techniques in the Altamont Hills
- AES-2.4: Underground new electric transmission lines in visually sensitive areas

- AES-2.5: Apply aesthetic surface treatments to certain structures in visually sensitive areas
- AES-3.1: Replace disturbed vegetation along landscaped freeways

Implementation of Mitigation Measures AES-2.1, AES-2.2, AES-2.3, AES-2.4, AES-2.5, and AES-3.1 would reduce impacts associated with the Preferred Alternative, due to the following alignment and stations, to a less-than-significant level: Tri-Valley Alignment, Dublin/Pleasanton Station, Isabel Station, Southfront Road Station Alternative, Downtown Tracy Station, North Lathrop Station, and any TPSS placed between Greenville Road and the Tracy OMF or at the North Lathrop Station. This is because selective grading would ensure that new landforms would preserve and blend with hilly terrain and pedestrian overcrossings would blend with and complement the surrounding landscape. In addition, darker fencing would improve visibility through the barrier compared with standard gray metal surfaces, dark-colored overhead light standards and TPSS facilities would recede into the view, and undergrounding would prevent visual intrusions from new utilities. In addition, ancillary rail features would not stand out in the landscape and detract from views, and vegetation removed along landscaped freeway segments would be replaced.

Significant Effect: Impact AES-4: Operation of the Preferred Alternative could substantially damage scenic resources within a State Scenic Highway.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: The Tri-Valley Alignment, Dublin/Pleasanton Station, Isabel Station, Southfront Road Station, Interim OMF, and Tracy OMF would fall within view of scenic corridors that are protected by regulations. The Southfront Road Station Alternative would introduce elevated structures because it would add a pedestrian overpass to the median of I-580. The Stone Cut Alignment Alternative would require landform alterations that would affect the appearance of the hillsides and views from Altamont Pass Road and I-580, both scenic routes. The Mountain House Station Alternative would have a less than significant impact. The parking areas associated with the Mountain House Station Alternative would be planted with trees that would help soften the appearance of the parking lot. Fencing and aboveground utilities would introduce new vertical features that would disrupt the visual landscape and scenic views associated with I-580, resulting in potentially significant impacts. The Stone Cut Alignment Alternative would require landform alterations that would affect the appearance of the hillsides and views from Altamont Pass Road and I-580, both scenic routes. It would result in a large slope cut that would be readily visible from I-580. Retaining wall structures would also be needed to support the slopes in proximity to I-580 underpass. However, the retaining walls would not likely be highly visible from I-580 because they would be located under the freeway and drivers pass by this location at a high rate of speed.

The following measures mitigate this impact to a less than significant level.

- AES-2.1: Landscape parking facilities at stations
- AES-2.2: Apply aesthetic design treatments to parking structures, pedestrian overcrossings, Interim OMF, viaduct structures, and retaining walls with high visibility along I-580 and from roadways within the Altamont Hills
- AES-2.3: Utilize selective grading and planting techniques in the Altamont Hills
- AES-2.4: Underground new electric transmission lines in visually sensitive areas

- AES-2.5: Apply aesthetic surface treatments to certain structures in visually sensitive areas
- AES-3.1: Replace disturbed vegetation along landscaped freeways

Implementation of Mitigation Measures AES-2.1, AES-2.2, AES-2.3, AES-2.4, AES-2.5, and AES-3.1 would reduce impacts associated with the Preferred Alternative, due to the following alignment, stations, and OMFs to a less-than-significant level: Tri-Valley Alignment, Altamont Alignment, Stone Cut Alignment Alternative, Isabel Station, Southfront Road Station Alternative, Mountain House Station Alternative, Interim OMF, and Tracy OMF. This is because selective grading would ensure that new landforms would preserve and blend with hilly terrain and pedestrian overcrossings would blend with and complement the surrounding landscape. In addition, darker fencing would improve visibility through the barrier compared with standard gray metal surfaces, dark-colored overhead light standards would recede into the view, and undergrounding would prevent visual intrusions from new utilities. In addition, ancillary rail features would not stand out in the landscape and detract from views, and vegetation removed along landscaped freeway segments would be replaced, thereby ensuring that views associated with scenic routes would be maintained.

Implementation of Mitigation Measure AES-2.5 would reduce impacts associated with the OCS poles associated with the Stone Cut Alignment Alternative BEMU technology variant to a less-than-significant level. This is because dark-colored OCS poles would recede into the view compared to standard gray metal surfaces.

Significant Effect: Impact AES-5: Operation of the Preferred Alternative could create a new source of substantial light or glare that would adversely affect daytime or nighttime views.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Parking garage, parking lot, access road, and platform lighting could include standard lighting or light-emitting diode (LED) lighting for security purposes, which could affect sensitive receptors if not properly designed. Glare could occur where vegetation removal decreases shading, resulting in increased glare, or where a new structure is built that introduces a surface that reflects sunlight and potentially increase glare. The Isabel Station, River Islands Station, and North Lathrop Station pedestrian overpasses would create new surfaces that would reflect light. The proposed structures could increase glare because of the materials used. This could increase glare for travelers on I-580, Greenville Road, and Altamont Pass Road or heading to the River Islands community, in addition to recreationists and drivers on local roadways around the stations, resulting in potentially significant impacts. The Southfront Road Station Alternative and Mountain House Station Alternative would construct new station platforms, maintenance facilities, and parking areas where none presently exist. New sources of lighting, especially blue-rich white light (BRWL) LED lighting, at all stations and maintenance facilities would result in potentially significant impacts.

The following measures mitigate this impact to a less than significant level.

- AES-2.1: Landscape parking facilities at stations
- AES-2.2: Apply aesthetic design treatments to parking structures, pedestrian overcrossings, Interim OMF, viaduct structures, and retaining walls with high visibility along I-580 and from roadways within the Altamont Hills

- AES-2.5: Apply aesthetic surface treatments to certain structures in visually sensitive areas
- AES-3.1: Replace disturbed vegetation along landscaped freeways
- AES-5.1: Apply minimum lighting standards

Implementation of Mitigation Measures AES-2.1, AES-2.2, AES-2.5, AES-3.1, and AES-5.1 would reduce impacts associated with the Preferred Alternative, due to the following stations and OMF to a less-than-significant level: Dublin/Pleasanton Station; Isabel Station; Southfront Road Station Alternative; Interim OMF; Mountain House Station Alternative; Tracy OMF; Downtown Tracy Station; River Islands Station; and North Lathrop Station. This is because landscaping at parking facilities would filter new sources of lighting, reduce the potential for structures and ancillary site features to create glare, and replace sources of shade along the landscaped freeway. Furthermore, lighting would be designed in a manner that would not contribute to light pollution or nuisance glare.

Significant Effect: Impact C-AES-1. Implementation of the Preferred Alternative, in combination with other foreseeable projects in the surrounding area, could result in a significant cumulative impact on aesthetics.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: The land use changes associated with the cumulative condition resulting from implementation of both the Preferred Alternative and the projects identified in Tables 4-3, 4-4, and 4-5 of the Draft EIR have the potential to affect aesthetic and visual resources in several ways. These impacts would result from project construction activities; development of roadways, parking areas, and buildings; alteration of the study area's visual character; and the introduction of new light and/or glare sources that would change the visual conditions along the Valley Link corridor. These changes associated with Valley Link and other foreseeable projects would result in a significant cumulative impact on aesthetics.

The following measures mitigate these impacts to a less than significant level.

- AES-1.1: Install visual barriers between construction work areas and sensitive residential and recreational receptors
- AES-1.2: Limit construction near residences to daylight hours
- AES-1.3: Minimize fugitive light from portable sources used for construction
- AES-2.1: Landscape parking facilities at stations
- AES-2.2: Apply aesthetic design treatments to parking structures, pedestrian overcrossings, Interim OMF, viaduct structures, and retaining walls with high visibility along I-580 and from roadways within the Altamont Hills
- AES-2.3: Utilize selective grading and planting techniques in the Altamont Hills
- AES-2.4: Underground new electric transmission lines in visually sensitive areas
- AES-2.5: Apply aesthetic surface treatments to certain structures in visually sensitive areas
- AES-3.1: Replace disturbed vegetation along landscaped freeways

- AES-5.1: Apply minimum lighting standards
- AQ-2.5: Implement fugitive dust controls during construction

The presence of a parking garage, parking lot, access road, and platform lighting could affect sensitive receptors if the lighting spilled outside the site boundaries, creating a new source of nuisance lighting or glare for adjacent sensitive viewers. The Preferred Alternative's lighting, in combination with operational lighting that may be used at cumulative projects, could exacerbate this effect, leading to a significant cumulative lighting effect. However, implementation of Mitigation Measures AES-2.1, AES-2.2, AES-2.5, AES-2.6, AES-3.1, and AES-5.1 would ensure that the change to existing nighttime light and glare levels relative to parking garage, parking lot, and platform lighting at stations are nominal and will reduce this impact to a less-than-significant level for the Preferred Alternative, including the alignment, stations, and OMFs located along the Altamont Segment that would introduce features in hilly areas currently supporting minimal development. Therefore, cumulative Preferred Alternative's operational contributions to increased light and glare would be less than considerable with mitigation.

3.3.2.2 Agricultural Resources

Significant Effect: Impact AG-1a. The Preferred Alternative could result in conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance to nonagricultural use because of temporary use.

Finding: The Authority hereby makes finding (a)(1) (described in above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Construction would require the temporary use of Important Farmland. This land would be temporarily leased from the landowner (per a temporary construction easement) and temporarily removed from agricultural use for the duration of construction. If temporary staging areas are not immediately restored to former agricultural use (pre-construction condition) after construction, disruption in agricultural use may become permanent and result in permanent conversion of Important Farmland to nonagricultural use.

The Tracy to Lathrop segment would traverse urban land and Important Farmland. The Tracy to Lathrop Alignment Variant 1, Single Track and Tracy to Lathrop Alignment Variant 2, Double Track would result in temporary use of small areas of Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance (see Table 3.2-6 of the Draft EIR). The impact due to these alignments is potentially significant.

The following measure mitigates these impacts to a less than significant level.

- AG-1.1: Restore Important Farmlands used for temporary staging areas

Implementation of Mitigation Measure AG-1.1 would reduce impacts from temporary use of Important Farmland during construction to a less-than-significant level for the Preferred Alternative. This mitigation would be effective in minimizing any conversion of Important Farmland to nonagricultural use because it will require any Important Farmland temporarily used for construction access, mobilization, material laydown, and staging to be returned to a condition equal to the pre-construction staging condition. The required restoration plan and the Authority's oversight, ensuring that the restoration plan is properly implemented, will maintain Important

Farmland in equal quantities to those at the beginning of construction. The impact would be less than significant after mitigation for the Preferred Alternative.

Significant Effect: Impact AG-3a. Construction and operation of the Preferred Alternative could result in the conversion of Farmland to nonagricultural use through temporary or permanent disruption of agricultural infrastructure.

Finding: The Authority hereby makes finding (a)(1) (described in above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Construction activities that temporarily or permanently affect Important Farmland (see Table 3.2-6 and Table 3.2-7 of the Draft EIR) have the potential to disrupt agricultural infrastructure temporarily or permanently as a result of service interruptions; service shutdowns; or relocations of utilities, farm roads, and irrigation infrastructure. If temporary or permanent service, irrigation, or farm road interruptions or relocations are not coordinated with agricultural producers, agricultural operations could be affected, potentially resulting in the conversion of Important Farmland.

Operation of the Preferred Alternative would not disrupt agricultural infrastructure. However, maintenance on or adjacent to Important Farmland permanently used by the Preferred Alternative (see Table 3.2-7) could have potential to disrupt agricultural infrastructure temporarily because of service interruptions or temporary relocations of farm roads. If temporary service interruptions or temporary road relocations are not coordinated with agricultural producers, agricultural operations could be temporarily affected, potentially resulting in conversion of Important Farmland. No permanent disruption of agricultural infrastructure is anticipated because of operations and maintenance of the Preferred Alternative.

The following measures mitigate these impacts to a less than significant level.

- AG-3.1: Notify agricultural property owners or leaseholders
- AG-3.2: Coordinate with utility and energy service providers
- AG-3.3: Verify new irrigation facilities are operational before disconnecting the original facility
- AG-3.4: Maintain access to Important Farmlands
- AG-3.5: Provide permanent equipment crossings on affected access roads
- TRA-1.1: Transportation Management Plan for Project Construction

Implementation of Mitigation Measures AG-3.1, AG-3.2, AG-3.3, AG-3.4, AG-3.5, and TRA-1.1 would reduce impacts from temporary and permanent disruption of agricultural infrastructure serving Important Farmland during construction to a less-than-significant level. The mitigation measures would be effective in minimizing conversion of Important Farmland to nonagricultural uses for the reasons listed below.

- Mitigation Measure AG-3.1 will require that the construction schedule be communicated to agricultural property owners and leaseholders of Important Farmland adjacent to the Proposed Project to allow them time to adjust operations to accommodate the planned construction activities.

- Mitigation Measure AG-3.2 will require that utility and energy service disruptions because of construction be coordinated with utility and energy service providers to minimize or avoid disruptions.
- Mitigation Measure AG-3.3 will require the contractor to verify a new irrigation facility is operational prior to disconnecting the original facility to maintain continuity of irrigation services.
- Mitigation Measure AG-3.4 will require that access to Important Farmlands be maintained during construction.
- Mitigation Measure AG-3.5 will require that permanent access be provided at the end of construction if access is interrupted, to allow for continued movement during agricultural operations.
- Mitigation Measure TRA-1.1 will require development and implementation of a transportation management plan for the construction period, which will minimize construction effects on transportation movement, including movement associated with agricultural operations.

Implementation of Mitigation Measures AG-3.1, AG-3.2, and AG-3.3 would reduce impacts from temporary of agricultural infrastructure serving Important Farmland during maintenance activities to a less-than-significant level. The mitigation measures would be effective in minimizing the conversion of Important Farmland to nonagricultural uses for the reasons listed below.

- Mitigation Measure AG-3.1 will require that the maintenance schedule be communicated to agricultural property owners and leaseholders of Important Farmland adjacent to the Proposed Project to allow them time to adjust operations and accommodate planned maintenance activities.
- Mitigation Measure AG-3.2 will require that utility and energy service disruptions because of maintenance activities be coordinated with utility and energy service providers to minimize or avoid disruptions.
- Mitigation Measure AG-3.3 will require the contractor to verify a new irrigation facility is operational prior to disconnecting the original facility to maintain continuity of irrigation services.

With implementation of these mitigation measures, the impact from temporary and permanent disruption of agricultural infrastructure serving Important Farmland during construction and maintenance would be less than significant for the Preferred Alternative.

Significant Effect: Impact C-AG-1. Implementation of the Preferred Alternative, in combination with other foreseeable projects in the surrounding area, could result in a significant cumulative impact on agricultural resources.

Findings: The Authority hereby makes findings (a)1 and (a)(3) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: The following measures mitigate the Preferred Alternative's impact to a less than considerable level.

- AG-3.1: Notify agricultural property owners or leaseholders
- AG-3.2: Coordinate with utility and energy service providers

- AG-3.3: Verify new irrigation facilities are operational before disconnecting the original facility
- AG-3.4: Maintain access to Important Farmlands
- AG-3.5: Provide permanent equipment crossings on affected access roads.

Construction of the Preferred Alternative could temporarily or permanently disrupt agricultural activities on or adjacent to Important Farmland. If temporary or permanent service, irrigation, or farm road interruptions or relocations are not coordinated with agricultural producers, agricultural operations could be affected, potentially resulting in the conversion of Important Farmland. It is reasonably foreseeable that construction activities at some of the projects listed in Tables 4-3, 4-4, and 4-5, especially those located within the Livermore Valley, Altamont Hills, and San Joaquin Valley, could similarly affect agricultural operations. Combined, these affects would constitute a cumulatively considerable contribution to the existing impact. Implementation of Mitigation Measures AG-3.1, AG-3.2, AG-3.3, AG-3.4, and AG-3.5 would require specific property owner notification and service provider coordination to minimize such impacts, thereby minimizing potential cumulatively considerable contributions to such impacts. With implementation of these mitigation measures, construction-related service interruptions would not disrupt agricultural infrastructure; therefore, the Preferred Alternative would not contribute considerably to this cumulative impact.

Operations and maintenance activities associated with the Preferred Alternative, including train operation, track inspections and repairs, and vegetation removal could temporarily disrupt agricultural activities on or adjacent to Important Farmland. If temporary service, irrigation, or farm road interruptions or relocations are not coordinated with agricultural producers, agricultural operations could be affected, potentially resulting in the conversion of Important Farmland. It is reasonably expected that some operations and maintenance activities associated with identified projects, especially rail projects, would require similar operations and maintenance activities that could present similar impacts. Combined, these impacts would constitute a significant cumulative impact regarding the disruption of agricultural infrastructure activities. However, implementation of Mitigation Measures AG-3.1, AG-3.2, AG-3.3, and AG-3.4 would require property owner notification and service provider coordination. This coordination would reduce the Preferred Alternative's contribution to this impact to a less than considerable level.

3.3.2.3 Air Quality

Significant Effect: Impact AQ-1: Construction of the Preferred Alternative could conflict with or obstruct implementation of the applicable air quality plans. Operation of the Preferred Alternative would not conflict with or obstruct implementation of the applicable air quality plans.

Finding: The Authority hereby makes finding (a)(1) (described in above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Construction emissions would exceed BAAQMD's ROG and NO_X thresholds, SJVAPCD's annual NO_X and PM10 thresholds, and the NO_X, CO, PM10, and PM2.5 ambient air quality analysis (AAQA) triggers. This is a potentially significant impact because of construction-period emissions, which would exceed thresholds for both BAAQMD and SJVAPCD.

The following measures mitigate these impacts to a less than significant level.

- AQ-2.1: Implement advanced emissions controls for off-road equipment during construction

- AQ-2.2: Implement off-road engine maintenance and idling restrictions during construction
- AQ-2.3: Implement advanced emissions controls for trains during construction
- AQ-2.4: Utilize modern fleet for on-road material delivery and haul trucks during construction
- AQ-2.5: Implement fugitive dust controls during construction
- AQ-2-6: Enter into a Voluntary Emissions Reduction Agreement for Project Construction Emissions over BAAQMD emissions in the San Francisco Bay Area Air Basin (SFBAAB)
- AQ-2-7: Enter into a Voluntary Emissions Reduction Agreement for Project Construction Emissions over SJVAPCD emissions in the San Joaquin Valley Air Basin (SJVAB)

Mitigation Measures AQ-2.1 through AQ-2.4 will reduce construction-related ROG emissions below BAAQMD's daily threshold, and construction-related NOX emissions below SJVAPCD's annual threshold. However, construction-related NOX emissions would remain above BAAQMD's daily threshold and construction-related PM10 emissions would remain above SJVAPCD's annual threshold. Also, construction-related CO and PM10 emissions would remain above SJVAPCD's daily thresholds. Dispersion modeling confirms that PM10 emissions more than SJVAPCD's AAQA trigger would contribute to violations of CAAQS. However, dispersion modeling confirms that CO emissions more than SJVAPCD's AAQA trigger would not contribute to violations of CAAQS. Because of the exceedances of BAAQMD's daily threshold and SJVAPCD's annual thresholds and the contribution of PM10 emissions within SJVAPCD to violations of CAAQS, Mitigation Measures AQ-2.6 and AQ-2.7 will be implemented to reduce criteria pollutant emissions through purchase of emissions offsets in the SFBAAB and the SJVAB to reduce emissions below threshold levels. Construction of the Preferred Alternative would not conflict with applicable air quality plans with implementation of mitigation.

Significant Effect: Impact AQ-2a. Construction of the Preferred Alternative could result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is designated a nonattainment area under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Construction of the Preferred Alternative has the potential to create air quality impacts due to emissions from heavy-duty construction equipment, worker vehicle trips, truck hauling trips, and train trips. In addition, fugitive emissions would result from site grading, asphalt paving, and demolition. This is a potentially significant impact.

The Tri-Valley Alignment would occur exclusively within BAAQMD. The alignment would result in construction-related ROG and NO_X emissions greater than BAAQMD's thresholds of significance. None of the stations would individually result in construction emissions greater than BAAQMD's thresholds of significance. Construction of the Stone Cut Alignment Alternative located within BAAQMD would result in NO_X emissions that would exceed the air district's threshold (it would result in similar, but slightly higher, construction emissions as the originally proposed portion of the Altamont Alignment). Construction of the Interim OMF option would occur in BAAQMD. The Interim OMF would not individually result in construction emissions greater than BAAQMD's thresholds of significance.

The following measures mitigate these impacts to a less than significant level within the jurisdiction of the BAAQMD. These impacts would be significant and unavoidable within the SJVAPCD as previously discussed under the Significant and Unavoidable Impacts section.

- AQ-2.1: Implement advanced emissions controls for off-road equipment during construction
- AQ-2.2: Implement off-road engine maintenance and idling restrictions during construction
- AQ-2.3: Implement advanced emissions controls for trains during construction
- AQ-2.4: Utilize modern fleet for on-road material delivery and haul trucks during construction
- AQ-2.5: Implement fugitive dust controls during construction
- AQ-2-6: Enter into a Voluntary Emissions Reduction Agreement for Project Construction Emissions over BAAQMD emissions in the San Francisco Bay Area Air Basin (SFBAAB)

Mitigation is required to reduce ROG, NO_X, CO, PM10, and PM2.5 emissions. Mitigation Measures AQ-2.1 and AQ-2.2 target emissions from off-road equipment and require engines greater than 25 horsepower to meet Tier 4 emission standards. Equipment idling times will also be reduced to 2 minutes and all engines properly tuned according to manufacturer specifications. Mitigation Measure AQ-2.3 requires trains used during rail work to meet Tier 4 emission standards, whereas Mitigation Measure AQ-2.4 requires all on-road vehicles with a gross vehicle weight rating of 19,500 pounds or greater to comply with USEPA 2007 on-road emission standards. Mitigation Measure AQ-2.5 outlines air district-recommended measures to control fugitive dust.

As shown in Table 3.3-14 of the Draft EIR, Mitigation Measures AQ-2.1 through AQ-2.4 would reduce construction-related ROG emissions in BAAQMD below the applicable significance threshold but NO_X emissions in BAAQMD would still exceed 54 pounds per day, even after implementation of all feasible onsite mitigation. Consequently, Mitigation Measure AQ-2.6 will be implemented to reduce NO_X emissions within BAAQMD to below threshold levels. With implementation of Mitigation Measures AQ-2.1 through AQ-2.4 and AQ-2.6, impacts in the BAAQMD would be less than significant.

Significant Effect: Impact AQ-3b. Construction of the Preferred Alternative could expose sensitive receptors to substantial DPM or localized PM concentrations.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Construction has the potential to create inhalation health risks and exposure to PM2.5, which may exceed local significance thresholds for increased cancer and non-cancer health risk at receptor locations adjacent to the track. As noted in Section 3.3.3.2, *Pollutants of Concern*, of the Draft EIR, the cancer risk from exposure to diesel exhaust is much higher than the risk associated with any other air toxic from construction of the Preferred Alternative.

The following measures mitigate these impacts to a less than cumulatively considerable level.

- AQ-2.1: Implement advanced emissions controls for off-road equipment during construction
- AQ-2.2: Implement off-road engine maintenance and idling restrictions during construction
- AQ-2.3: Implement advanced emissions controls for trains during construction
- AQ-2.4: Utilize modern fleet for on-road material delivery and haul trucks during construction

Tables 3.3-21 and 3.3-22 of the Draft EIR summarize estimated maximum cancer risk, chronic health hazard, and PM2.5 concentrations in the BAAQMD and SJVAPCD, respectively. Risks are presented for each geographic segment. The modeling assumes implementation of all feasible onsite mitigation measures, as described under Mitigation Measures AQ-2.1 through AQ-2.4 because these mitigation measures for criteria pollutants are required whether or not there are nearby sensitive receptors and whether or not there are significant impacts relative to sensitive receptors. The risks are shown to be below the threshold of significance. As shown in Table 3.3-23 of the Draft EIR, construction of the Mountain House Station Alternative would not result in risks above the applicable thresholds.

Significant Effect: Impact AQ-3g. The Preferred Alternative could expose sensitive receptors to cumulative health risks from increased exposure to DPM and PM2.5 concentrations.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Table 3.3-28 of the Draft EIR summarizes the cumulative cancer risk, chronic health hazard, and PM2.5 concentrations at representative locations along the Tri-Valley and Altamont segments in BAAQMD during construction. Table 3.3-29 of the Draft EIR summarizes cumulative cancer risk, chronic health hazard, and PM2.5 concentrations at representative locations along the Tri-Valley and Altamont segments in BAAQMD during operations of the Preferred Alternative. As shown in these tables, total cumulative health risks to sensitive receptors located near the Preferred Alternative during construction and operations would not exceed BAAQMD's cumulative health risk thresholds for the Altamont segment but would exceed the thresholds for cancer risk and PM2.5 for the Tri-Valley segment. Preferred Alternative operational emissions would be less with the DMU or HBMU technology variants compared to the DLH technology variant. Without the criteria pollutant mitigation, the contribution would be higher than shown in the tables. These impacts are a result of ambient background concentrations that exceed BAAQMD significance thresholds and a contribution of additional DPM emissions-related health risks due to the Preferred Alternative.

The following measures mitigate these impacts to a less than cumulatively considerable level outside the Tri-Valley segment.

- AQ-2.1: Implement advanced emissions controls for off-road equipment during construction
- AQ-2.2: Implement off-road engine maintenance and idling restrictions during construction
- AQ-2.3: Implement advanced emissions controls for trains during construction
- AQ-2.4: Utilize modern fleet for on-road material delivery and haul trucks during construction

The modeling results shown in Tables 3.3-28 and 3.3-29 of the Draft EIR include application of Mitigation Measures AQ-2.1 through AQ-2.4 to the Preferred Alternative. This impact is less than significant for the Preferred Alternative relative to BEMU operations within the Tri-Valley segment, and construction and operation outside the Tri-Valley segment. This impact is significant and unavoidable for construction and DMU/HBMU/DLH operation in the Tri-Valley segment, as discussed previously under Significant Unavoidable Impacts.

Significant Effect: Impact AQ-3h. Construction of the Preferred Alternative could expose sensitive receptors to increasing risk of contracting Valley Fever or exposure to asbestos-containing material. Table 3.3-28 summarizes cumulative cancer risk, chronic health hazard, and PM2.5 concentrations

at representative locations along the Tri-Valley and Altamont segments in BAAQMD during construction. The table presents the Preferred Alternative and ambient contribution to the cumulative risk.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Disturbance of soil containing *C. immitis* could expose the receptors adjacent to the construction sites to spores known to cause Valley Fever. Areas endemic to *C. immitis* are generally arid to semiarid with low annual rainfall, and as such, soil containing the fungus is commonly found in Southern California and throughout the Central Valley. The risk of contracting Valley Fever is relatively higher in the San Joaquin County than in Alameda County.

Demolition of existing structures results in fugitive dust and other particulates that may disperse to adjacent sensitive receptor locations. Asbestos-containing materials (ACM) were commonly used as fireproofing and insulating agents prior to the 1970s. The U.S. Consumer Product Safety Commission banned use of most ACM in 1977 due to their link to mesothelioma. However, buildings constructed prior to 1977 that would be demolished by the Preferred Alternative may have used ACM and could expose receptors to asbestos, which may become airborne with other particulates during demolition.

The following measure mitigates these impacts to a less than cumulatively considerable level.

- AQ-2.5: Implement fugitive dust controls during construction

Dust-control measures are the primary defense against Valley Fever infection. Fugitive dust controls per Mitigation Measure AQ-2.5 would avoid dusty conditions and reduce the risk of contracting Valley Fever by implementing routine watering and other controls. This impact would be less than significant with mitigation for the Preferred Alternative.

Significant Effect: Impact C-AQ-1. Implementation of the Preferred Alternative, in combination with other foreseeable projects in the surrounding area, could result in a significant cumulative impact on air quality.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: During construction, both the Preferred Alternative and all identified projects would emit criteria pollutants and TACs from use of construction equipment and vehicles. Although construction activities would be temporary, the emissions of these pollutants and contaminants from concurrent or nearby construction of identified projects would exceed the SJVAPCD and BAAQMD thresholds for criteria pollutants. This could result in a significant cumulative air quality impact.

Operation of all Valley Link ridership scenarios would reduce all criteria pollutant emissions under 2025 and 2040 conditions under the full buildout of Valley Link (i.e., from the Dublin/Pleasanton Station to the North Lathrop Station) except for nitrogen oxide emissions for the 2025 full build with the diesel locomotive haul (DLH) technology variant, which would still be less than BAAQMD and SJVAPCD significance thresholds. Net emissions for all technology variants would not exceed BAAQMD or SJVAPCD significance thresholds under the Southfront Road Station Alternative IOS and

Mountain House Station Alternative IOS. Thus, operational criteria pollutant emissions in BAAQMD and SJVAPCD would not exceed any air district thresholds. Accordingly, operation of the Preferred Alternative would be consistent with applicable air quality plans in BAAQMD and SJVAPCD and would have a less than considerable cumulative contribution to criteria pollutants for the full buildout of Valley Link as well as the Southfront Road Station Alternative IOS and Mountain House Station Alternative IOS. It is expected that operation of the rail projects identified in Table 4-3 of the Draft EIR similarly would also result in overall reduction of criteria pollutants (compared to the No Project Alternative increases in either passenger vehicle or truck emissions), and like the Preferred Alternative would have a less than considerable contribution to cumulative criteria pollutant impacts.

The following measures mitigate these impacts to a less than significant level.

- AQ-2.1: Implement advanced emissions controls for off-road equipment during construction
- AQ-2.2: Implement off-road engine maintenance and idling restrictions during construction
- AQ-2.3: Implement advanced emissions controls for trains during construction
- AQ-2.4: Utilize modern fleet for on-road material delivery and haul trucks during construction
- AQ-2.5: Implement fugitive dust controls during construction
- AQ-2-6: Enter into a Voluntary Emissions Reduction Agreement for Project Construction Emissions over BAAQMD emissions in the San Francisco Bay Area Air Basin (SFBAAB)
- AQ-2-7: Enter into a Voluntary Emissions Reduction Agreement for Project Construction Emissions over SJVAPCD emissions in the San Joaquin Valley Air Basin (SJVAB)

Implementation of Mitigation Measures AQ-2.1, AQ-2.2, AQ-2.3, AQ-2.4, AQ-2.5, AQ-2.6, and AQ-2.7, construction equipment, including vehicles that would transport equipment to construction sites, would be selected and maintained in a manner that minimizes criteria pollutant emissions. Furthermore, construction fugitive dust controls and construction emissions offsets would further reduce Preferred Alternative construction emissions, and construction of the Preferred Alternative would have a less than considerable contribution to criteria pollutants, with mitigation.

This impact is significant and unavoidable for toxic air contaminant emissions in the Tri-Valley segment, as discussed previously under *Findings Regarding Significant and Unavoidable Effects*. Operation of the DLH, diesel multiple unit (DMU), or hybrid battery multiple unit (HBMU) technology variants would contribute to significant cumulative health risks to sensitive receptors at certain locations along the Tri-Valley segment (including facilities in the Tri-Valley segment) due to existing risks exceeding the cumulative thresholds already. If the battery-electric multiple unit (BEMU) technology variant is chosen, then the Preferred Alternative (including facilities in the Tri-Valley segment) would not contribute to cumulative health risks due to train operations.

3.3.2.4 Biological Resources

Significant Effect: Impact BIO-1. Construction of the Preferred Alternative could remove or degrade special-status plants and their habitat.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Special-status plant species have the potential to occur adjacent to the existing disturbed lands of the footprints for the Preferred Alternative, where natural land cover with suitable habitat characteristics (e.g., alkaline soils, vernal pools, riparian forests and woodlands) is present. Where special-status plant species are present, ground disturbance could result in the direct mortality of individuals through the removal of vegetation, crushing, trampling, introduction of nonnative or invasive plants, and degradation or loss of habitat. Other temporary construction impacts on special-status plant species would include exposure to air pollutants during construction (e.g., dust) and removal of vegetation that would most likely regenerate within 1 year. In addition, the potential exists for runoff with sediment and contaminants (e.g., oil, grease, concrete) to enter upland areas as well as water bodies adjacent to construction activities, which would decrease habitat quality and potentially indirectly affect special-status plant species.

The following measures mitigate these impacts to a less than significant level.

- BIO-1.1: Conduct preconstruction surveys for special-status plant species
- BIO-1.2: Prepare a salvage, relocation, or propagation and monitoring plan for special-status plant species
- BIO-1.3: Document affected special-status plant species
- BIO-1.4: Prevent introduction or spread of invasive plant species
- Select the Southfront Road Station Alternative in place of the Greenville Station

Implementation of Mitigation Measures BIO-1.1, BIO-1.2, BIO-1.3, and BIO-1.4 would avoid or compensate for impacts on special-status plants through impact avoidance, salvage and relocation, impact documentation, and prevention of the spread of invasive plants. In addition, as described in Section 3.10, *Hydrology and Water Quality*, of the Draft EIR, construction contractor(s) would be required to obtain applicable resource agency permits and approvals and comply with permit requirements to prevent impacts on water quality and demonstrate that water quality standards and/or Waste Discharge Requirements (WDRs) are not violated. With implementation of Mitigation Measures BIO-1.1, BIO-1.2, BIO-1.3, and BIO-1.4, impacts on special-status plant species during construction of the Preferred Alternative, due to implementation of the following alignments, stations, and OMFs would be less than significant: Tri-Valley Alignment; Isabel Station; Altamont Alignment (including Owens-Illinois Industrial Lead Variant 1, Single Track and Owens-Illinois Industrial Lead Variant 2, Double Track); Stone Cut Alignment Alternative; Interim OMF; Mountain House Station Alternative; Tracy OMF; Tracy to Lathrop Alignment Variant 1, Single Track; Tracy to Lathrop Alignment Variant 2, Double Track; and River Islands Station.

Significant Effect: Impact BIO-2. Construction of the Preferred Alternative could injure or kill special-status wildlife species and remove or degrade their habitat.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: If special-status wildlife species are present, construction activities (e.g., grading, grubbing, pile driving, excavation, vegetation removal, soil compaction, increased light, noise, the introduction of invasive species) could result in direct and/or indirect effects on special-status wildlife species. Direct effects can be temporary (i.e., conditions return to baseline within 1 year of disturbance) or permanent and result in injury or mortality to special-status wildlife species.

Indirect effects are reasonably certain to occur from a proposed action later in time; these effects generally alter the behavior patterns and habitat suitability of special-status wildlife species. The types of direct and indirect effects on special-status wildlife resulting from these actions would be similar wherever habitat for a given species or a group of species is present. The description of effects on special-status wildlife is based on land cover types or habitat features that support special-status species, including some that support multiple species, and could be affected by construction. The potential of construction on special-status species is summarized in Table 3.4-4 of the Draft EIR.

The following measures mitigate this impact to a less than significant level.

- BIO-2.1: Obtain coverage from, be consistent with, and tier from existing conservation strategies as feasible
- BIO-2.2: Conduct a worker environmental training program for construction personnel
- BIO-2.3: Implement noise reduction measures for pile driving in or adjacent to streams and wetlands as feasible
- BIO-2.4: Implement seasonal restrictions for in-water work as feasible
- BIO-2.5: Protect wetlands during construction
- BIO-2.6: Protect sensitive natural communities, including riparian habitat, during construction
- BIO-2.7: Protect vernal pool-endemic species
- BIO-2.8: Protect valley elderberry longhorn beetle
- BIO-2.9: Protect California tiger salamander, western spadefoot toad, and California red-legged frog
- BIO-2.10: Protect foothill yellow-legged frog
- BIO-2.11: Protect western pond turtle and giant garter snake
- BIO-2.12: Protect California legless lizard, California glossy snake, coast horned lizard, and San Joaquin coachwhip
- BIO-2.13: Protect special-status and non-special-status nesting birds
- BIO-2.14: Protect golden eagles
- BIO-2.15: Protect Swainson's hawk nests
- BIO-2.16: Compensate for Swainson's hawk foraging habitat loss
- BIO-2.17: Protect burrowing owls and burrowing owl habitat
- BIO-2.18: Compensate for burrowing owl habitat loss
- BIO-2.18: Avoid San Joaquin kit fox and American badger
- BIO-2.19: Protect special-status and non-special-status roosting bats
- BIO-2.20: Protect riparian brush rabbit
- BIO-2.21: Compensate for riparian brush rabbit habitat loss
- BIO-2.22: Protect American badger, San Joaquin kit fox, mountain lion, and their habitat

- BIO-2.23: Compensate for American badger, San Joaquin kit fox, and mountain lion habitat loss
- BIO-2.24: Protect Crotch bumble bee and western bumble bee nesting habitat and floral resources
- BIO-2.25: Compensate for Crotch bumble bee and western bumble bee habitat loss

Implementation of Mitigation Measures BIO-2.1, BIO-2.2, BIO-2.3, BIO-2.4, BIO-2.5, BIO-2.6, BIO-2.7, BIO-2.8, BIO-2.9, BIO-2.10, BIO-2.11, BIO-2.12, BIO-2.13, BIO-2.14, BIO-2.15, BIO-2.16, BIO-2.17, BIO-2.18, BIO-2.19, BIO-2.20, BIO-2.21, BIO-2.22, BIO-2.23, BIO-2.24, and BIO-2.25 would avoid, reduce, and/or compensate for impacts on special-status wildlife through habitat avoidance, a preconstruction survey, no-disturbance buffers, timing restrictions, and compensation for habitat disturbance or loss. With implementation of Mitigation Measures BIO-2.1, BIO-2.2, BIO-2.3, BIO-2.4, BIO-2.5, BIO-2.6, BIO-2.7, BIO-2.8, BIO-2.9, BIO-2.10, BIO-2.11, BIO-2.12, BIO-2.13, BIO-2.14, BIO-2.15, BIO-2.16, BIO-2.17, BIO-2.18, BIO-2.19, BIO-2.20, BIO-2.21, BIO-2.22, BIO-2.23, BIO-2.24, and BIO-2.25 impacts on special-status wildlife species during construction of the Preferred Alternative would be reduced to less than significant.

Significant Effect: Impact BIO-3. Construction of the Preferred Alternative would injure or kill special-status fish and remove or degrade their habitat.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: When fish are present, ground disturbance from construction could result in impacts on special-status species through degradation or loss of habitat, along with a reduction in the number of available prey species, such as invertebrates. SRA cover, which is defined as nearshore aquatic habitat and adjacent woody riparian habitat that provides shade and cover in a stream or river, is important habitat for special-status fish species. Riparian vegetation removal along creek and riverbanks would affect fish habitat. The removal of SRA can increase water temperatures, decrease cover, and decrease the number of available prey species for fish, including invertebrates. Construction noise and vibration from pile driving could be other temporary impacts on special-status fish species. In addition, the potential exists for sediment and contaminants (i.e., oil, grease, concrete) in runoff to enter water bodies adjacent to construction, which would decrease water quality for aquatic species.

Noise from pile driving could injure or kill fish in Paradise Cut and the San Joaquin River. Pile driving near Paradise Cut and the San Joaquin River would occur only as a part of the Tracy to Lathrop Alignment Variant 2, Double Track. The assessment of impacts on special-status fish species due to noise from pile driving is based on specific noise thresholds and ambient noise levels.

The alignment and stations in the Tri-Valley and Altamont segments would not affect special-status fish species because suitable habitat is absent and no impact would occur within that segment.

The following measures mitigate these impacts to a less than significant level.

- BIO-2.1: Obtain coverage from, be consistent with, and tier from existing conservation strategies as feasible
- BIO-2.2: Conduct a worker environmental training program for construction personnel
- BIO-2.3: Implement noise reduction measures for pile driving in or adjacent to streams and wetlands as feasible

- BIO-2.4: Implement seasonal restrictions for in-water work as feasible
- BIO-3.1: Develop and implement a hydroacoustic monitoring plan to minimize noise effects on fish
- BIO-7.1: Compensate for loss of riparian habitat

Implementation of Mitigation Measures BIO-2.1, BIO-2.2, BIO-2.3, BIO-2.4, BIO-3.1, and BIO-7.1 would minimize or reduce impacts on special-status fish species and their habitat by reducing the likelihood of fish mortality or injury during construction, ensuring movement through the water bodies with new bridges and compensating for riparian habitat loss through in-kind habitat preservation, enhancement, and/or creation. In addition, as described in Section 3.10, *Hydrology and Water Quality*, of the Draft EIR, construction contractor(s) would be required to obtain applicable resource agency permits and approvals and comply with permit requirements to prevent impacts on water quality and demonstrate that water quality standards and/or WDRs are not violated. With implementation of Mitigation Measures BIO-2.1, BIO-2.2, BIO-2.3, BIO-2.4, BIO-3.1, and BIO-7.1, impacts on special-status fish species during construction of the Tracy to Lathrop Alignment Variant 1, Single Track and Tracy to Lathrop Alignment Variant 2, Double Track would be less than significant.

Significant Effect: Impact BIO-4: Operation and maintenance of the Preferred Alternative could injure or kill special-status wildlife species.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Operation would increase train traffic substantially and introduce rail traffic to some areas that do not currently experience passenger rail traffic. Large carnivores, such as mountain lion and bobcats, are sensitive to anthropogenic mortality, which increases in human-dominated landscapes. Additionally, studies have documented that projects associated with human population growth and road and highway projects affect large carnivore (e.g., mountain lion) habitat and movement corridors and contribute to mortality due to vehicle strike. Operation could affect special-status wildlife species through increased train traffic, leading to anthropogenic barriers to movement and dispersal, and wildlife/train strikes across all segments of the alignment. Increased train traffic could contribute to the level of noise and ambient light present in areas that currently do not experience passenger rail traffic.

Operation of rail stations and OMFs would increase the exposure of special-status wildlife species to human presence and potential for vehicle strikes along the access roads to rail stations. The additional passenger train traffic generated by operation would be substantially different from existing levels in these areas. Increased train traffic would occur following construction, and operational conditions along the ROW would be expected to be significantly different from existing conditions with respect to special-status wildlife species.

The BEMU technology variant would include an OCS in the Altamont Pass between east of Greenville Road and the Tracy OMF. The OCS would not be implemented as part of the DMU, HBMU, and DLH technology variants and the OCS would not be required for the remaining Valley Link train route that relies on BEMU technology. Operation of OCS would introduce risk to aerial wildlife (i.e., raptors, birds of prey) through collision with electrical overhead powerlines and/or support poles, traction power station, strain gantry, or other traction power facilities, and wireless

communications facilities. The Avian PowerLine Interaction Committee also notes that small birds such as passerines can also be at risk of electrocution.

Maintenance of Valley Link tracks and stations could affect special-status wildlife species through the disturbance, modification, or removal of habitat as well as direct and indirect impacts on special-status wildlife individuals. Track maintenance activities that would occur because of Valley Link service would consist of ongoing maintenance of track, vegetation management (i.e., annual vegetation trimming, herbicide application), and infrastructure maintenance (i.e., bridges, drainage features, signal apparatus, signal infrastructures). Maintenance activities at new stations and OMFs constructed would consist of vegetation maintenance, potential use of pesticides/rodenticides, and, as required, structure maintenance (i.e., minor/major concrete work, platform maintenance, paving/road work, general maintenance). Infrastructure maintenance (e.g., tie back walls, pier protections, railroad tracks, signal lights, track switches) would also be required for a new single-span bridge over eastbound I-580 and for the crossing under westbound I-580 for the Stone Cut Alignment Alternative. Fleet maintenance would occur at select OMFs. Maintenance of Valley Link tracks and stations could affect special-status wildlife species through the disturbance, modification, or removal of habitat as well as direct and indirect impacts on special-status wildlife individuals.

The following measures and revisions mitigate this impact to a less than significant level.

- BIO-4.1: Protect nesting birds during maintenance activities
- BIO-4.2: Protect roosting bats during maintenance activities
- BIO-4.3: Minimize permanent intermittent impacts on avian and bat wildlife species due to the Altamont OCS and aerial structures
- BIO-4.4: Implement removal of carrion that may attract raptors and carnivores
- BIO-4.5: Avoid use of second-generation anticoagulant rodenticides
- BIO-8.1: Design curbs to permit California tiger salamander and California red-legged frog movement
- BIO-8.2: Install station lighting controls and fencing limitations
- BIO-8.4: Improve existing wildlife crossings and/or implement new wildlife crossing options along the Altamont Alignment and the Stone Cut Alignment Alternative
- BIO-8.5: Improve existing wildlife crossings and/or implement new wildlife crossing options along certain portions of the Tracy to Lathrop Alignment
- Select the Southfront Road Station Alternative in place of the Greenville Station
- Select the Mountain House Station Alternative in place of the Mountain House Station

The originally proposed Greenville Station would hinder wildlife movement related to the existing underground rail crossing east of Greenville, even with mitigation. The originally proposed Mountain House Station would result in a substantial impediment to wildlife movement in the undeveloped foothills, which are an area of key wildlife movement, even with mitigation. Thus, new rail services associated with the Proposed Project would result in significant and unavoidable impact on special-status species relative to the proposed Greenville Station and Mountain House Station, even after implementation of mitigation. Selection of the Southfront Road Station Alternative (in place of the Greenville Station) and Mountain House Station Alternative (in place of the Mountain House Station) avoids this significant unavoidable impact.

Implementation of the mitigation measures identified above, as well as the selection of the Southfront Road Station Alternative and the Mountain House Station Alternative would ensure that this impact from the Preferred Alternative would be less than significant.

Significant Effect: Impact BIO-6. Construction of the Preferred Alternative would remove or degrade federally regulated wetlands and other aquatic resources.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Even though most of the Preferred Alternative footprint is disturbed or developed, wetlands occur in limited areas because of the presence of a combination of geophysical factors, including local topography, soils, and hydrologic conditions. Similarly, wetlands and other aquatic resources are present in limited portions of the Preferred Alternative footprint. Most wetlands and other waters of the United States are northeast of Livermore, in the Altamont Hills, west of Tracy, or between Tracy and Lathrop. In these areas, seasonal wetlands, vernal pools, and alkali seasonal wetlands are concentrated in the Altamont Hills and areas west of Tracy, as described in Table 3.4-9 of the Draft EIR.

The following measures mitigate these impacts to a less than significant level.

- BIO-2.5: Protect wetlands during construction
- BIO-6.1: Compensate for impacts on jurisdictional wetlands and non-wetland waters of the United States (aquatic resources) prior to impacts during construction

Implementation of Mitigation Measures BIO-2.5 and BIO-6.1 would avoid, minimize, or compensate for impacts on federally regulated wetlands and other aquatic resources, which would reduce impacts to a less-than-significant level.

Significant Effect: Impact BIO-7. Construction of the Preferred Alternative could remove or degrade sensitive natural communities, including riparian habitat, identified in local or regional plans, policies, and regulations or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Sensitive natural communities within the study area include riparian and wetland plant natural communities as well as the pond and salt grass flats land cover types. Table 3.4-10 of the Draft EIR indicates the alignments, stations, and OMFs that would have the potential to affect riparian habitat and other sensitive natural communities. As shown in Table 3.4-10, the Dublin/Pleasanton Station, Interim OMF, Tracy OMF, Downtown Tracy Station, and North Lathrop Station would not affect any sensitive natural communities and would, therefore, have no impacts on sensitive natural communities.

The following measures mitigate these impacts to a less than significant level.

- BIO-2.5: Protect wetlands during construction

- BIO-2.6: Protect sensitive natural communities, including riparian habitat and salt grass flats, during construction
- BIO-6.1: Compensate for impacts on jurisdictional wetlands and non-wetland waters of the United States (aquatic resources) prior to impacts during construction
- BIO-7.1: Compensate for loss of riparian habitat
- BIO-7.2: Compensate for loss of sensitive natural communities (excluding riparian and wetland habitat)

Implementation of Mitigation Measures BIO-2.5, BIO-2.6, BIO-6.1, BIO-7.1, and BIO-7.2, impacts on sensitive natural communities (salt grass flats, alkali seasonal wetlands, freshwater wetlands, riparian scrub and forest, and vernal pools) from construction of the Preferred Alternative would be less than significant.

Significant Effect: Impact BIO-8. Construction of the Preferred Alternative could substantially interfere with the movement of native resident or migratory fish or wildlife species, established migration corridors, or the use of nursery areas.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Construction could affect native and resident wildlife movement in all land cover types, except developed land cover. Construction could affect the movement of regional wildlife, including special-status species such as mountain lion, San Joaquin kit fox, American badger, California red-legged frog, and California tiger salamander through grassland, wetland, riparian, aquatic, and cropland (i.e., row crops) land cover types. Construction in grassland, wetland, riparian, aquatic, and cropland land cover types could directly deter or prevent fish or wildlife movement through the area because of habitat removal or disturbance; the presence of physical barriers (e.g., cofferdams, dewatering activities, construction fencing, wildlife exclusionary fencing, roads), construction equipment, or humans; vegetation removal (which provides wildlife with cover during movement and dispersal); and alteration of hydrology. Construction in these habitats could indirectly deter or prevent fish or wildlife movement through vibration, noise, and light generated by construction; vegetation composition alteration; increased road and vehicle traffic, and the introduction of invasive plants. Additionally, construction of the Preferred Alternative would lead to wildlife habitat fragmentation by spread of human development and associated transportation corridors.

The following measures mitigate these impacts to a less than significant level.

- BIO-2.2: Conduct a worker environmental training program for construction personnel
- BIO-2.3: Implement noise reduction measures for pile driving in or adjacent to streams and wetlands as feasible
- BIO-2.4: Implement seasonal restrictions for in-water work as feasible
- BIO-2.5: Protect wetlands during construction
- BIO-2.6: Protect sensitive natural communities, including riparian habitat, during construction
- BIO-2.7: Protect vernal pool–endemic species

- BIO-2.8: Protect valley elderberry longhorn beetle
- BIO-2.9: Protect California tiger salamander, western spadefoot toad, and California red-legged frog
- BIO-2.10: Protect foothill yellow-legged frog
- BIO-2.11: Protect western pond turtle and giant garter snake
- BIO-2.12: Protect California legless lizard, California glossy snake, coast horned lizard, and San Joaquin coachwhip
- BIO-2.14: Protect golden eagle
- BIO-2.15: Protect Swainson's hawk nests
- BIO-2.16 Compensate for Swainson's hawk foraging habitat loss
- BIO-2.17: Protect burrowing owls and burrowing owl habitat
- BIO-2.18: Compensate for burrowing owl habitat loss
- BIO-2.19: Protect special-status and non-special-status roosting bats
- BIO-2.20: Protect riparian brush rabbit
- BIO-2.21: Compensate for riparian brush rabbit habitat loss
- BIO-2.22: Protect American badger, San Joaquin kit fox, mountain lion, and their habitat
- BIO-2.23: Compensate for American badger, San Joaquin kit fox, and mountain lion habitat loss
- BIO-2.24: Protect Crotch bumble bee and western bumble bee nesting habitat and floral resources
- BIO-2.25: Compensate for Crotch bumble bee and western bumble bee habitat loss
- BIO-3.1: Develop and implement a hydroacoustic monitoring plan to minimize noise effects on fish
- BIO-6.1: Compensate for impacts on jurisdictional wetlands and non-wetland waters of the United States (aquatic resources) prior to impacts during construction
- BIO-7.1: Compensate for loss of riparian habitat
- BIO-7.2: Compensate for loss of sensitive natural communities (excluding riparian and wetland habitat)
- BIO-8.1: Install curbs to permit California tiger salamander and California red-legged frog movement
- BIO-8.2: Install station lighting controls and fencing limitations
- BIO-8.4: Improve existing wildlife crossings and/or implement new wildlife crossing options along the Altamont Alignment and the Stone Cut Alignment Alternative
- BIO-8.5: Improve existing wildlife crossings and/or implement new wildlife crossing options along certain portions of the Tracy to Lathrop Alignment

Disturbances from construction-related noise and vibration; the presence of construction vehicles and machinery, as well as humans; and habitat removal or degradation could affect fish and wildlife movement. Impacts on native resident and migratory fish and wildlife corridors from construction

of the Preferred Alternative would be significant. Implementation of Mitigation Measures BIO-2.2, BIO-2.3, BIO-2.4, BIO-2.5, BIO-2.6, BIO-2.7, BIO-2.8, BIO-2.9, BIO-2.10, BIO-2.11, BIO-2.12, BIO-2.13, BIO-2.14, BIO-2.15, BIO-2.16, BIO-2.17, BIO-2.18, BIO-2.19, BIO-2.20, BIO-2.21, BIO-2.22, BIO-2.23, BIO-2.24, BIO-2.25, BIO-3.1, BIO-6.1, BIO-7.1, BIO-7.2, BIO-8.1, BIO-8.2, BIO-8.4, and BIO-8.5 would avoid or minimize impacts on native and resident fish and wildlife movement and wildlife corridors, and would reduce impacts to a less-than-significant level for construction of the Preferred Alternative.

Significant Effect: Impact BIO-9. Operation of the Preferred Alternative could substantially interfere with the movement of native resident or migratory fish or wildlife species, established migration corridors, or the use of nursery areas.

Findings: The Authority hereby makes finding (a)(3) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Operational and maintenance activities proposed at Isabel Station would affect native and migratory wildlife that use the Arroyo Las Positas riparian corridor. Therefore, Isabel Station could affect fish and wildlife movement and the impact would be potentially significant.

Operation of the Stone Cut Alignment Alternative would affect wildlife movement to a greater extent compared with the portion of the proposed Altamont Alignment that the Stone Cut Alignment Alternative would replace. This alternative would be located near the existing Alameda County Transportation Corridor ROW and UPRR ROW, which bisect the central region of the Altamont Hills adjacent to suitable movement habitat, including annual grasslands, seasonal wetlands, and ephemeral drainages. The Stone Cut Alignment Alternative (which would not use a tunnel), compared to the Altamont Alignment (which would use an existing tunnel) would have a larger surface footprint and two active railways in the area parallel to the existing tunnel rather than one, thereby increasing the potential for direct (e.g., increased potential for train strike) and indirect impacts (e.g., reduced habitat suitability) with the area of the Stone Cut Alignment Alternative parallel to the existing tunnel. Operation of the Stone Cut Alignment Alternative would increase the level of noise, lighting, human presence, and potential for wildlife strike compared to existing conditions. Thus, operation of the Stone Cut Alignment Alternative would result in a potentially significant impact. For the rest of the Altamont Alignment (including Owens-Illinois Industrial Lead Variant 1, Single Track and Owens-Illinois Industrial Lead Variant 2, Double Track), impacts in undeveloped natural land cover would have the potential to affect migratory and resident wildlife movement during the operational period. The impact would be potentially significant.

The proposed location for the Interim OMF is dominated by salt grass flats, which are surrounded, for the most part, by open natural land cover types that support wildlife movement. Common and special-status wildlife species have the potential to move through this area and be affected by operation and maintenance of the Interim OMF. This would be a potentially significant impact.

Operation of the Tracy to Lathrop Alignment Variant 1, Single Track and Tracy to Lathrop Alignment Variant 2, Double Track would result in impacts on fish and wildlife movement because of the increase in train traffic. The Tracy to Lathrop Alignment Variant 2, Double Track would affect fish and wildlife movement to a greater extent because of a larger footprint. Impacts associated with increased train traffic in less urbanized areas of the alignment have the potential to affect migratory

and resident fish and wildlife movement during the operational period. This would be a potentially significant impact.

The River Islands Station would occur east of Paradise Cut and west of the San Joaquin River, within agricultural land cover types (row crops or fallow land), which may be used as movement corridors for wildlife. Mixed riparian forest and an aquatic ditch are also present along the UPRR ROW. Operation and maintenance activities could disrupt wildlife movement in the general area and potentially pose a threat to an established wildlife migration corridor, which is associated with Paradise Cut. This would be a potentially significant impact.

The Southfront Road Station Alternative has been selected in place of the Greenville Station included in the original Proposed Project. The alternative would be constructed south of I-580, along Southfront Road, adjacent to developed, paved industrial areas. Like the other proposed stations in developed and ruderal land cover types, there is no potential for the station to affect migratory or resident fish and wildlife movement during the operational period because this station would be entirely within an urbanized area and isolated from large areas of contiguous natural land cover. In addition, the area lacks aquatic habitat features. Therefore, operation of the Southfront Road Station Alternative would have a less-than-significant impact on fish and wildlife movement.

The Mountain House Station Alternative has been selected in place of the Mountain House Station included in the original Proposed Project. Operation and maintenance of the Mountain House Station Alternative would have a less-than-significant impact on wildlife movement for resident or migratory species because it would be surrounded by development, cropland, or previously disturbed ruderal land cover. Impacts on native or migratory fish and wildlife movement would not be substantial because the Mountain House Station Alternative would be isolated from large areas of contiguous natural land cover.

The following measures and revisions mitigate this impact to a less than significant level.

- BIO-8.1: Design curbs to permit California tiger salamander and California red-legged frog movement
- BIO-8.2: Install station lighting controls and fencing limitations
- BIO-8.4: Improve existing wildlife crossings and/or implement new wildlife crossing options along the Altamont Alignment and the Stone Cut Alignment Alternative
- BIO-8.5: Improve existing wildlife crossings and/or implement new wildlife crossing options along certain portions of the Tracy to Lathrop Alignment
- Select the Southfront Road Station Alternative in place of the Greenville Station
- Select the Mountain House Station Alternative in place of the Mountain House Station

Implementation of Mitigation Measures BIO-8.1, BIO-8.2, BIO-8.4, and BIO-8.5 would avoid or minimize impacts on native and resident fish and wildlife movement. The Southfront Road Station and Mountain House Station Alternatives would avoid the substantial impediment to wildlife movement in the undeveloped foothills, which are an area of key wildlife movement, that would have resulted from the originally proposed Greenville Station and Mountain House Station.

Implementation of the mitigation measures identified above, as well as the selection of the Southfront Road Station Alternative and the Mountain House Station Alternative would ensure that this impact from the Preferred Alternative would be less than significant.

Significant Effect: Impact BIO-10. Construction of the Preferred Alternative could conflict with local biological resource policies, including tree preservation policies or ordinances.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Construction could conflict with local biological resource policies, including tree preservation policies and ordinances, by removing locally regulated trees during construction. Tree removal is expected during construction as part of ground disturbance. However, construction would avoid tree removal, unless necessary.

The following measure mitigates these impacts to a less than significant level.

- BIO-2.1: Obtain coverage from, be consistent with, and tier from existing conservation strategies as feasible.
- BIO-10.1: Compensate for tree removal during construction

Implementation of Mitigation Measures BIO-2.1 and BIO-10.1 would require compensation for removed trees, using ratios derived from applicable local ordinances. This mitigation would require replacement trees and reduce the impact of tree removal from the Preferred Alternative to a less than significant level.

Significant Effect: Impact BIO-12. Construction of the Preferred Alternative could conflict with provisions of adopted habitat conservation plans, natural community conservation plans, or approved local, regional, or state habitat conservation plans.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Portions of the Preferred Alternative traverse the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), which is an adopted HCP that covers all of San Joaquin County. Construction of the Preferred Alternative could conflict with this adopted HCP through vegetation removal and ground disturbance, which could affect biological resources (e.g., special-status species, sensitive land cover, wetlands and aquatic resources) that are covered by the plan. Coverage for the Preferred Alternative under this HCP would be sought; if it cannot be obtained, ESA and CESA coverage, consistent with this HCP, would be obtained through USFWS/NMFS and CDFW consultation and permits.

Portions of the Preferred Alternative also traverse the East Alameda County Conservation Strategy (EACCS) in Alameda County; however, the EACCS is not an adopted HCP or NCCP. The EACCS enables local projects to comply with state and federal regulatory requirements within a framework of comprehensive conservation goals and objectives. It enables local projects to be implemented using consistent and standardized mitigation requirements. Project proponents can choose not to follow the guidelines in the EACCS. As with the SJMSCP, coverage under the EACCS would be sought for the Preferred Alternative. If it cannot be obtained, ESA and CESA coverage, consistent with the EACCS, would be obtained through USFWS/NMFS and CDFW consultation and permits. Because there are no requirements to comply with the EACCS, no impacts are associated with conflicts with the EACCS. This impact is not discussed further.

The following measures mitigate these impacts to a less than significant level.

- BIO-2.1: Obtain coverage from, be consistent with, and tier from existing conservation strategies as feasible

Implementation of Mitigation Measure BIO-2.1 would avoid conflicts with the approved SJMSCP HCP and compensate for impacts, consistent with the SJMSCP HCP. Therefore, impacts from the Preferred Alternative would be less than significant with implementation of this mitigation measure.

Significant Effect: Impact C-BIO-1. Implementation of the Preferred Alternative, in combination with other foreseeable projects in the surrounding area, could result in a significant cumulative impact on biological resources.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: As described in Section 3.4, *Biological Resources*, of the Draft EIR, the Preferred Alternative could have significant construction impacts on special-status species, riparian habitats or other sensitive natural communities, protected wetlands or waters, and to trees along the Valley Link corridor during construction, without mitigation. However, implementation of the Mitigation Measures described in Section 3.4, *Biological Resources*, would reduce Preferred Alternative construction impacts to biological resources to less than significant levels. Generally, because construction of the Preferred Alternative would not occur in pristine areas, but rather in a developed rail corridors or highly urbanized areas, impacts would be to remnant biological resources within that context. This would be the case for most of the Valley Link corridor, specifically the Tri-Valley and Tracy to Lathrop segments. Thus, with mitigation, Valley Link's residual construction impacts would be limited in scale and extent. However, while individual Preferred Alternative construction impacts would be mitigated, at sites where the Preferred Alternative crosses through areas of sensitive biological habitat near any of the projects identified in Tables 4-3, 4-4, and 4-5 of the Draft EIR, a significant cumulative impact on biological resources could still occur. Projects including the Freight Rail Future Plans (reference 1), Major Highway Improvements (reference 5), and Paradise Cut Bypass Expansion Project, per the *Delta Plan* (reference 7), would be constructed in the same area as the Valley Link corridor.

The following measures mitigate these impacts to a less than significant level.

- AES-1.3: Minimize fugitive light from portable sources used for construction
- BIO-2.3: Implement noise reduction measures for pile driving as feasible
- BIO-2.4: Implement seasonal restrictions for in-water work as feasible
- BIO-2.5: Protect wetlands during construction
- BIO-2.6: Protect sensitive natural communities, including riparian habitat and salt grass flats, during construction
- BIO-3.1: Develop and implement a hydroacoustic monitoring plan to minimize noise effects on fish
- BIO-7.1: Compensate for loss of riparian habitat
- BIO-8.2: Install station lighting controls and fencing limitations

- BIO-8.4: Improve existing wildlife crossings and/or implement new wildlife crossing options along the Altamont Alignment and the Stone Cut Alignment Alternative
- BIO-8.5: Improve existing wildlife crossings and/or implement new wildlife crossing options along certain portions of the Tracy to Lathrop Alignment
- BIO-10.1: Compensate for tree removal during construction
- Select the Southfront Road Station Alternative in place of the Greenville Station
- Select the Mountain House Station Alternative in place of the Mountain House Station

Most of the Tri-Valley segment is in a highly urbanized context, and most of this segment is located within the existing I-580 right-of-way, which does not support substantial habitat resources. The Preferred Alternative would include the addition or replacement of bridge structures with abutments and piers within riparian habitat. Work for Major Highway Improvements (reference 5), specifically I-580 SR-84/Isabel Interchange Improvements Phase 2, would be in the same area as the proposed Isabel Station. However, implementation of the applicable mitigation measures would reduce construction of the Isabel Station's contribution to impacts on biological resources to less than significant levels in this area. In addition, in the event that environmental clearance is obtained for the highway bridge project and construction of both the Preferred Alternative and bridge activities were to occur concurrently, lead agencies would be required to coordinate with the California Department of Transportation (Caltrans) to minimize cumulative environmental impacts, including impacts to biological resources, in the vicinity.

At the eastern end of the Tri-Valley segment, the originally proposed Greenville Station would be located beyond the existing Alameda County's Urban Growth Boundary and City of Livermore boundaries. The proposed Greenville Station would be constructed adjacent to wetlands, suitable habitat for special-status species, and suitable wildlife movement habitat within and along Altamont Creek. While implementation of Mitigation Measure BIO-8.3 would minimize potential construction impacts to Altamont Creek, construction activities in proximity to sensitive biological resources can cause disturbance impacts associated with noise, lights, vibration, and otherwise disruptive activities that may deter wildlife from utilizing Altamont Creek as a movement corridor. Therefore, the Preferred Alternative, in combination with Greenville Plaza (reference 36) and Exeter (FedEx) Distribution Facility (reference 37), could still result in a significant cumulative impact to biological resources at this location. However, these impacts would be reduced by incorporation of Mitigation Measures AES-1.3, BIO-2.5, BIO-2.6, and BIO 8.2, which would ensure that construction lighting is not disruptive to wildlife and would require the development and incorporation of wetland and sensitive natural community protection strategies that would minimize the potential construction impacts at Greenville Station. Selection of the Southfront Road Station Alternative in place of the originally proposed Greenville Road Station would ensure that contributions to cumulative impacts on biological resources relative to Altamont Creek near Greenville Road and the wildlife undercrossing near Greenville Road would be less than considerable with mitigation.

Several track crossovers, stations, and OMFs in the Altamont segment and the Tracy to Lathrop segment would be in areas outside the existing railroad right-of-way. The areas east of the Altamont Hills and west of Tracy are areas of particularly sensitive biological habitat. In these areas, construction of the components of the Preferred Alternative that cross riparian habitat would substantially interfere with native or migratory fish and wildlife species movement and would impact special-status species known to occur in the region. The Musco Family Olive Company Expansion Project (reference 38) and Cordes Ranch Specific Plan (reference 39) are also located in

this vicinity, and propose, respectively, wastewater evaporation ponds and over 1,800 acres of commercial, office, business-park industrial development with park and recreation facilities. Additionally, the Paradise Cut Bypass Expansion Project, per the *Delta Plan* (reference 7), would overlap with the new bridge proposed over Paradise Cut for the Tracy to Lathrop Alignment Variant 2, Double Track. Because the Paradise Cut Bypass Expansion Project (reference 7) would also likely have to employ seasonal construction restrictions, it is feasible that construction activities associated with both bridges could occur concurrently, resulting in the potential for a significant cumulative impact to biological resources. However, because agency coordination and National Pollutant Discharge Elimination System (NPDES) compliance would be required to secure construction permits at this location for both the Preferred Alternative and identified projects, it is expected that environmental impacts to riparian habitat, aquatic resources, and special-status fish and wildlife species in the vicinity, including potential erosion impacts, would be minimized to the extent practicable. Furthermore, adherence to Mitigation Measures BIO-2.3, BIO-2.4, BIO-2.5, BIO-2.6, and BIO-3.1 would render the Preferred Alternative's contribution to aquatic resource construction impacts less than considerable.

As described in Section 3.4, *Biological Resources*, operation of the Preferred Alternative could have significant impacts on special-status species, riparian habitats or other sensitive natural communities, protected wetlands or waters, and to trees along the Valley Link corridor. Even with implementation of the Mitigation Measures described in Section 3.4, *Biological Resources*, some operational impacts would not be reduced to less than significant levels. Selection of the Southfront Road Station Alternative and Mountain House Station Alternative in place of the originally proposed Greenville Station and the Mountain House Station avoids the potential for Valley Link train operation to interfere with wildlife movement.

Operation of the Preferred Alternative would introduce new rail traffic into the eastern foothills west of I-580 where the Altamont County Transportation Corridor diverges from the UPRR Oakland subdivision. The Preferred Alternative would also increase rail traffic across the Altamont segment between Tracy and North Lathrop, subsequently increasing noise effects and the potential for train strikes. Increased train operation could act as a barrier to wildlife movement across all three Valley Link segments. Additionally, operation of rail stations and OMFs would increase exposure of special-status wildlife species to human presence, thereby increasing potential for vehicle strike along the access roads to rail stations. Implementation of Mitigation Measures BIO-8.2, BIO-8.4, and BIO-8.5, impacts relative to wildlife movement for special-status wildlife species would reduce these effects and these impacts would be reduced below the level of significance by selection of the Southfront Road Station Alternative and Mountain House Station Alternative.

Identified projects of concern for operations include Freight Rail Future Plans (reference 1), ACE Extension Lathrop to Ceres/Merced (reference 2), Valley Rail Sacramento Extension Project (reference 3), and Major Highway Improvements (reference 5), which would similarly affect biological resources through increased train traffic and/or noise emissions in the northern San Joaquin Valley. However, only potential future freight rail expansion along the Tracy Subdivision and the Owens-Illinois Industrial Lead, and potential improvements to I-580 in the Tri-Valley and Altamont segments would occur in the same area affected by the Preferred Alternative. Even with mitigation, operation of the projects that would affect the same areas affected by the Preferred Alternative, would represent a significant cumulative impact to biological resources along the Valley Link corridor. These impacts would generally be restricted to biologically sensitive areas along the Valley Link corridor. Cumulative operational railway impacts associated with increased railway noise and train-wildlife collisions are generally not expected within highly developed portions of the

Tri-Valley segment (Dublin, Pleasanton, and portions of Livermore) or within highly developed portions of the Tracy to Lathrop segment within the Cities of Tracy and Lathrop.

As described in Section 3.4, *Biological Resources*, mitigation measures would ensure that potential impacts associated with the vegetation removal required as part of track maintenance activities, as well as potential impacts associated with the new and replacement bridge operations (changes in channel morphology, hydraulics, and shading), would be reduced to less than significant levels.

However, where the Preferred Alternative and other projects would be constructed in the same vicinity, there would be a substantial increase in stormwater runoff that could degrade water quality in surface waters downstream of the Preferred Alternative and identified projects, thereby affecting aquatic species. Both the Preferred Alternative and all identified projects would be required to comply with current water quality regulations implemented through the NPDES, which requires treatment of stormwater runoff to manage impacts on water quality resulting from new development. Additionally, the Preferred Alternative would be required to comply with Mitigation Measure BIO-7.1, which requires compensation for loss of riparian habitat. Because of these regulations, there would be no significant cumulative impact related to water quality.

Valley Link train operation relative to the Greenville Station and Mountain House Station in combination with the operation of the other rail and highway projects identified in Tables 4-3 and 4-4, would represent a significant cumulative operational impact to biological resources relative to wildlife movement. Selection of the Southfront Road Station Alternative and the Mountain House Station Alternative would avoid a cumulatively considerable contribution relative to wildlife movement due to Valley Link train operations, relative to the originally proposed Greenville Station and Mountain House Station.

3.3.2.5 Cultural Resources

Significant Effect: Impact CUL-1. Construction and operation of the Preferred Alternative would directly or indirectly cause a substantial adverse change in the significance of a built environmental historical resource.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Table 3.5-1 identifies the built environment historical resources located within and outside of the existing railroad ROW. Because railroad features located within the existing ROW are considered historical resources, improvements within the ROW such as new track and track upgrades, could result in the physical alteration of the resource or its surroundings. For improvements outside of the existing railroad ROW (such as station improvements, parking lot improvements, and pedestrian overcrossings) nearby historical resources could be similarly affected. The Preferred Alternative could result in changes in the significance of a historical resource to the point where the resource would no longer be considered historic; these impacts would be potentially significant.

The potential impacts on built environment historical resources are limited to permanent impacts from the construction of Preferred Alternative, as opposed to its operation, including proposed train technology, service frequency, or service hours. Operation and maintenance would have no impact on built environment historical resources.

The following measures mitigate these impacts to a less than significant level.

- CUL-1.1: Prepare and submit Historic American Engineering Record documentation
- CUL-1.2: Prepare interpretive exhibits

Implementation of Mitigation Measures CUL-1.1 (Prepare and submit Historic American Engineering Record documentation) and CUL-1.2 (Prepare interpretive exhibits) would reduce potential impacts on historical resources to a less-than-significant level for the Preferred Alternative by preserving a record of these resources.

Significant Effect: Impact CUL-2. Construction of the Preferred Alternative could cause a substantial adverse change in the significance of an archeological resource or tribal cultural resource.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: The potential for impacts on archaeological resources occurs when a project disturbs or destroys portions of an archaeological resource during ground disturbance. This includes both known resources and previously unknown resources. Impacts from the Preferred Alternative vary because some of the facilities occur within the boundaries of known sites and some are located within areas determined to have increased sensitivity for as-yet-undocumented resources.

Potential impacts on archaeological resources would be limited to construction because operation and maintenance of the Preferred Alternative would not involve ground disturbance. As such, operation and maintenance of the Preferred Alternative would result in no impact on archaeological resources.

The following measure mitigates these impacts to a less than significant level.

- CUL-2.1: Develop and implement an archaeological testing plan
- CUL-2.2: Conduct cultural resources awareness training
- CUL-2.3: Develop an archaeological monitoring plan
- CUL-2.4: Implement avoidance and protection measures
- CUL-2.5: Conduct archaeological monitoring
- CUL-2.6: Implement procedures in case of inadvertent discoveries.

Because of the presence of the rail line, pavement, urban overlay, and property acquisition issues, in the majority of the CEQA study area, evaluation through archaeological testing is not feasible. Mitigation Measures CUL-2.1 through CUL-2.5 would be implemented where previously unevaluated resources are located to determine their eligibility as a CEQA resource (Tracy to Lathrop Alignment Variant 1, Single Track and Tracy to Lathrop Alignment Variant 2, Double Track). Mitigation Measures CUL-2.2 and CUL-2.6 are applicable to all areas where ground disturbance would occur, which includes all alignments, stations, and OMFs. The mitigation measures described above would allow for adequate evaluation and identification of both known and as-yet undocumented archaeological resources. Conformance with these mitigation measures would reduce potential impacts on unique archaeological resources from the Preferred Alternative to a less-than-significant level.

Significant Effect: Impact CUL-3. Construction of the Preferred Alternative could disturb human remains, including those interred outside of formal cemeteries.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: The potential for impacts associated with disturbance of human remains occurs when a project encounters or disturbs such remains, including in areas outside of formal cemeteries and known burial sites. The potential for such impacts to occur varies, depending on anticipated excavation activities. Ground disturbance would be limited during the construction phase, as such this analysis focus on the construction impacts.

Operation and maintenance of the Preferred Alternative does not include ground disturbance. Maintenance activities include annual vegetation trimming and herbicide application and are not anticipated to affect any known or as-yet-undocumented archaeological resources. Thus, operation and maintenance of the Preferred Alternative would result in a less-than-significant impact related to disturbing Native American human remains.

The following measure mitigates these construction impacts to a less than significant level.

- CUL-3.1: Comply with state laws relating to Native American remains

Implementation of Mitigation Measure CUL-3.1, as well as mitigation measures included in Impact CUL-2 would allow for evaluation, identification, and respectful treatment of archaeological resources, including human resources, and would therefore reduce potential impacts on human remains associated with construction of the Preferred Alternative to a less-than-significant level.

Significant Effect: Impact C-CUL-1. Implementation of the Preferred Alternative, in combination with other foreseeable projects in the surrounding area, could result in a significant cumulative impact on cultural resources.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Construction of the Preferred Alternative would affect historical resources at several locations in Alameda and San Joaquin counties. However, implementation of mitigation measures to reduce impacts to such resources would ensure that the Preferred Alternative would not result in changes to the significance of a historical resource to the point at which the resource would no longer be considered historically significant; therefore, the Preferred Alternative's impacts on such resources would be less than significant after mitigation. The construction of identified rail, road, and other transportation projects and land use development projects that overlap with the Valley Link footprint or that would occur adjacent to or in the immediate vicinity of the Preferred Alternative could result in an adverse change to a listed or list-eligible property in the national, California, or local registers. Adverse changes to such resources would result in a significant cumulative impact on built environment historical resources. Reasonably foreseeable future projects would be subject to federal and state cultural resource regulations, which require identification, evaluation, and assessment of direct and indirect affects to historical resources. Additionally, future projects with the potential to affect historical resources

would be required to include appropriate/feasible mitigation to address adverse impacts to built environment historical resources.

Construction of the Preferred Alternative would affect built environment historical resources at several locations in Alameda and San Joaquin counties, but because mitigation measures would reduce potential impacts to less than significant levels, the Preferred Alternative would not result in changes to the significance of a historical resource to the point where the resource would no longer be considered historically significant. Therefore, the Preferred Alternative would not contribute to the significant cumulative impact created by other projects in the study area.

The projects and plans listed in Tables 4-3, 4-4, and 4-5 of the Draft EIR were reviewed to determine whether they, in combination with the Preferred Alternative, would result in cumulative impacts to archaeological resources and human remains. None of the projects or plans would intersect with known archaeological resources or human remains within the Preferred Alternative footprint. Therefore, there would not be a significant cumulative impact to known archaeological resources or human remains.

The following measures mitigate these impacts to a less than significant level.

- CUL-1.1: Prepare and submit Historic American Engineering Record documentation
- CUL-1.2: Prepare interpretive exhibits
- CUL-2.1: Develop and implement an Archaeological Testing Plan
- CUL-2.2: Conduct cultural resources awareness training
- CUL-2.3: Implement cultural resources monitoring plan
- CUL-2.4: Implement avoidance and protection measures
- CUL-2.5: Conduct archaeological monitoring
- CUL-2.6: Implement procedures in case of inadvertent discoveries

Construction of the Preferred Alternative would affect built environment historical resources at several locations in Alameda and San Joaquin counties, but because mitigation measures would reduce potential impacts to less than significant levels, the Preferred Alternative would not result in changes to the significance of a historical resource to the point where the resource would no longer be considered historically significant. Feasible mitigation to reduce the potential for significant cumulative impacts includes implementation of Mitigation Measures CUL-1.1 and CUL-1.2 as discussed in Section 3.5, *Cultural Resources*, of the Draft EIR. These measures would reduce potential impacts to historical resources to a less than significant level and the River Islands at Lathrop would have a less than considerable contribution to cumulative impacts with mitigation

Ground disturbing construction activities such as excavation always present the potential for the discovery of currently unknown resources, including human remains. This potential remains true for the Preferred Alternative and all projects listed in Tables 4-3, 4-4, and 4-5 of the Draft EIR. Implementation of Mitigation Measures CUL-2.2 through CUL-2.6 would ensure that such resources would be appropriately treated in the event of inadvertent discoveries during construction of the Preferred Alternative. Therefore, the Preferred Alternative's contribution to such impacts would not be considerable.

Implementation of Mitigation Measures CUL-2.1 through CUL-2.6 and CUL-3.1 would reduce cultural resources impacts from the Preferred Alternative to less than significant levels. Therefore, the Preferred Alternative's contribution to cumulative impacts on archaeological resources and human remains because of construction would be less than considerable.

3.3.2.6 Geology and Soils

Significant Effect: Impact GEO-4. Construction of the Preferred Alternative could directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: The potential for impacts on paleontological resources depends on whether the Preferred Alternative would disturb geologic units with undetermined or high paleontological sensitivity. Many alignments, stations, and OMFs would occur on geologic units with undetermined or high paleontological sensitivity. Construction would require ground disturbance, which could affect significant paleontological resources. Likewise, construction of the Southfront Road Station Alternative, Stone Cut Alignment Alternative, and Mountain House Station Alternative would require ground disturbance that could affect significant paleontological resources.

Operational activities for the Preferred Alternative are not anticipated to be ground-disturbing and thus are not expected to have any significant impact on paleontological resources.

The following measure mitigates these impacts to a less than significant level.

- GEO-4.1: Monitor for discovery of paleontological resources, evaluate found resources, and prepare and follow a recovery plan for found resources

Mitigation Measure GEO-4.1 requires training by a qualified paleontologist for construction crews to recognize paleontological resources, stopping work in case of discovering such resources, evaluating those resources by a qualified paleontologist and, as appropriate, preparing and implementing a recovery plan. This measure would ensure that excavation would not result in destruction of significant paleontological resources and potential construction impacts would be less than significant for the Preferred Alternative.

Significant Effect: Impact C-GEO-1. Implementation of the Preferred Alternative, in combination with other foreseeable projects in the surrounding area, could result in a significant cumulative impact on geology, soils, and unique paleontological/geologic resources.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Paleontological resources are nonrenewable and are subject to impacts from ground-disturbing activities such as grading, excavation, and vegetation clearing (Society for Vertebrate Paleontology 2010). As a nonrenewable resource, rail, road, and land development activities on geologic units that may contain paleontological resources have the potential to remove such resources irretrievably from the scientific record. Accordingly, in areas of rapid growth where paleontological resource-rich geologic units lie close to the ground surface, such as in the

paleontological resources study area described in Section 3.7, *Geology and Soils*, of the Draft EIR, a cumulative impact on paleontological resources has potential to exist.

The following measure mitigates these impacts to a less than significant level.

- GEO-4.1: Monitor for discovery of paleontological resources, evaluate found resources, and prepare and follow a recovery plan for found resources

The Preferred Alternative would be in areas that are underlain by geologic units that have yielded abundant, diverse, and scientifically important fossil finds, including remains of numerous vertebrates. Where geologic units with high paleontological sensitivity are present, construction-related ground disturbance, particularly excavation and grading, could result in disturbance, damage, or loss affecting significant (scientifically important but non-unique) paleontological resources. Ground disturbance by projects located within these sensitive geologic units presents a similar potential to disturb, damage, or lose such resources. Implementation of Mitigation Measure GEO-4.1 during construction of the Preferred Alternative would require paleontological monitoring, resource evaluation, and the preparation of recovery plans for found resources. Incorporation of this measure would provide ample protection for paleontological resources during construction of the Preferred Alternative. Thus, by recovering any paleontological resources found during ground-disturbing activities and conserving information about the context in which they were found, the Preferred Alternative's contribution to cumulative impacts on paleontological resources or unique geologic features because of construction would be less than considerable.

3.3.2.7 Hazards and Hazardous Materials

Significant Effect: Impact HAZ-2. Construction, operation, and maintenance of the Preferred Alternative could create a significant hazard to the public or the environment involving reasonably foreseeable upset conditions or the disturbance of existing hazardous materials.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Buildings, bridges, roadways with yellow pavement stripes, and railroad facilities located within the Preferred Alternative footprint for all three segments could potentially contain hazardous building materials, such as ACM, lead-based paint, universal wastes (e.g., PCBs, diethylhexyl phthalate, mercury, and other metals), wood preservatives (e.g., arsenic, chromium, copper, pentachlorophenol, or creosote), lead, and petroleum products. The disturbance of hazardous building materials could pose a health risk to construction workers, maintenance workers, the public, and/or the environment if not handled and disposed of properly. The removal of hazardous building materials prior to demolition is governed by federal and state laws and regulations. Workers who conduct hazardous materials abatement and demolition activities must be trained in accordance with OSHA and Cal/OSHA requirements. Hazardous building materials removed during construction must be transported in accordance with USDOT regulations and disposed of in accordance with RCRA, Cal. Code Regs., and/or the California Universal Waste Rule at a facility permitted to accept the wastes. Treated-wood waste, such as railroad ties, may also be disposed of in accordance with the Alternative Management Standards adopted by DTSC under Cal. Code Regs. Title 22, Chapter 34.

The following measures mitigate this impact to a less than significant level.

- HAZ-2.1: Conduct site investigations Implement voluntary oversight agreement
- HAZ-2.2: Implement construction risk management plan
- AQ-2.5: Implement fugitive dust controls during construction

Implementation of Mitigation Measures HAZ-2.1, HAZ-2.2, and AQ-2.5, would be applied to all Preferred Alternative facilities. These mitigation measures would require a voluntary oversight agreement, site-specific investigations, a CRMP, and fugitive dust controls, which would reduce impacts from the disturbance of potentially contaminated soil, ballast, and/or groundwater during construction and maintenance of the Preferred Alternative to a less-than-significant level.

Significant Effect: Impact HAZ-3. Construction, operation, and maintenance of the Preferred Alternative would create a potentially significant hazard for children at nearby schools from emissions or handling of hazardous or acutely hazardous materials.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: The handling or emission of hazardous or acutely hazardous materials near schools must consider potential health effects on children, who are considered sensitive receptors. There are existing K-12 schools within 0.25 mile of the footprint for the Tri-Valley Alignment; Tracy to Lathrop Alignment Variant 1, Single Track; and Tracy to Lathrop Alignment Variant 2, Double Track. The primary exposure pathway of concern for children at nearby schools is through the inhalation of air contaminants, such as particulate matter.

As discussed under Impact HAZ-1a and HAZ-1b, hazardous materials used during construction and operation of Preferred Alternative would be managed in accordance with applicable laws and regulations and would not be expected to create a hazard to human health. Nonetheless, as discussed under Impact HAZ-2, construction and maintenance of Preferred Alternative improvements that disturb existing soil and/or ballast contamination could generate dust and pose a health risk to the public, which includes nearby schools.

As discussed in Section 3.3, *Air Quality* of the Draft EIR, sources of hazardous emissions during construction and operation of the Preferred Alternative would include diesel particulate matter from the exhaust of construction equipment and increased passenger rail service. Based on conservative air dispersion modeling and health risk analyses, it was determined that emissions of diesel particulate matter from construction equipment could pose health risks to nearby sensitive receptors. However, nearby sensitive receptors potentially impacted would not include schools. In addition, as described in Section 3.3, *Air Quality*, it was determined that emissions of diesel particulate matter from increased operation of the proposed rail service would not pose health risks to nearby sensitive receptors, such as schools.

The following measures mitigate this impact to a less than significant level.

- HAZ-2.2: Implement construction risk management plan
- AQ-2.5: Implement fugitive dust controls during construction

Implementation of Mitigation Measures HAZ-2.2 and AQ-2.5, which would require air quality monitoring and dust control measures during excavation in areas with elevated contaminants of concern, would reduce the impact on K-12 school children from contaminated dust generated

during construction and maintenance activities to a less-than-significant level for the Preferred Alternative (due to the Tri-Valley Alignment; Tracy to Lathrop Alignment Variant 1, Single Track; and Tracy to Lathrop Alignment Variant 2, Double Track and Tracy to Lathrop Alignment, Variants 1 and 2).

Significant Effect: Impact C-HAZ-1. Implementation of the Preferred Alternative, in combination with other foreseeable projects in the surrounding area, would not result in a significant cumulative impact from hazardous materials.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Hazardous materials impacts are typically site specific and depend on the soil and groundwater conditions underlying project sites. The geographic context for potential cumulative impacts related to hazardous materials includes areas within 0.25 miles of the Preferred Alternative for transportation projects and 0.15 miles for development projects, respectively. Projects within this geographic context include the projects listed in Tables 4-3, 4-4, and 4-5 of the Draft EIR.

The following measures mitigate this impact to a less than significant level.

- HAZ-2.1: Conduct site investigations Implement voluntary oversight agreement
- HAZ-2.2: Implement construction risk management plan
- AQ-2.5: Implement fugitive dust controls during construction

Compliance with local, state, and federal regulations for handling hazardous materials and adherence to the mandatory SWPPP would avoid impacts associated with construction-related handling of hazardous materials. For encountered contamination, implementation of Mitigation Measures HAZ-2.1, HAZ-2.2, and AQ-2.5 would require that the Authority conduct pre-construction investigations of potentially contaminated areas; prepare a risk management plan (RMP) outlining appropriate containment procedures for handling and disposal of any encountered contaminated soil, ballast, or groundwater; and implement fugitive dust controls to manage potentially hazardous airborne dust emissions from construction activities. Where the Preferred Alternative would be constructed within 0.25 mile of existing schools, the RMP and fugitive dust controls required under Mitigation Measures HAZ-2.2 and AQ-2.5 would reduce potential construction-related hazards to sensitive receptors. Identified projects that would be constructed within the vicinity of the Preferred Alternative, including within 0.25 mile of schools, would be required to comply with local, state, and federal regulations pertaining to hazardous materials. Because hazardous materials impacts are site-specific, potential hazardous materials construction impacts to the projects identified in Tables 4-3, 4-4, and 4-5 of the Draft EIR may not be identical to those anticipated with the Preferred Alternative. However, because both the Preferred Alternative and identified projects would be required to comply with all applicable regulations to reduce hazardous materials impacts, potential impacts would collectively be significantly reduced. Thus, with adherence to these regulations and incorporation of mitigation measures, the Preferred Alternative's contribution to cumulative impacts related to hazardous materials because of construction would be less than considerable with mitigation.

Operation and maintenance activities associated with the Preferred Alternative would involve the routine use of diesel fuel to power locomotives and pesticides to clear vegetation from track areas to

reduce fire risk. Common activities such as fueling and pesticide applications could result in the exposure of workers, the public, and/or the environment to hazardous materials if the materials are not properly managed or are accidentally released. Because the Preferred Alternative and all identified projects would be required to adhere to federal and state regulations, including the California Environmental Protection Agency Unified Program, the operational risk of exposure to hazardous materials, as well as the risk of accidental release of hazardous materials, including risks to K-12 school children, would be minimized. However, Preferred Alternative maintenance, as well as maintenance activities associated with similar projects such as the rail projects identified in Table 4-3 of the Draft EIR and the rail/road projects identified in Table 4-4 of the Draft EIR, could result in the disturbance of contaminated soil, ballast, or groundwater. If contaminated materials are encountered, implementation of Mitigation Measures HAZ-2.1, HAZ-2.2, and AQ-2.5 would require pre-construction investigations of potentially contaminated areas; preparation of an RMP outlining appropriate containment procedures for handling and disposal of any encountered contaminated soil, ballast, or groundwater; and the implementation of fugitive dust controls. Thus, the Preferred Alternative's contribution to cumulative impacts related to hazardous materials because of operations would be less than considerable, assuming mitigation and adherence to all applicable regulatory requirements.

3.3.2.8 Hydrology and Water Quality

Significant Effect: Impact HYD-1a. Construction of the Preferred Alternative could violate water quality standards or waste discharge requirements, provide substantial additional sources of polluted runoff, or otherwise substantially degrade surface or ground water quality.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: For the Preferred Alternative, construction would require earthwork. If contaminants are present in reused existing soil or imported fill materials that are exposed to stormwater, contaminants could leach into stormwater runoff from the reused existing soil or imported fill and result in pollution of stormwater runoff and surface water, potentially reducing the quality of the receiving water.

Construction of the Preferred Alternative would involve grading and reuse of existing soil and use of imported fill materials. If contaminants are present in reused existing soil or in fill materials that are placed in a location exposed to stormwater, contaminants could leach into stormwater runoff from the reused existing soil or imported fill and result in pollution of stormwater runoff and surface water, potentially reducing the quality of the receiving water.

Pesticides would be used (like current operation) to maintain and clear vegetation from track areas. The future use of pesticides for vegetation removal near the tracks would be required to comply with DPR regulations that are intended to protect human health and the environment (see discussion under *California Department of Pesticide Regulation* in Section 3.10.2.2). DPR puts special controls on pesticides that can be especially dangerous to human health or the environment if not used correctly, limiting their use to trained individuals and only at times and places approved by a permit from the County Agricultural Commissioners (California Department of Pesticide Regulation 2008). Use of pesticides for vegetation removal near the tracks in compliance with DPR regulations would therefore result in a less-than-significant impact on water quality.

Trains can be sources of pollutants such as petroleum products (i.e., oil, grease, and diesel) and metals. Under normal operating conditions, the amount of these pollutants released by modern trains is minimal (i.e., only minor drips) because trains undergo regular inspections and maintenance to prevent and fix leaks. Impacts from minor drips would be limited to the area immediately below the railroad tracks, and the track ballast material would minimize stormwater runoff from the area of localized impacts and prevent significant impacts on water quality. Therefore, operation of the Preferred Alternative within track areas would not contribute new significant sources of pollutants to stormwater runoff unless an accidental release of hazardous materials occurs along the tracks. Operation of the Preferred Alternative would comply with stringent federal and state protocols and regulations intended to reduce the likelihood of accident conditions. Accident conditions, including the accidental release of hazardous materials and the potential effects on water quality, are not expected to increase with operation of the Preferred Alternative.

The Preferred Alternative improvements within track areas would include altering drainage patterns (e.g., altering or creating drainage systems) along tracks. If appropriate stormwater control and treatment systems are not designed and constructed as part of these improvements, pollutants that may be entrained in sediments could be transported from track areas to surface waters in stormwater runoff. The Construction General Permit includes post-construction stormwater performance standards that address water quality and channel protection for construction projects that are not in an area subject to post-construction standards of an active Phase I or Phase II MS4 permit with an approved Storm Water Management Plan. The Construction General Permit requires post-construction runoff to match preconstruction runoff in quality, which would not only reduce the risk of impact on the receiving water's channel morphology but would also provide some protection of water quality. The Construction General Permit also requires implementation of post-construction BMPs to reduce pollutants in stormwater discharges that are reasonably foreseeable after all construction phases have been completed. Compliance with the post-construction requirements of the Construction General Permit must be demonstrated by submitting a map and post-construction runoff calculation worksheets with the Notice of Intent.

The following measures mitigate this impact to a less than significant level.

- HAZ-2.2: Implement construction risk management plan

Implementation of Mitigation Measure HAZ-2.2, as described in Section 3.9, *Hazardous Materials*, requires preparation of an RMP. The RMP will include guidelines for testing and reuse of existing soil to ensure that potentially contaminated existing soil would not be reused in a manner that could pollute stormwater runoff, surface waters, or groundwater. The RMP will include guidelines for testing and use of imported fill material to ensure that contaminated fill materials are not used in a manner that could pollute stormwater runoff, surface waters, or groundwater. Implementation of Mitigation Measure HAZ-2.2 will ensure that operation of the Preferred Alternative would have a less-than-significant impact on water quality.

Significant Effect: Impact HYD-1b. Operation and maintenance of the Preferred Alternative could violate water quality standards or waste discharge requirements, provide substantial additional sources of polluted runoff, or otherwise substantially degrade surface or ground water quality.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: For the Preferred Alternative, construction would require earthwork. If contaminants are present in reused existing soil or imported fill materials that are exposed to stormwater, contaminants could leach into stormwater runoff from the reused existing soil or imported fill and result in pollution of stormwater runoff and surface water, potentially reducing the quality of the receiving water.

The following measure mitigates this impact to a less than significant level.

- HAZ-2.2: Implement construction risk management plan

Implementation of Mitigation Measure HAZ-2.2, as described in Section 3.9, *Hazardous Materials* of the Draft EIR, requires preparation of an RMP. The RMP will include guidelines for testing and reuse of existing soil to ensure that potentially contaminated existing soil would not be reused in a manner that could pollute stormwater runoff, surface waters, or groundwater. The RMP will include guidelines for testing and use of imported fill material to ensure that contaminated fill materials are not used in a manner that could pollute stormwater runoff, surface waters, or groundwater. Implementation of Mitigation Measure HAZ-2.2 will ensure that operation of the Preferred Alternative would have a less-than-significant impact on water quality.

Significant Effect: Impact HYD-3a. Construction of the Preferred Alternative would substantially alter the existing drainage patterns, in a manner that would result in substantial erosion or siltation on- or off-site; or provide substantial additional sources of polluted runoff; or risk release of pollutants due to Preferred Alternative inundation.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: The Preferred Alternative would require construction activities within drainage courses during construction of bridges and culverts within 100-year and 200-year floodplains (see Figures P-4A, P-4B, and P-4C of the Draft EIR). In addition, Preferred Alternative-related construction activities would be required within or across small urban or rural streams that could flood during winter storm events, even if those small streams are not designated as 100- or 200-year floodplains. If flooding of construction areas occurs, stockpiles of construction materials could be inundated and result in pollution of onsite or offsite downstream surface waters.

The following measure mitigates this impact to a less than significant level.

- HYD-3a.1: Prevent construction materials from being exposed to storm flooding hazards

Mitigation Measure HYD-3a.1 contains specific measures to prevent construction materials from being exposed to storm flooding hazards. This measure would mitigate potential construction impacts related to flooding hazards to a less-than-significant level by eliminating the potential for construction materials to be carried offsite by floodwaters.

Significant Effect: Impact HYD-3b: Operation of the Preferred Alternative would substantially alter the existing drainage patterns, including through the addition of impervious surfaces, in a manner that would result in substantial erosion or siltation on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems; or provide substantial additional sources of polluted runoff.

Finding: The Authority hereby makes finding (a)(1) (described in Section 3.1 above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Operation of the Preferred Alternative would increase runoff from new impervious surfaces, which has the potential to exceed stormwater drainage capacity and/or result in increased potential for transport of onsite and offsite downstream pollutants.

Compliance with the applicable MS4/NPDES Permit requirements, including post-construction requirements of the Construction General Permit, would ensure that operation of all Preferred Alternative improvements would minimize increases in stormwater runoff compared to the existing conditions. However, increases in stormwater runoff could still result from improvements such as creation of new pavement surfaces and connection of trackside drainage ditches to existing storm drainage systems where previously no such connections existed. The new surfaces and connection to existing storm drainage systems could contribute toward exceeding the capacity of existing storm drainage systems and/or result in increased pollutant transport. This is a potentially significant impact.

The following measure mitigates this impact to a less than significant level.

- HYD-3b.1: Perform detailed hydraulic evaluations and implement new or modify existing stormwater controls as required to prevent storm drainage system capacity exceedance and reduce pollutant transport

Implementation of Mitigation Measure HYD-3b.1 would require detailed hydraulic evaluations, and modification of stormwater controls as required and would reduce potential impacts related to creation of new impervious surfaces that would in turn increase the rate or volume of stormwater runoff, which could result in exceeding storm drainage system capacity and/or downstream pollutant transport, to a less-than-significant level due to the Preferred Alternative.

Significant Effect: Impact HYD-4. Construction and operation of the Preferred Alternative would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that could result in onsite or offsite flooding, and could impede flood flows.

Finding: The Authority hereby makes finding (a)(1) (described in Section 3.1 above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: The Preferred Alternative would include construction and operation of new facilities across small drainages and watercourses as shown in Figures P-4A, P-4B, and P-4C; and in FEMA 100-year flood zones as shown on Figures P-4A and P-4B of the Draft EIR. In addition, Preferred Alternative facilities would also be constructed and operated in CVFPP 200-year flood zones in the Tracy to Lathrop segment, as shown in Figure P-4B.

The Preferred Alternative would include construction of new bridges and culverts across drainage courses, and improvements within flood zones. If these improvements are not appropriately designed, their operation could potentially impede or redirect flood flows during operation resulting in downstream offsite flooding, as well as onsite inundation.

Operation of the Preferred Alternative would create new impervious surfaces, which could also result in an increased rate and/or volume of stormwater runoff that could result in onsite or offsite downstream flooding.

The Central Valley Flood Protection Project (CVFPP) is intended to guide 200-year flood reduction efforts in the Central Valley. Portions of the Preferred Alternative in the Tracy to Lathrop segment would be located in an area covered by the *Basin-Wide Feasibility Study, San Joaquin Basin* (California Department of Water Resources 2017b) and would encroach on levees and floodways under CVFPB's jurisdiction; therefore, compliance with the CVFPP would be required. From the Stanislaus River to near Bear Creek and Disappointment Slough in the Delta, existing flood management facilities include a leveed conveyance system on the main stem of the San Joaquin River.

Paradise Cut diverts flows out of the San Joaquin River to channels in the South Delta. The feasibility study for the lower San Joaquin River (California Department of Water Resources 2017b) identifies several potential flood improvements for this area, including an expansion of the Paradise Cut Bypass, which is located on the southwestern side of Stewart Tract in Lathrop. Paradise Cut is a federal flood control bypass that diverts flows from the San Joaquin River during high flows. Due to sedimentation and other factors, the current capacities of Paradise Cut and the lower San Joaquin River just downstream of Paradise Cut weir do not meet their original design capacities. The purpose of the Paradise Cut Bypass Expansion is to increase the flow in the Paradise Cut Bypass to reduce peak flood stages along the San Joaquin River downstream and help maintain a potential 200-year level of protection with respect to climate change for Lathrop and Manteca. As shown on Figure P-4C of the Draft EIR, portions of the Preferred Alternative (Tracy to Lathrop Alignment Variant 1, Single Track; Tracy to Lathrop Alignment Variant 2, Double Track; and the River Islands Station) would be constructed in and would require construction and operation of culverts and bridges in the Paradise Cut area and would also require a bridge crossing over the San Joaquin River. If these improvements are not appropriately designed, their operation could potentially impede or redirect flood flows during Preferred Alternative operation and could potentially interfere with flood reduction efforts that are planned by DWR and CVFPB San Joaquin Basin-Wide Feasibility Study.

The following measure mitigates this impact to a less than significant level.

- HYD-3b.1: Perform detailed hydraulic evaluations and implement new or modify existing stormwater controls as required to prevent storm drainage system capacity exceedance and reduce pollutant transport
- HYD-4.1: Perform hydrologic and hydraulic studies for project improvements to be located in floodplains, coordinate with regulatory agencies, and obtain required permits.

Implementation of Mitigation Measure HYD-3b.1 would require detailed hydraulic evaluations and design of new, or modification of existing, stormwater controls for new impervious surfaces to minimize the rate and volume of stormwater runoff. Implementation of Mitigation Measure HYD-4.1 requires that detailed, site-specific hydrologic and hydraulic studies be conducted and used to design Preferred Alternative facilities such that flood flows would not be impeded or redirected; requires that the Authority consult with DWR and CVFPB to ensure that Preferred Alternative facilities are designed so they will not interfere with flood protection efforts under the San Joaquin Basin-Wide Feasibility Study; and requires the Authority to consult with, design, and obtain all necessary permits from agencies with regulatory authority over construction through levees.

Implementation of these mitigation measures would reduce potential impacts related to flooding from creation of new impervious surfaces and alteration of drainages and the potential impacts related to structures that would impede flood flows to a less than significant level.

Significant Effect: Impact C-HYD-1. Implementation of the Preferred Alternative, in combination with other foreseeable projects in the surrounding area, could result in a significant cumulative impact on hydrology and water quality.

Finding: The Authority hereby makes finding (a)(1) (described in Section 3.1 above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: As described in Section 3.10, *Hydrology and Water Quality*, the Preferred Alternative has the potential to degrade water quality from the transport of disturbed soils and materials such as fuels, lubricants, and paints into downstream waterbodies. Furthermore, the Preferred Alternative would involve direct, in-water work for bridges and culverts in a variety of locations. However, projects that disturb 1 acre or more of soil, which includes the Preferred Alternative as well as all projects listed in Tables 4-3, 4-4, and 4-5 of the Draft EIR, are required to comply with the requirements of the SWRCB's NPDES Construction General Permit, which requires preparation of a SWPPP and implementation of best management practices that are specifically designed to protect water quality from sediment carried by erosion.

As described in Section 3.10, *Hydrology and Water Quality* of the Draft EIR, the Preferred Alternative would include construction activities within 100- and 200-year floodplains, and construction would be undertaken within and across other small urban or rural streams that could flood during winter storm events. This could lead to an increased risk of off-site flooding.

As described in Section 3.10, *Hydrology and Water Quality*, operation of the Preferred Alternative would result in increased use of petroleum products (e.g., oil, grease, and diesel), metal, and herbicide pollutants. Under typical operating conditions, the amount of these pollutants released by modern trains is minimal (i.e., only minor drips) because trains undergo regular inspections and maintenance to prevent and fix leaks. The storage, use, and disposal of herbicides is heavily regulated at the federal, state, and local level; these regulations are specifically designed to reduce the potential for adverse human health or environmental effects. The Preferred Alternative would also increase the amount of impervious surface areas to accommodate vehicle parking, stations and platforms, train maintenance, and fueling activities. Pollutants that accumulate on impervious surfaces would enter stormwater during rain events; however, design of stormwater control systems in compliance with existing regulations (e.g., the SWRCB's NPDES Construction General Permit; Caltrans' NPDES permit; requirements for Small Municipal Separate Storm Sewer System [MS4] Permits; and Industrial General Permits) would ensure that stormwater runoff from the Preferred Alternative would not cause erosion and sedimentation in receiving waters and that runoff from impervious surface areas would be managed and treated to remove contaminants. Furthermore, all projects listed in Tables 4-3, 4-4, and 4-5 of the Draft EIR would also be required to comply with applicable NPDES/MS4 permits during operations.

All the projects listed in Tables 4-3, 4-4, and 4-5 of the Draft EIR would alter existing drainage patterns and increase the amount of impervious surfaces. As a result, increased stormwater runoff would occur, which could exceed the capacity of stormwater drainage systems. Local planning requirements would require most, if not all, of these projects to prepare an analysis of impacts on existing drainage systems. In addition, compliance with regional and countywide stormwater

regulations (e.g., requirements for MS4 Permits and Industrial General Permits) would address substantial sources of increased stormwater runoff associated with projects and would require such projects to provide features for retention of water onsite and treatment of stormwater runoff. In addition, projects that would result in an increased need for off-site stormwater conveyance or treatment would be required to pay a fair-share contribution towards the new local and/or regional infrastructure. However, because most of these projects are still in the planning phase, the necessary hydrologic and hydraulic studies that would determine the timing, rate, amount of stormwater runoff, and the onsite and/or offsite facilities necessary to convey and treat the runoff, have not been prepared. Therefore, these projects would result in significant impacts from exceedance of stormwater drainage systems, which in turn would result in cumulatively significant degradation of water quality.

As discussed in Section 3.10, *Hydrology and Water Quality* of the Draft EIR, railway improvements within the existing UPRR right-of-way for the Preferred Alternative would alter drainage patterns by altering or creating trackside ditches and drainage systems. Other Valley Link facilities such as new station boarding platforms, parking lots, parking structures, roadways, bridges, and OMF facilities would also create new impervious surfaces and stormwater drainage systems, which would alter drainage patterns and create new sources of runoff. If stormwater control systems are not appropriately designed for these improvements, stormwater runoff could exceed the capacity of stormwater drainage systems and result in degradation of water quality. However, compliance with existing regulations, including post-construction requirements of the SWRCB's NPDES Construction General Permit and hydromodification management requirements of applicable MS4 permits would minimize stormwater runoff. Additionally, implementation of Mitigation Measure HYD-3b.1 would require detailed hydraulic evaluations to ensure that new and/or modified stormwater infrastructure would be appropriately designed and that runoff from the Preferred Alternative would not exceed the capacity of storm drainage systems and result in water quality degradation. Thus, the Preferred Alternative's contribution to cumulative operational impacts on exceedance of stormwater drainage systems and water quality would be less than considerable with mitigation.

The rail and regional transportation projects listed in Table 4-3 of the Draft EIR and the River Islands Development Project, Northeast Industrial Specific Plan, and South Lathrop Specific Plan, would entail operation within 100-year or 200-year floodplains. In addition, these projects would also require operation within the boundaries of the legal Delta, and within the area covered by the *Basin-Wide Feasibility Study, San Joaquin Basin* (California Department of Water Resources 2017) and would encroach on levees and floodways under the jurisdiction of the Central Valley Flood Protection Board and other agencies such as Federal Emergency Management Agency (FEMA), U.S. Army Corps of Engineers (USACE), California Department of Water Resources (DWR), and local reclamation districts. Although such projects are subject to multiple state regulations, because most of the identified projects are still in the planning phase, the necessary hydrologic and hydraulic studies that would inform the appropriate design and sizing of facilities in floodplains, and the necessary storm drainage infrastructure, have not been prepared. Therefore, the identified projects would result in significant operational impacts from flooding related to storm drainage infrastructure and impeding or redirecting flood flows (including interference with proposed flood protection improvements that are envisioned under the San Joaquin Basin-Wide Feasibility Study).

As discussed in Section 3.10, *Hydrology and Water Quality* of the Draft EIR, Preferred Alternative facilities would increase the rate and amount of stormwater runoff from alteration of drainage patterns and creation of impervious surfaces, which could result in flooding. Preferred Alternative facilities would also be in 100- and 200-year floodplains and would require crossing over small

urban or rural streams, as well as Paradise Cut and the San Joaquin River. Therefore, Valley Link facilities could increase flooding from increased stormwater runoff, impede flood flows and thereby increase upstream or downstream flooding, and potentially reduce the effectiveness of flood improvements included in the Central Valley Flood Protection Plan as part of the San Joaquin Basin-Wide Feasibility Study.

The following measures mitigate this impact to a less than significant level.

- HAZ-2.2: Implement construction risk management plan
- HYD-3a.1: Prevent construction materials from being exposed to storm flooding hazards
- HYD-3b.1: Perform detailed hydraulic evaluations and implement new or modify existing stormwater controls as required to prevent storm drainage system capacity exceedance and reduce pollutant transport
- HYD-4.1: Perform hydrologic and hydraulic studies for project improvements located in floodplains, coordinate with regulatory agencies, and obtain required permits

The Preferred Alternative would require implementation of permit requirements from California Department of Fish and Wildlife, U.S. Army Corps of Engineers (USACE), and/or the SWRCB and Mitigation Measures HAZ-2.2, which requires the implementation of a construction risk management plan. Additional requirements that would also prevent degradation of water quality for in-water work, such as a Clean Water Act Section 401 Water Quality Certification, are discussed in Section 3.4, *Biological Resources*. Where identified projects would be constructed within or adjacent to aquatic features, these projects would also be subject to these permit requirements to minimize construction impacts on water quality. Thus, the Preferred Alternative's contribution to cumulative construction impacts on water quality from erosion would not be considerable.

Implementation of Mitigation Measure HYD-3a.1 would prevent the storage of stockpiled construction materials, such as soil, fuels, and lubricants, in flood zones during the winter months when storms are most likely to occur. Thus, the Preferred Alternative's contribution to cumulative construction impacts on water quality from flooding would be less than considerable with mitigation.

In addition to the regulatory permits described above applicable to both the Preferred Alternative and other future projects, implementation of Mitigation Measure HAZ-2.2 would require preparation of an RMP outlining appropriate containment procedures for handling and disposal of any encountered contaminated soil and groundwater and incorporates limitations for use and handling near creeks, surface waters, or other aquatic habitats based on the findings of an ecological risk assessment. Thus, the Preferred Alternative's contribution to cumulative operational impacts on water quality and stormwater runoff would be less than considerable with mitigation.

In addition to the state and local stormwater regulations discussed above, implementation of Mitigation Measure HYD-3b.1 would require detailed hydraulic evaluations to ensure that new and/or modified stormwater infrastructure would be appropriately designed and that runoff from the Preferred Alternative would not exceed the capacity of storm drainage systems and result in water quality degradation. Thus, the Preferred Alternative's contribution to cumulative operational impacts on exceedance of stormwater drainage systems and water quality would be less than considerable with mitigation.

In addition to the federal, state and local flood protection regulations discussed in Section 4.2.5.12 of the Draft EIR, implementation of Mitigation Measure HYD-3b.1 would require detailed hydraulic evaluations to ensure that new and/or modified stormwater infrastructure would be appropriately designed and that runoff from the Preferred Alternative would not exceed the capacity of storm drainage systems or contribute to flooding. Additionally, implementation of Mitigation Measure HYD-4.1 would require site-specific detailed hydrologic and hydraulic studies for portions of the Preferred Alternative located within 100- and 200-year floodplains. The results of these studies would be used to inform the facility design such that 100- and 200-year flows could pass without impedance, as required by FEMA, DWR, USACE, and Central Valley Flood Protection Board standards, thereby preventing upstream, onsite, and downstream flooding. Mitigation Measure HYD-4.1 also requires the Authority to consult with DWR and Central Valley Flood Protection Board regarding Preferred Alternative -related work that is proposed in the Paradise Cut area, to ensure that facilities are designed so they will not impair any of the flood zone improvements planned by DWR and Central Valley Flood Protection Board as part of the *2017 Central Valley Flood Protection Plan Update* and the *Basin-Wide Feasibility Study, San Joaquin Basin, Draft* (DWR 2017). Finally, Mitigation Measure HYD-4.1 requires the Authority to obtain all necessary permits, consult with any necessary agencies with levee jurisdiction, and perform work in accordance with the terms of the permits, which would contain measures to protect public safety and water quality, as issued by the cognizant regulatory agency. Thus, the Preferred Alternative's contribution to cumulative operational impacts related flooding would be less than considerable with mitigation.

3.3.2.9 Land Use and Planning

Significant Effect: Impact LU-2. Construction and operation of the Preferred Alternative could result in an impact due to a conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: The Preferred Alternative would be subject to regional and local plans and regulations. Land use plans, policies, and regulations adopted by cities, counties, and agencies with jurisdiction over the Preferred Alternative area are listed in Table 3.11-2 of the Draft EIR. Many of these policies are adopted for the purpose of restricting growth to planned areas and preventing development outside of established urban areas to prevent sprawl, protect agricultural land, and prioritize infill development. Each relevant policy or regulation is accompanied by an analysis of the Preferred Alternative's potential to conflict or be inconsistent with each respective policy.

Table 3.11-2 of the Draft EIR identifies potential conflicts between the Preferred Alternative and plans, policies, and regulations. In general, the Preferred Alternative is consistent with adopted land use plans, policies, or regulations. However, the Draft EIR does identify potentially significant impacts due to the Greenville Station and the Mountain House Station.

Construction of the Greenville Station would occur in unincorporated Alameda County on land planned for agriculture, outside of the City of Livermore's Urban Growth Boundary (UGB). Locating urban-style development, such as a commuter rail station, outside the UGB is inconsistent with the *Plan Bay Area 2040* regional plan, the Alameda County General Plan Open Space Element, and the *City of Livermore General Plan 2003-2025*. As discussed in Section 3.11, *Land Use and Planning* of the

Draft EIR, it would conflict with Livermore General Plan Objective LU-5.1, Policy LU-1.1 P1, Objective LU-18.1, and Policy LU-18.1 P3 that discourage development outside established UGBs. This policy inconsistency of allowing development outside the UGB could have a significant impact on known habitat of threatened and endangered species in the area and could serve as a catalyst for development in areas not currently anticipated in Livermore or Alameda County planning documents. In addition, construction of the Greenville Station outside of the UGB could result in pressures to develop the surrounding area with urban uses incompatible with currently adopted plans and policies in the station vicinity. This could be a significant impact.

The Mountain House Station would be in unincorporated San Joaquin County and is not located within the City of Tracy's sphere of influence (County of San Joaquin 2012). The Mountain House Station would be developed in areas located beyond current developed areas and would potentially conflict with policies intended to direct new urban development to locations within existing communities. Specifically, the Mountain House Station would be inconsistent with the *San Joaquin County General Plan* Policies LU-1.1, LU-2.1, and C-1.5. The Mountain House Station and West Tracy OMF Alternative could be inconsistent with the *City of Tracy General Plan* Policies LU-8.1 P1 and CC-4.1 P1. These policies contain language that development outside city boundaries could cause unplanned growth or conversion of agricultural lands and should therefore be opposed. Further, the Mountain House Station would be in areas zoned for agricultural uses. Like the Greenville Station, construction of the Mountain House Station as originally proposed could result in pressures to develop the immediate surrounding area with urban uses that would be incompatible with currently adopted plans and policies in the vicinity. This could be a significant impact.

The following changes mitigate this impact to a less than significant level.

- Select the Southfront Road Station Alternative and Mountain House Station Alternative in place of the Greenville Station and Mountain House Station.

Selection of the Southfront Road Station Alternative in place of the Greenville Station and the Mountain House Station Alternative in place of the Mountain House Station avoids the significant and unavoidable impacts identified with those originally proposed stations. With these changes, the Preferred Alternative would result in a less than significant impact.

3.3.2.10 Noise and Vibration

Significant Effect: Impact NOI-2a. Construction of the Preferred Alternative would expose sensitive receptors to substantial increases in groundborne vibration levels.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Construction activities can be expected to generate vibration levels at 25 feet as high as 94 VdB from compactors during site work, 87 VdB from bulldozers during rail work, and 104 VdB from impact pile drivers during structures work. Except for pile drivers, it is unlikely that such equipment would be used close enough to sensitive structures to have any damage effects. For pile driving, it is anticipated that the potential for damage effects would be limited to structures located at distances in the range of 30 to 75 feet from construction activities, depending on the building category.

Vibration annoyance effects or interference with the use of sensitive equipment, resulting from the vibration impact from pile driving is expected to be even greater than damage effects. Based on FTA methodology, Table 3.12-13 of the Draft EIR provides the approximate distances within which receivers could experience construction-related vibration annoyance effects. The results of the analysis indicate that vibration impacts would extend to distances of 230 to 630 feet from pile driving operation, depending on vibration sensitivity.

It is possible that construction activities involving pile drivers occurring at the edge of or slightly outside of the current right-of-way could result in vibration damage, and damage from construction vibration due to the Preferred Alternative would be a potentially significant impact.

The following measure mitigates this impact to a less than significant level.

- NOI-2.1a: Implement a construction vibration control plan

With implementation of Mitigation Measure NOI-2.1a, vibration impacts would be avoided or minimized; if building damage occurs due to construction then repairs would be made, or compensation provided. With implementation of Mitigation Measure NOI-2.1a, impacts resulting from construction vibration structural damage would be less than significant for the Preferred Alternative.

Significant Effect: Impact C-NOI-1. Implementation of the Preferred Alternative, in combination with other foreseeable projects in the surrounding area, would result in a significant cumulative impact from vibration.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: During construction, an increase in vibration levels would affect sensitive receptors along the Preferred Alternative corridor. Vibration impacts during construction would primarily result from simultaneous construction of different projects in the same location at the same time; however, where construction occurs in quick succession in the same area, there could also be a cumulative impact due to the extended duration of construction-related vibration. As shown in Tables 4-3 and 4-4 of the Draft EIR, the Preferred Alternative construction may overlap in time or location with several rail and other regional transportation projects. There are also numerous land development projects with planned or potential construction periods that would also overlap with construction of the Preferred Alternative, as shown in Table 4-5 of the Draft EIR.

As described in Section 3.12, *Noise and Vibration* of the Draft EIR, construction vibration levels at 25 feet could be as high as 94 velocity decibels (VdB) from compactors during site work, 87 VdB from bulldozers during rail work, and 104 VdB from impact pile drivers during structures work; pile driving activities are anticipated where bridges would be constructed, such as at Paradise Cut and the San Joaquin River. Vibrational impacts would extend to distances of 230 to 630 feet from pile-driving operations, 100 to 240 feet for compacting, and less than 130 feet for bulldozers, depending on the vibration sensitivity of the land use category.

As described in Section 3.12, *Noise and Vibration*, the Preferred Alternative would not result in any operational vibration impacts along the Valley Link corridor. Although the Preferred Alternative would introduce new passenger rail service from Dublin/Pleasanton to Lathrop, this new service would utilize mostly existing freeway and railroad corridors that are already utilized for vehicle and

freight rail traffic. Because of the volume of existing freight train traffic and high volume of vehicle traffic within the I-580 corridor in the area where Valley Link operations would occur, the increased vibration due to passenger trains with Valley Link operations would be very small. Also, because the new passenger rail service would not result in vibration levels greater than existing levels, no vibration impacts are projected at locations with existing train operations. Thus, the Preferred Alternative's contribution to cumulative vibration impacts because of operations would be less than considerable.

The following measure mitigates this impact to a less than significant level.

- NOI-2.1a: Implement a construction vibration control plan

Mitigation Measure NOI-2.1a would require preparation of a vibration control plan to reduce potential construction vibration impacts. Although there could be other projects simultaneously under construction adjacent to the Preferred Alternative corridor, unlike noise, vibration levels do not tend to accumulate. Thus, the Preferred Alternative's contribution to cumulative vibration impacts because of construction would be less than considerable with mitigation.

3.3.2.11 Population and Housing

Significant Effect: Impact POP-1. Construction and operation of the Preferred Alternative could substantially induce, either directly or indirectly, unplanned population growth in an area.

Findings: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: The Preferred Alternative may induce substantial amounts of unplanned population growth in three ways: (1) if the Preferred Alternative would result in a substantial amount of permanent employment that results in a substantial amount of unplanned growth; (2) if the Preferred Alternative (i.e., construction of stations, train operations) indirectly facilitates land use changes in the immediate vicinity of station areas that would result in substantial amounts of unplanned growth; or (3) if Valley Link service would substantially increase housing demand beyond planned levels.

Studies suggest that transit stations are more likely to increase the attractiveness of developing the surrounding area if land use policies and the character of the area are conducive to such development. If local land use policies support increased development and population growth, new stations are more likely to induce transit-oriented development (TOD). Although construction of a new transit station or expansion of an existing transit station, such as at the Tracy Transit Center, which currently serves only buses but would become part of the Valley Link Downtown Tracy Station with the Preferred Alternative, could make surrounding land more attractive to developers, an expansion of transit service by itself would not induce growth. Local land use policies, market conditions, political attitudes, and regulatory constraints would all inform the feasibility of developing TOD around stations for the Preferred Alternative.

The Greenville Station could result in pressures to develop the surrounding area with urban uses that would be incompatible with currently adopted plans and policies in the station vicinity. Development within the unincorporated county would be contingent upon review and approval by the City of Livermore and Alameda County and require changes to both Livermore and the county urban limit lines, thereby requiring a vote by residents of both Livermore and Alameda County. The

Authority considered mitigation to coordinate with Alameda County and the City of Livermore to initiate a general plan amendment planning process to address the issues related to population growth in the Greenville area. The Alameda County and the City of Livermore have exclusive responsibility for land use planning in each respective jurisdiction. Because the Authority has no jurisdiction of land use planning within Alameda County and the city of Livermore, mitigation to initiate a general plan amendment process is infeasible. In addition, there is no indication that Alameda County or the City of Livermore intend to amend the general plan.

Because the Authority has no land use authority and cannot mandate changes to local land use plans, there is currently no formal plan to change the planning documents to accommodate a transit station at Greenville Road or additional development around a new transit station. Development in this area would be inconsistent with current planning and would result in unplanned impacts on biological resources, and possibly other resources. Thus, the impact of the Greenville Station is considered significant and unavoidable.

Mountain House Station could result in pressures to develop the immediate surrounding area with urban uses that would be incompatible with currently adopted plans and policies in the vicinity. Development within the unincorporated county would be contingent upon review and approval by the City of Tracy and San Joaquin County and require changes to city and county urban limit lines. The Authority considered mitigation to coordinate with Alameda County, San Joaquin County, and the City of Tracy to initiate a general plan amendment planning process to address the issues related to population growth in the Mountain House Station area. Alameda County, San Joaquin County, and the City of Tracy have exclusive responsibility for land use planning in each respective jurisdiction. Because the Authority has no jurisdiction over land use planning within Alameda County, San Joaquin County, or the city of Tracy, mitigation to initiate a general plan amendment process is infeasible. In addition, there is no indication Alameda County, San Joaquin County, and the City of Tracy intend to amend the general plan. Furthermore, there are currently no formal plans to change local land use plans to accommodate the Mountain House Station or anticipate additional development around the new transit station. The Authority has no land use authority and cannot mandate changes to local land use plans. Development in the area would be inconsistent with current planning and could result in unplanned impacts on other resource areas.

The following changes mitigate these impact to a less than significant level.

- Select the Southfront Road Station Alternative and Mountain House Station Alternative in place of the Greenville Station and Mountain House Station.

Selection of the Southfront Road Station Alternative in place of the Greenville Station and the Mountain House Station Alternative in place of the Mountain House Station avoids the significant and unavoidable impacts identified with those originally proposed stations. With these changes, the Preferred Alternative would result in a less than significant impact on population and housing.

Significant Effect: Impact C-POP-1. Implementation of the Preferred Alternative, in combination with other foreseeable projects in the surrounding area, could result in a significant cumulative impact on population and housing.

Findings: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: As summarized in Section 3.13, *Population and Housing* of the Draft EIR, the Greenville Station and Mountain House Station could result in pressures to develop the surrounding area with urban uses that would be incompatible with currently adopted plans and policies in the station vicinity, some of which are designed to promote environmental protection. Because the Authority has no land use authority and cannot mandate changes to local land use plans, there is currently no formal plan to change the planning documents to accommodate the Greenville Station, Mountain House Station, or additional development around a new transit station. Development in these areas would be inconsistent with current planning and could result in unplanned impacts on biological resources, and possibly other resources. Thus, the impact of the Proposed Project from implementation of the Greenville Station and the Mountain House Station is considered significant and unavoidable and mitigation is considered infeasible. Valley Link's contribution to a potential significant cumulative impact, due to land uses that are incompatible with local land use plans, would be considerable due to the Greenville Station and Mountain House Station.

The following Project changes mitigate this impact to a less than significant level.

- Select the Southfront Road Station Alternative and Mountain House Station Alternative in place of the Greenville Station and Mountain House Station contained in the Proposed Project.

Selection of the Southfront Road Station Alternative in place of the Greenville Station and the Mountain House Station Alternative in place of the Mountain House Station avoids the significant and unavoidable impacts identified with those originally proposed stations. With these changes, the Preferred Alternative would result in a less than considerable contribution to a cumulative impact on population and housing.

3.3.2.12 Recreation

Significant Effect: Impact REC-1. Construction and operation of the Preferred Alternative could substantially impair access to and/or the quality of existing recreational facilities.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Three recreational resources are within the footprint or within 300 feet of the Tri-Valley Alignment and Dublin/Pleasanton Station: the Dublin Sports Ground is adjacent to the Tri-Valley Alignment; the Iron Horse Regional Trail is within an underpass below the Tri-Valley Alignment footprint and crosses under I-580 at the proposed Dublin/Pleasanton Station; and the Arroyo Las Positas Trail is approximately 50 feet from the Tri-Valley Alignment and separated from the Preferred Alternative footprint by open space and vegetation.

The Preferred Alternative could have an impact on the above resources because of their proximity or overlap with the Preferred Alternative. The Dublin Sports Ground and the Arroyo Las Positas Trail are within 300 feet of the Preferred Alternative footprint and there are no roads or buildings acting as barriers to construction dust or visual degradation. Therefore, the potential exists for a significant impact on the Dublin Sports Ground and the Arroyo Las Positas Trail. The Iron Horse Regional Trail crosses under I-580 at the proposed Dublin/Pleasanton Station. The Dublin/Pleasanton Station would require right-of-way (ROW) acquisition. Construction activities associated with overhead bridge expansion may also be required within this recreational resource.

Based on preliminary engineering, the construction area associated with the Dublin/Pleasanton Station platform, adjacent to the existing BART station platform, could require construction that could encroach on the Iron Horse Regional Trail undercrossing. In addition, users of nearby portions of the trail would experience impacts involving visual degradation and increased noise and dust during the construction period. Thus, use and accessibility at this recreational resource would be temporarily disrupted during the construction period, which could potentially substantially impair the quality of the trail, resulting in a potentially significant impact.

As discussed in Section 3.15, *Recreation* of the Draft EIR, four recreational resources are located within 300 feet of the Tracy to Lathrop Alignment, variants 1 and 2 and the Downtown Tracy Station; and two recreational resources are located within the footprint of the Tracy to Lathrop Alignment, variants 1 and 2. The Preferred Alternative could have an impact on these resources because of their proximity to or overlap with the Preferred Alternative. As a result, users of these recreational resources would most likely experience impacts involving visual degradation and increased noise and dust during the construction period. The duration of construction-period impacts would vary, based on the proposed improvement. Users of recreational resources in the vicinity of track improvements may experience construction-period impacts that last a few days to a week, whereas users of recreational resources in the vicinity of station areas may experience construction-period impacts that last up to 3 months. Users of new railroad bridges that cross water features, such as the San Joaquin River, may experience construction-period impacts that last up to 36 months.

The San Joaquin River and Mossdale Crossing Regional Park are within the footprint of the Tracy to Lathrop Alignment, variants 1 and 2. The portion of the footprint within Mossdale Crossing Regional Park is within the UPRR ROW, which is currently within the Park. The San Joaquin River and Mossdale Crossing Regional Park therefore face the greatest risk of being affected by construction for an extended period. Users of Mossdale Crossing Regional Park would experience impacts involving visual degradation, increased noise, and dust during construction. Construction of the Tracy to Lathrop Alignment, variant 1 would require the installation of new replacement track on the already existing track crossing at the San Joaquin River. Upgrading of the existing track within the UPRR ROW would occur in segments. Once the sub-grade, ballast, and upgraded track are installed for one segment, construction would continue down the alignment. In addition to the new tracks, construction of the Tracy to Lathrop Alignment, variant 2 would entail construction of a new bridge over the San Joaquin River, which could last approximately 14 to 36 months. Although construction would be temporary, the duration of construction activities could potentially substantially impair access to or the quality of existing recreational facilities. The impacts would be potentially significant. Thus, use and accessibility of these recreational resources would be temporarily disrupted during the construction period. Construction of the Tracy to Lathrop Alignment, variants 1 and 2 could temporarily and potentially substantially impair the quality of the San Joaquin River and Mossdale Crossing Regional Park and would therefore result in a potentially significant impact.

The following measures mitigate this impact to a less than significant level.

- REC-1.1: Coordinate with the East Bay Regional Park District to provide advance notice of construction activities and maintain safe access to the Iron Horse Regional Trail during construction
- REC-1.2: Coordinate with San Joaquin County to provide advance notice of and maintain a safe open channel in the San Joaquin River during construction activities

- AES-1.1: Install visual barriers between construction work areas and sensitive residential and recreational receptors
- AQ-2.1: Implement advanced emissions controls for off-road equipment
- AQ-2.2: Implement off-road engine maintenance and idling restrictions
- AQ-2.3: Implement advanced emissions controls for trains
- AQ-2.4: Utilize modern fleet for on-road material delivery and haul trucks
- AQ-2.5: Implement fugitive dust controls during construction
- NOI-1.1a: Implement construction noise control plan

Mitigation for impacts on Iron Horse Regional Trail and the San Joaquin River, both of which are within the Preferred Alternative footprint, would involve local jurisdictions. Mitigation Measure REC-1.1 would ensure the continued availability of Iron Horse Regional Trail during construction. A safe detour would be provided during construction of the track alignments to ensure that use of the trail would remain available for pedestrians, bicyclists, and equestrians. Coordination between the Authority and the EBRPD would ensure more effective communication with recreationalists concerning temporary closures. Mitigation Measure REC-1.2 would ensure that the San Joaquin River would remain accessible to recreationists during construction. Agency coordination with San Joaquin County would help ensure an open channel for water recreation under the bridge. In the event of a temporary closure, the Authority will coordinate with the County on the timing and give advance notice to the community.

Other resources within 300 feet of the Preferred Alternative footprint would be susceptible to construction noise and dust. Mitigation Measure AES-1.1, which is described in greater detail in Section 3.1, *Aesthetics* of the Draft EIR, would require the Authority to install visual barriers between construction activities and sensitive receptors that would experience visual degradation during construction, including nearby recreational facilities. Recreational facilities that would be subject to visual degradation include those sites identified as occurring within 0.25 mile of Preferred Alternative construction sites, which would have unobstructed views of construction activities, such as Mossdale Crossing Regional Park. Mitigation Measures AQ-2.1 through AQ-2.5 require advanced emissions controls, engine maintenance, idling restrictions, fleet requirements for construction equipment and fugitive dust control measures to minimize potential construction air quality and dust impacts on users of nearby recreational resources. Mitigation Measure NOI-1.1a, which is described in greater detail in Section 3.12, *Noise* of the Draft EIR, requires development of a Noise Control Plan, which would incorporate best practices to minimize the impacts of construction-related noise to nearby sensitive receptors, including recreational facilities. Disruption to recreational resources from construction activities would be temporary, and usage of the recreational facilities would most likely return to normal after construction. Implementation of Mitigation Measures REC-1.1, REC-1.2, AES-1.1, AQ-2.1, AQ-2.2, AQ-2.3, AQ-2.4, AQ-2.5, and NOI-1.1a would reduce potential impacts on recreational resources to a less-than-significant level due to the construction of the Preferred Alternative (due to the Tri-Valley Alignment; Dublin/Pleasanton Station; Tracy to Lathrop Alignment, variants 1 and 2; Downtown Tracy Station).

Significant Effect: Impact C-REC-1. Implementation of the Preferred Alternative, in combination with other foreseeable projects in the surrounding area, could result in a significant cumulative impact on recreational resources.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Users of recreational resources in the vicinity of the Preferred Alternative would experience impacts involving visual degradation, and increased noise and dust during the construction period. Likewise, construction of the projects listed in Tables 4-3, 4-4, and 4-5 of the Draft EIR could result in similar impacts to the recreational resources that would be affected by construction of Valley Link. Table 4-7 of the Draft EIR identifies the projects that would be located within 1,000 feet of the recreational resources that could be affected by Valley Link.

The duration of construction-period impacts varies between a few days to a week (track work) and 12 to 36 months (station and railroad bridges), depending on the facility constructed. Although construction would be temporary, the duration of construction activities could impair access to or the quality of existing recreational facilities. For a cumulative impact to occur, the construction period for the Preferred Alternative and the construction period for the identified project would have to overlap for a substantial period, such that access would be impaired. As summarized in Table 4-7 of the Draft EIR, most recreational facilities would not be affected because the facilities are separated from identified projects by parking lots or existing buildings that would block the visual, noise, and dust impacts. Nonetheless, as shown in Table 4-7, there are some projects located close to recreational resources that would also be affected by Valley Link and a potential cumulative impact could occur if there were overlap in construction schedules. Thus, the Preferred Alternative in combination with the construction of other nearby projects, would constitute a potentially significant cumulative impact.

The following measures mitigate this impact to a less than significant level.

- AES-1.1: Install visual barriers between construction work areas and sensitive residential and recreational receptors
- AQ-2.1: Implement advanced emissions controls for off-road equipment
- AQ-2.2: Implement off-road engine maintenance and idling restrictions
- AQ-2.3: Implement advanced emissions controls for trains
- AQ-2.4: Utilize modern fleet for on-road material delivery and haul trucks
- AQ-2.5: Implement fugitive dust controls during construction
- NOI-1.1a: Implement construction noise control plan

The Preferred Alternative would implement Mitigation Measures AES-1.1, AQ-2.1 through AQ-2.5, and NOI-1.1a, which would require the installation of visual barriers between stationary construction work areas and sensitive recreational receptors; require advanced emissions controls, engine maintenance, idling restrictions, fleet requirements for construction equipment, and fugitive dust control measures; and the preparation of a construction noise plan. These mitigation measures would limit the visual exposure of construction activities, minimize potential construction air quality and dust impacts, and noise of construction activities to users of nearby recreational resources. Thus, Preferred Alternative's contribution to cumulative impacts on recreational resources because of construction would be less than considerable with mitigation.

3.3.2.13 Transportation and Traffic

Significant Effect: Impact TR-1. Construction and operation of the Preferred Alternative could conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: As discussed in Section 3.17, *Transportation and Traffic* of the Draft EIR, the Preferred Alternative would conform to—and not conflict with—programs, plans, ordinances, and policies addressing the circulation system, and impacts of Preferred Alternative operation related to the regulatory setting would be less than significant. Likewise, operation-related impacts for the alternatives analyzed at an equal level of detail would be less than significant.

However, in recognition of potential disruptions during construction of the Preferred Alternative to the circulation system, to mainline (freight and passenger) rail operation along UPRR-owned ROW, and to BART operation, the impacts of construction of the Preferred Alternative have been conservatively deemed significant. Likewise, construction-related impacts for the alternatives analyzed at an equal level of detail have been conservatively deemed significant

The following measures mitigate the Preferred Alternative's contribution to these effects to less than significant.

- TRA-1.1: Transportation management plan for project construction
- TRA-1.2: Mainline railway disruption control plan for project construction
- TRA-1.3: BART disruption control plan for project construction

Implementation of Mitigation Measure TRA-1.1, TRA-1.2, and TRA-1.3 would address construction-related effects on the circulation system, on mainline railway operation along UPRR-owned ROW, and on BART operation, and would reduce these impacts to less than significant. Likewise, Mitigation Measures TRA-1.1, TRA-1.2, and TRA-1.3 would reduce these impacts to less than significant for the Preferred Alternative.

Significant Effect: Impact C-TRA-1: Implementation of the Preferred Alternative, in combination with other foreseeable projects in the surrounding area, could result in a significant cumulative impact on transportation and traffic.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Considering the Preferred Alternative in conjunction with identified projects, potential effects on transportation and traffic may be amplified where construction activities are in proximity or when they take place concurrently. Standard construction practices and regulations require construction contractors to work with relevant parties (e.g., public works departments, transportation agencies, transit service providers) to coordinate construction activities and identify, avoid, and minimize disruptions to the circulation system. Despite these requirements, however, it is possible that cumulative construction effects could reach the level of a significant impact.

For certain components of the circulation system, however, it cannot be determined with reasonable certainty whether general conformance with applicable programs, plans, ordinances, or policies would be achievable. The ability to improve transit service and facilities, for example, is often restricted by the availability of funding, and it is possible that land use development in the cumulative timeframe may generate additional ridership that would require substantive physical improvements that are not foreseeable at this time, or that may not be implemented in time to ensure that transit continues to function in accordance with applicable programs, plans, ordinances, or policies. Likewise, it is not certain whether goals and objectives from the regulatory setting related to VMT reduction are fully achievable. Given this uncertainty, cumulative impacts related to the regulatory setting are conservatively deemed significant.

The following measures mitigate this impact to a less than significant level.

- TRA-1.1: Transportation management plan for project construction
- TRA-1.2: Mainline railway disruption control plan for project construction
- TRA-1.3: BART disruption control plan for project construction

Implementation of Mitigation Measures TRA-1.1, TRA-1.2, and TRA-1.3 would mitigate project-specific construction impacts to less than significant levels by maximizing planning and coordination between the Preferred Alternative and other transportation services. While these mitigation measures would reduce the significant construction impact to less than significant, they would also reduce the Preferred Alternative's contribution to the impact to less than considerable.

3.3.2.14 Utilities and Service Systems

Significant Effect: Impact USS-1. Construction or operation of the Preferred Alternative could result in relocation or construction of new or expanded electric power, natural gas, or telecommunication facilities, the construction of which could cause significant environmental effects.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: As discussed in Section 3.18, *Utilities and Service Systems* of the Draft EIR, construction of the Preferred Alternative could disrupt utilities or require utilities to be relocated. It is possible that relocation or accidental disruption during construction could disrupt utility service or damage utilities, resulting in a potentially significant impact on utilities infrastructure.
The following measure mitigates this impact to a less than significant level.

- USS-1.1: Implement a Utility Relocation Plan

Implementation of mitigation measures USS-1.1 would ensure that the potential for disruption of utilities or utility relocation is minimized by pre-planning and coordination between the Preferred Alternative and the utility providers.

Significant Effect: Impact C-USS-1. Implementation of the Preferred Alternative, in combination with other foreseeable projects in the surrounding area, could result in a significant cumulative impact on utilities and service systems.

Finding: The Authority hereby makes finding (a)(1) (described above), as required by PUB. RES. CODE 21081 and stated in State CEQA Guidelines Section 15091, with respect to the above identified effect.

Facts in Support of Findings: Construction of both the Preferred Alternative and identified projects, such as the ACE Extension Lathrop to Ceres/Merced and California High-Speed Rail (Merced to Sacramento Section), could disrupt utilities or require utilities to be relocated. However, the agencies affiliated with these projects would work with local utility service providers to address the potential for utility disruption during construction, and to minimize service interruptions.

The following measure mitigates this impact to a less than significant level.

- USS-1.1: Implement a Utility Relocation Plan
- HAZ-2.2: Implement Construction Risk Management Plan

Implementation of mitigation measures USS-1.1 and HAZ-2.2 would ensure that the potential for disruption of utilities or utility relocation is minimized by pre-planning and coordination between the Preferred Alternative and the utility providers.

3.4 Findings Regarding the Alternatives

As required by CEQA, a discussion of possible alternatives to the Proposed Project, including the No-Project Alternative, was included in the Draft EIR and Final EIR. With adoption of the Preferred Alternative, the Authority makes the following findings to support its rejection of the following alternatives and recommendation to adopt the Southfront Road Station Alternative, Stone Cut Alignment Alternative, and Mountain House Station Alternative as part of the approved Project. Therefore, no infeasibility findings are necessary for those three alternatives. Other alternatives were considered and screened out of the range of alternatives analyzed in the EIR for the reasons discussed in Section 5.8 of the Final EIR, which is hereby incorporated by reference.

As noted above, Section 15091 (a)(3) of the State CEQA Guidelines describes that one of the findings that a lead agency can make concerning significant project impacts is that specific economic, legal, social, technological, or other considerations, make infeasible the Project alternatives identified in the Final EIR. In the Final EIR, Chapter 5, *Other Alternatives Considered*, the alternatives were screened for potential technical, logistical, and financial feasibility, but the alternatives were not evaluated for all economic, legal, social or other considerations that make up the broader definition of "feasibility" in Section 15091 (a)(3). In these findings, the decision-making body is making a final determination of feasibility.

An alternative may have been determined to be potentially technically, logistically, and financially "feasible" in the Final EIR and still ultimately be concluded by the Authority to meet the definition of "infeasibility" per Section 15091 (a)(3) when all considerations are considered. The final determination of infeasibility "involves a balancing of various 'economic, environmental, social, and technological factors.'" (*City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 401, 417). Where there are competing and conflicting interests to be resolved, the determination of infeasibility "is not a case of straightforward questions of legal or economic feasibility," but rather, based on policy considerations. (*California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 1001-02). "[A]n alternative that is impractical or undesirable from a policy standpoint may be

rejected as infeasible." (*Id*. at p. 1002, citing 2 Kostka & Zischke, Practice Under the Cal. Environmental Quality Act, (Cont. Ed. Bar 2010) section 17.29, p. 824).

For this EIR, the following basic objectives are the primary purposes of the Project identified in Chapter 2, *Project Description,* of the Draft EIR. These are integrated objectives, meaning that an alternative must satisfy all of them to meet the standard of the Project. Improved rail service is intended to provide an alternative to vehicle travel that will meet statewide objectives for air quality improvement and greenhouse gas (GHG) reduction (as expressed in the air quality standards of the San Francisco Bay Area Air Quality Management District, San Joaquin Valley Air Pollution Control District, and the Air Resources Board's SB 32 Scoping Plan), as well as regional objectives for reducing traffic congestion and improving transportation sustainability (as expressed in the Regional Transportation Plans/Sustainable Communities Strategies adopted by the San Joaquin and Bay Area Metropolitan Planning Organizations).

- Improve connectivity within the Northern California Megaregion: connecting housing, people, and jobs.
- Establish rail connectivity between BART's rapid transit system and the ACE commuter service in the Tri-Valley
- Pursue Project implementation that is fast, cost-effective, and responsive to the goals and objectives of the communities it will serve
- Be a model of sustainability in the design, construction, and operation of the system
- Support the vision of the California State Rail Plan to connect the Northern California Megaregion to the State rail system.

3.4.1 No-Project Alternative

Findings: The Authority hereby finds that this alternative is determined to be infeasible for the following reasons.

Facts in Support of Findings: The No-Project Alternative would largely maintain existing levels of service. The No-Project Alternative would not meet any of the Project's objectives listed above. Intercity service and transit connections would remain at existing levels and therefore connectivity within the region, and between the BART and ACE systems, not be enhanced. Sustainability would not be enhanced because regional air quality, and GHG emissions would not be improved beyond existing baseline levels. Further, the No-Project Alternative would not improve connectivity within the Megaregion. For these reasons, the No-Project Alternative is determined to be infeasible.

3.4.2 Greenville Station

Findings: The Authority hereby finds that this alternative is determined to be infeasible for the following reasons.

Facts in Support of Findings: The Greenville Station would be in an area of high biological sensitivity, with the potential to support numerous special status species, including California tiger salamander and California red-legged frog, among others. The presence of the Greenville Station may deter normal wildlife use of the undercrossing under I-580 and contribute to wildlife dispersal. These impacts relative to the Mountain House would result in a significant and unavoidable impact on biological resources. The Greenville Station would also be inconsistent with land use planning for

the area and would have the potential to induce unplanned growth, which would be a significant and unavoidable land use and population and housing impact. Inclusion of the Southfront Road Station Alternative in the Preferred Alternative would avoid the significant and unavoidable impacts on biological resources, land use, and population and housing associated with the Greenville Station. The alternative is rejected for this reason.

3.4.3 Mountain House Station

Findings: The Authority hereby finds that this alternative is determined to be infeasible for the following reasons.

Facts in Support of Findings: The Mountain House Station would be in an area of high biological sensitivity, with the potential to support numerous special status species, including California tiger salamander, California red-legged frog, and San Joaquin kit fox, among others. The presence of the Mountain House Station may deter normal wildlife movement and contribute to wildlife dispersal. These impacts relative to the Mountain House would result in a significant and unavoidable impact on biological resources. The Mountain House Station would also be inconsistent with land use planning for the area and would have the potential to induce unplanned growth, which would be a significant and unavoidable land use and population and housing impact. Inclusion of the Mountain House Station Alternative in the Preferred Alternative would avoid the significant and unavoidable impacts on biological resources and population and housing associated with the Mountain House Station. The alternative is rejected for this reason.

3.4.4 West Tracy OMF Alternative

Findings: The Authority hereby finds that this alternative is determined to be infeasible for the following reasons.

Facts in Support of Findings: The West Tracy OMF Alternative would be in an area of high biological sensitivity, with the potential to support numerous special status species, including California tiger salamander, American badger, and San Joaquin kit fox. The presence of the West Tracy OMF Alternative may deter normal wildlife use of the area and contribute to wildlife dispersal. These impacts relative to the West Tracy OMF Alternative would result in a significant and unavoidable impact on biological resources. Under the Preferred Alternative; as revised by inclusion of the Southfront Road Station Alternative, Stone Cut Alignment Alternative, and Mountain House Station Alternative; would avoid significant and unavoidable impacts on biological resources. The alternative is rejected for this reason.

3.4.5 Downtown Tracy Station Parking Alternative 1

Findings: The Authority hereby finds that this alternative is determined to be infeasible for the following reason.

Facts in Support of Findings: Construction of this alternative would involve a parking garage (in the near term), which would make it more costly than the Preferred Alternative. Construction of this alternative is not part of baseline project funding and is dependent on completion of station area plans and funding from the City of Tracy or other local funding partners. The uncertainty of financing this alternative is contrary to the Project objective calling for "project implementation that

is fast, [and] cost-effective." Furthermore, this alternative would not avoid or reduce any significant unavoidable impacts of the Preferred Alternative. This alternative is rejected for these reasons.

3.4.6 Downtown Tracy Station Parking Alternative 2

Findings: The Authority hereby finds that this alternative is determined to be infeasible for the following reason.

Facts in Support of Findings: Construction of this alternative would involve a parking garage (in the near term) which would make it more costly than the Preferred Alternative. Construction of this alternative is not part of baseline project funding and is dependent on completion of station area plans and funding from the City of Tracy or other local funding partners. The uncertainty of financing this alternative is contrary to the Project objective calling for "project implementation that is fast, [and] cost-effective." Furthermore, this alternative would not avoid or reduce any significant unavoidable impacts of the Preferred Alternative. This alternative is rejected for these reasons.

3.4.7 Bus/Bus Rapid Transit (BRT) with Managed Lanes Alternative

Findings: The Authority hereby finds that this alternative is determined to be infeasible for the following reasons.

Facts in Support of Findings: This alternative would not meet the Project objective to "[s]upport the vision of the California State Rail Plan to connect the Northern California Megaregion to the State rail system" to the same extent as the Project. A Bus/BRT alternative injects a non-rail mode into trips between the ACE and BART systems. This does not establish true rail connectivity. This alternative would result in substantially lower ridership (estimated weekday ridership of 5,660 in 2040) than the Preferred Alternative (estimated weekday ridership of 32,990 in 2040), which would result in substantially lower reductions in vehicle miles travelled, lower reductions of criteria pollutant emissions, and lower reduction in greenhouse gas (GHG) emissions. The lower ridership would mean that this alternative would not meet the Project objective to "Improve connectivity within the Northern California Megaregion: connecting housing, people, and jobs" in any way as much as the Preferred Alternative. The relatively lower reductions in criteria pollutants and GHG emissions in the long run would mean that this alternative would not meet the Project objective to "be a model of sustainability" in operations in any way as much as the Preferred Alternative. Due to not meeting one of the Project objectives and not meeting several other Project Objectives to any similar degree as the Preferred Alternative, and due to inferior environmental outcomes related to VMT, air quality, and GHG emissions, this alternative was rejected.

3.4.8 Electric Multiple Unit/Overhead Catenary System (EMU/OCS) Alternative

Findings: The Authority hereby finds that this alternative is determined to be infeasible for the following reasons.

Facts in Support of Findings: The EMU/OCS Alternative would be substantially more expensive than the Project. Based on 15% level engineering plans, capital costs for the Proposed Project (from Dublin/Pleasanton to North Lathrop, using DMU trainsets and the single-track variant from

Mountain House Station Alternative to Downtown Tracy) were estimated at $2.3 billion to $2.9 billion ($2018). The Altamont OCS would add an additional $185 million to $232 million to the cost of rolling stock.

No capital cost estimates were developed for the EMU/OCS Alternative construction and operation, but given the additional infrastructure, the capital cost estimate is assumed to be greater than that of the Proposed Project. In particular, the EMU/OCS Alternative would likely entail much greater construction costs owing to catenary poles and wires for the entire length of the route. For example, where the train would operate within the freeway median and traverse beneath existing overpasses, it may be necessary for trains to run within lowered trenches (or for overpasses to be raised) to accommodate catenary structures. Due to the additional construction impacts and cost, this alternative was rejected.

3.4.9 Iron Horse Alternative

Findings: The Authority hereby finds that this alternative is determined to be infeasible for the following reasons.

Facts in Support of Findings: If the Iron Horse Trail Alternative did not include any track capacity improvements east of Pleasanton (e.g., only included improvements along the Iron Horse Trail alignment), then this alternative would only be supported by existing ACE levels of service. In this scenario, this alternative would result in substantially lower ridership, reduction of VMT, reduction of criteria pollutants, and reduction of GHG emissions compared to the Preferred Alternative. Furthermore, in this scenario, ACE service from the San Joaquin Valley to Silicon Valley would be delayed due to at least one morning and one evening train needing to divert from the current ACE route to service the Dublin/Pleasanton BART station, which would impair ACE ridership due to the additional travel time. If the Iron Horse Trail Alternative did include track capacity improvements east of Pleasanton (in addition to along the Iron Horse Trail alignment), then it would not have substantial cost savings relative to the Preferred Alternative but would result in inferior service times due to a lengthier route of travel. An alignment through Downtown Livermore is opposed by the City of Livermore, and the City of Pleasanton is most likely to oppose this alternative due to the substantial construction disruption to construct along the Iron Horse Trail alignment, as well as the operational noise and recreational impacts of this alternative.

As described in Chapter 5 in the Draft EIR and in responses to comments, the Iron Horse Alternative would not meet the following project objectives:

- *Pursue project implementation that is fast, cost-effective, and responsive to the goals and objectives of the communities it will serve.* As described above, in order for this alternative to have similar levels of service and ridership as the Preferred Alternative, it would require substantial railway improvements between Greenville Road and the BART Dublin/Pleasanton Station in addition to roadway crossing improvements along the Iron Horse Trail alignment, which would incur the opposition of the City of Livermore and the likely opposition of the City of Pleasanton (both of which are member agencies of the Authority), which would slow the Project implementation and would not be responsive to the goals and objectives of communities served by the Project. In addition, this alternative would require substantial improvements between Lathrop and Greenville to provide the same level of service as the Proposed Project which will result in similar costs for that portion as the Proposed Project.

- *Be a model of sustainability in the design, construction, and operation of the system*. Because the project would place a railway through existing residential neighborhoods, would require acquisition of park lands, would displace/require rerouting of a regional trail, and would have inferior service (and thus inferior ridership) and thus less reductions of VMT, criteria pollutants, and GHG emissions, this alternative would not be a model of sustainability.

For these reasons, this alternative was rejected.

Section 4
Overriding Considerations

4.1 Introduction

CEQA requires decision-makers to balance the economic, legal, social, technological, or other benefits of a project against its unavoidable environmental risks when determining whether to approve a project. If the specific economic, legal, social, technological or other benefits of the project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered acceptable (State CEQA Guidelines 15093). In this case, the lead agency must state in writing the specific reasons to support its action. This "statement of overriding considerations" shall be supported by substantial evidence in the record, shall be included in the record of the project approval, and should be mentioned in the notice of determination. Pursuant to Section 15093 of the CEQA Guidelines, the following Statement of Overriding Considerations has been prepared for the Preferred Alternative.

4.2 Statements of Fact in Support of Overriding Considerations

The Authority hereby finds that the following social, legal, environmental and economic benefits of the Preferred Alternative outweigh the significant unavoidable impacts for the following reasons. These benefits, viewed both individually and collectively, outweigh the significant unavoidable adverse effects of implementing the Preferred Alternative:

- The 42-mile, 7-station Preferred Alternative would link the Dublin/Pleasanton BART Station in the Tri-Valley with a major intermodal ACE station in North Lathrop. Currently, there is a 5-mile gap between ACE service and the BART system in the Tri-Valley and, after decades of planning, the BART board decided in May 2018 to no longer plan for expansion of the BART system to Livermore. Connecting BART and ACE with frequent, bidirectional service throughout the day, and providing expanded passenger rail connectivity between the San Joaquin Valley and the Bay Area, will increase inter-regional mobility. The connection of these two intermodal hubs would link nearly 500 miles of commuter and intercity rail with more than 130 stations in the Northern California Megaregion, providing an alternative to congested roads and highways.
- The Altamont Pass Corridor, located in the center of the Northern California Megaregion, connects the San Joaquin Valley to the Tri-Valley in the Bay Area and is a vital node in the megaregion's economic ecosystem as well as a key megaregion transportation route. The I-580 freeway serves the Altamont Pass Corridor and ranks as one of the most congested freeways in the megaregion during peak hours due to a high volume of regional and inter-regional commuter, freight, and recreational traffic. According to the Bay Area Council Economic Institute, more than 86,000 commuters currently travel this route daily, and this number is expected to increase by up to 75 percent from 2016 to 2040.

Throughout the Bay Area region, daily minutes of delay per worker due to commute congestion have steadily increased, rising by more than 40 percent over the past two decades. Within Alameda

County, the highways are key regional and inter-regional connectors. As one of the region's highway network hubs, Alameda County experiences a disproportionately high share of the region's congestion. Overall, 47 percent of trips on Alameda County roads originate outside of the county. I-580 is the primary east-west transportation corridor in eastern Alameda County, and the topography of the areas north and south of I-580 limits alternative east-west transportation routes. In 2018, Alameda County had five of the top ten most congested roads and 31 percent of the Bay Area's congestion-related vehicle delay. Specifically, the westbound segment of I-580 from approximately the San Joaquin County line to Hacienda Drive in Dublin and Pleasanton was the 17th most congested highway segment in the Bay Area in 2015, with the congestion primarily occurring during the morning commute.

Rapid development within eastern Alameda County and in the Tri-Valley area, as well as inter-regional commuting from San Joaquin County, has resulted in severe congestion along I-580. For example, 84 percent of Tracy residents commute out of Tracy for work. San Joaquin County places in the top 10 nationally for its percentage of residents with a commute over 90 minutes long. It is estimated that these commuters spent over 5,000 hours stuck in traffic in each direction during an average day during 2017. These long commutes can be explained in part by the long distance traveled and by the growing congestion on I-580. The number of daily commuters traveling through the Tri-Valley from Northern San Joaquin Valley has grown to 86,445, a 43 percent increase from 2010 to 2017 (Figure 1-7). As shown in Figure 1-8, the number of daily commuters traveling through the Tri-Valley from Northern San Joaquin Valley has continued to increase (14 percent between 2017 and 2018), resulting in even greater congestion.

The Preferred Alternative will help reduce commute traffic on heavily travelled routes between the Bay Area and northern San Joaquin Valley. The rapid increase in travel demand between the San Joaquin Valley, the Tri-Valley, and the South Bay, coupled with the growth in population in the surrounding areas, has placed increasing pressures on the highways serving the region. By 2040, the Preferred Alternative is expected to provide an estimated 33,000 daily rides in 2040. This will help ameliorate expected vehicle congestion in the I-580/Altamont Pass freeway corridor.

- The Preferred Alternative is designed to meet, serve, and expand on regional and State transportation goals as the Preferred Alternative and other investments in the megaregion are developed over the next two decades. Valley Link closes critical transit gaps and improves connectivity within the Bay Area and the Northern California Megaregion by connecting two designated State Rail Hubs, Stockton Area Hub and the Tri-Valley Hub, and providing a potential early connection to high-speed rail.
- The Preferred Alternative, by displacing vehicle trips with commuter rail trips, will reduce future air quality deterioration, particularly in the San Joaquin Valley Air Basin. The SJVAB is designated an extreme nonattainment area for the 8-hour federal standard for ozone and a nonattainment area for the federal PM2.5 standard. With respect to California standards, the SJVAB is currently a severe nonattainment area for the 1-hour ozone standard and a nonattainment area for the 8-hour ozone, PM2.5, and PM10 standards.

Section 3.3, *Air Quality* of the Draft EIR provides a summary of data collected at the air quality monitoring stations nearest to the Preferred Alternative corridor and a discussion of the total number of days that state and federal ambient air quality standards were exceeded. Because transportation is the major contributor to ozone precursors, increasing auto travel threatens the area's improvement in air quality. Growing congestion will add to the potential problems because of increased emissions of vehicles operating in stop-and-go traffic. Shifting commuters and other

travelers to higher occupancy modes is highly desirable as a means to partially offset the effects on air quality produced by the growth in auto travel. The Valley Link service offers the greatest potential for increased high-occupancy travel from the San Joaquin Valley to the Bay Area including in areas with the most severe air quality problems in the corridor. As shown on Table 3.3-19 of the Draft EIR, compared to existing conditions, by 2040, Valley Link would result in reduction in criteria emissions in both the BAAQMD and SJVAPCD.

- The State has adopted AB 32, the Global Warming Solutions Act of 2006, which seeks to make a first step in reducing statewide greenhouse gas (GHG) emissions. The long-term effects of climate change, if unchecked, could have substantial adverse effects on the economy, health, welfare and natural heritage of the San Francisco Bay Area and San Joaquin Valley, including sea level rise and more frequent droughts. The Authority, in adopting the Preferred Alternative, desires to connect the BART and ACE rail systems in a way that contributes most substantially to reducing GHG emissions to support California, national, and global efforts by reducing vehicle miles travelled (VMT) associated with commuting between the Bay Area and the northern San Joaquin Valley.

The Preferred Alternative will operate 74 daily round trips—providing an estimated 33,000 daily rides in 2040. This will result in the reduction of approximately 1.477 million vehicle miles traveled per year in 2040 (based on weekday reductions only) and the reduction of an estimated 33,979 to 42,657 metric tons of greenhouse gas (GHG) emissions annually in 2040. In addition, the Preferred Alternative would support the planning of local communities for transit-oriented development such as around the Isabel Station and near the Southfront Road Station Alternative in Livermore as well as the Downtown Tracy Station.

ATTACHMENT 5

MITIGATION MONITORING AND REPORTING PROGRAM VALLEY LINK

(SCH# 2018092027)

PREPARED FOR:

Tri-Valley–San Joaquin Valley Regional Rail Authority
1362 Rutan Court #100

Livermore, CA 94551
Contact: Michael Tree
Email: mtree@valleylinkrail.com

PREPARED BY:

ICF
201 Mission Street, Suite 1500
San Francisco, CA 94105
Contact: Rich Walter

April 2021

ICF. 2021. Mitigation Monitoring and Reporting Program for the Valley Link Project. April. San Francisco, CA. Prepared for Tri-Valley–San Joaquin Valley Regional Rail Authority, Livermore, CA.

1.0 Introduction

The California Environmental Quality Act (CEQA) requires that a Lead Agency establish a program to monitor and report on mitigation measures that it has adopted as part of the environmental review process, and that this program must be adopted at the time that the agency determines to carry out a project for which the environmental review process has been conducted (Public Resources Code Section 21081.6 (a) (1)). The Tri-Valley—San Joaquin Valley Regional Rail Authority (Authority) has prepared this Mitigation Monitoring and Reporting Program (MMRP) to ensure that mitigation measures identified in the Valley Link Project (Project) Environmental Impact Report (EIR) are fully implemented.

As the lead agency and proponent of this project, the Authority will implement the mitigation measures through its own actions, those of the construction Contractor, those of the rail service Operator and actions taken in cooperation with other agencies and entities. The Authority is ultimately accountable for the overall administration of the mitigation and monitoring program and for assisting relevant individuals and parties in their oversight and reporting responsibilities. The responsibilities of mitigation implementation, monitoring, and reporting extend to several entities including the Contractor and/or Operator as described below. However, the Authority will bear the primary responsibility for verifying that the mitigation measures are implemented.

2.0 Contractor Responsibilities

The Authority has defined the mitigation measures required for the Project that will be the construction Contractor's responsibilities.

The construction Contractor shall:

- Implement the mitigation measures for which it is responsible, as identified in Table 1, Summary of Mitigation Measures;
- Monitor its and its subcontractors' construction activities to ensure that the mitigation measures are being properly implemented;
- Accurately report its activities and results to the Authority;
- As one of the Contractor's Key Personnel, provide a qualified Environmental Compliance Lead for the Project who is acceptable to the Authority; and
- Provide additional specific expertise to fulfill specific roles as indicated in Section 4.0 to assist in the implementation of the MMRP.

3.0 Authority Responsibilities

The Authority will provide oversight of the Contractor's and Operator's activity and effectiveness of mitigation activities consistent with the reporting and monitoring schedule described in the column Implementation and Reporting Schedule in Table 1. The Authority will also implement mitigation that Table 1 indicates will be implemented by the Authority.

4.0 Table 1 – Summary of Mitigation Measures

The MMRP for the Project is presented as a table that includes the mitigation measures identified in the final EIR. The table is organized by environmental issue. The Authority may refine how it will implement a mitigation measure as long as compliance is achieved during Project implementation. Several supplementary tables from the final EIR are included at the end of this document that is referenced in the mitigation measures for ease of reference.

4.1 Description of Table Headers

The MMRP describes implementation and monitoring responsibilities, timing, implementation and reporting schedules, and implementation mechanisms or tools for each mitigation measure identified in the EIR, as described below. Reference to Contractor includes all subcontractors, as appropriate, working the direction and authority of the Contractor.

Mitigation Measure: Provides the mitigation measure as identified the final EIR.

Implementing, Monitoring, and Reporting Responsibilities: Identifies the entities that will be responsible for directly implementing the mitigation measures, reporting, and monitoring. Implementation can be the responsibility of the Authority, the Contractor, or other specified individuals such as a Qualified Biologist. Reporting on implementation will generally be the responsibility of the Contractor, with monitoring oversight provided by the Authority during the design and construction process. Post construction mitigation (such as monitoring replanted trees) may transition from the Contractor to Authority. Long-term mitigation responsibilities separate from construction will be held by the Authority.

Mitigation Timing: Implementation of mitigation will not all occur at the same time. Depending on the mitigation requirements, it may be undertaken prior to construction, during construction, following construction, or during operation of the project. These columns identify the stage(s) of the project during which the mitigation will be implemented and when reporting is to occur if it is required.

Implementation and Reporting Schedule: This column of the table describes when the mitigation will be implemented and when reporting is to occur if it is required.

Implementation Mechanism or Tool: Identifies the actions required to implement the mitigation measure, including any required agency consultation, documentation, agreements and/or conditions.

4.2 Implementation Roles

Responsibilities for implementation of this MMRP are as follows:

- **Contractor**: Designated contractor responsible for design and construction and for implementing or monitoring and reporting mitigation measures as specified in this MMRP.
- **Authority**: Lead Agency and designated representative responsible for the implementation, monitoring and reporting regarding mitigation measures specified in this MMRP.
- **Project Operator**: The operator of the Valley Link service, including responsibility for maintenance of the right of way and facilities.
- **Qualified Biologist**: A Qualified Biologist will be retained by the Authority for permitting and responsible for regulatory permit preparation and support (excluding responsibilities that will be assigned to the USFWS-Approved Biologist, as described below). A Qualified Biologist will also be retained by the contractor for construction and will be responsible for preparing and providing a Worker Environmental Awareness Training Program, as well as providing oversight to the Contractor's implementation of the biological mitigation and monitoring. Minimum qualifications for this position include the following: an individual with a bachelor's degree in biology or a similar natural resource field of study and prior experience monitoring the implementation of mitigation activities, as well as long-term success monitoring of mitigation projects.
- **USFWS-Approved Biologist**: A USFWS-Approved Biologist will be retained by the Authority for permitting and responsible for regulatory permit preparation and support. A USFWS-Approved Biologist will be retained by the Contractor and will be responsible for ensuring the appropriate treatment of federally listed species as identified in the EIR. Minimum qualifications for this position include the following: An individual with a bachelor's degree in biology or a similar natural resource field of study, possessing USFWS approval or a Section 10(A)(1)(a) permit to identify, handle, and relocate federally listed threatened and endangered species potentially present in the construction area.
- **Qualified Botanist**: A Qualified Botanist will be retained by the Authority and will be responsible for surveying areas of proposed construction disturbance containing undeveloped habitat suitable to support the special-status plants identified in the EIR to support permitting. A Qualified Botanist will also be retained by the Contractor and be responsible for preparing a revegetation and monitoring plan, if avoidance of special-status plants during construction is not possible. Minimum qualifications for this position include the following: an individual with a bachelor's degree in botany, biology, or similar a natural resource field of study, possessing experience conducting botanical surveys for special-status plant species and vegetation restoration in the greater San Francisco Bay Area.
- **Certified Arborist**: A Certified Arborist will be retained by the Authority for tree survey and development of the Tree Replacement Plan in cooperation with the contractor and will also be responsible for consulting with cities, counties, and affected property owners along the Project corridor during plan preparation. A Certified Arborist will also be retained by the Contractor for Project construction and will be responsible for overseeing the Contractor's tree mitigation in

conformance with the EIR. The Contractor in general shall avoid impacts to trees along the alignment through its final design and layout, where feasible. Minimum qualifications for this position include the following: (1) Minimum 3 years full-time experience in arboriculture or 2-year degree in arboriculture and 2 years practical experience for a 4-year degree in related field and one year of practical experience; and (2) a currently Certified Arborist per the ISA (International Society of Arboriculture).

- **Qualified Professional Archaeologist**: A Qualified Professional Archaeologist will be retained by the Contractor and will meet the Secretary of the Interior (SOI) Standards of Archaeology. The Qualified Professional Archaeologist will be responsible for implementing mitigation and coordinating the status of the archaeological mitigation with the Authority, the Contractor, and Archeological Monitors. The Qualified Professional Archaeologist will also be responsible for coordinating with the local Native American community. Minimum qualifications for this position are a graduate degree in archeology, anthropology, or closely related field plus: at least one year of full-time professional experience or equivalent specialized training in archeological research, administration, or management; at least four months of supervised field and analytic experience in general North American archeology and demonstrated ability to carry research to completion.

- **Archaeological Monitor**: Archaeological monitors will be retained by the Contractor and will be responsible for field monitoring of archaeological resources. The Authority will perform pre-construction investigation. Minimum qualifications for this position are a Bachelor's degree in anthropology with an emphasis in archaeology or closely related field (such as history or geology) and subsequent course work in archaeology and twelve months professional archaeology experience in California.

- **Qualified Geologist or Paleontologist**: A Qualified Geologist or Paleontological will be retained by the Authority for preparing the paleontological resources assessment and conducting environmental awareness training regarding paleontological resources. The Qualified Geologist or Paleontologist shall also be responsible for directing assessment and recovery actions in the event of an inadvertent discovery of paleontological resources. The Qualified Geologist or Paleontologist shall meet the qualifications found in the Society of Vertebrate Paleontology Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (Society of Vertebrate Paleontology 2010).

- **Qualified Environmental Consultant for additional hazardous material site assessment**: A Qualified Environmental Consultant will be retained by the Authority and will be responsible for preparation of a Phase II Environmental Site Assessment (ESA). The Contractor shall retain a Qualified Environmental Consultant who can assess whether hazardous materials are encountered and oversee their removal, disposal, and remediation in accordance with all applicable rules, regulations, and laws. Minimum qualifications for this position are that the consultant be a Professional Engineer (P.E.) or Professional Geologist (P. G.), registered in California, with experience conducting Phase II ESAs.

- **Qualified Acoustical Consultant**: A Qualified Acoustical Consultant will be retained by the Contractor and will be responsible for preparing the noise and vibration control plan. Minimum qualifications for this position include the following: 10+ years of experience as practicing

acoustical consultant; and a licensed professional engineer or Board Certified by the Institute of Noise Control Engineering.

5.0 Contractor Environmental Compliance Lead

The Contractor's Environmental Compliance Lead shall have a minimum of 10 years of experience overseeing and implementing compliance with requirements of environmental impact reports and required mitigations on major construction projects in California. The individual shall have expertise in compliance, mitigation, and in CEQA and NEPA regulations.

6.0 Construction Project Team Organization

Implementation of the MMRP related to construction will be a team effort consisting of both Authority and Contractor personnel. The Contractor's Environmental Compliance Lead shall be responsible for communications and coordination with the Authority's designated environmental lead regarding all MMRP activities throughout the duration of design and construction of the Project and following construction as determined by the Authority.

Contractor team members with specialized expertise identified in Section 4.2 shall report to the Contractor's Environmental Compliance Lead and shall work closely with Authority-designated experts in similar disciplines.

It is anticipated that, at a minimum, monthly meetings will be held between Authority and Contractor environmental leads and staffs to review status and progress relative to MMRP activities during construction. Additionally, the Authority and Contractor construction environmental leads shall ensure that all pre-requisite MMRP activities to design and construction are completed in a timely manner.

This page intentionally left blank.

Table 1. Mitigation Monitoring and Reporting Program – Summary of Mitigation Measures

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
AES-1.1: Install visual barriers between construction work areas and sensitive residential and recreational receptors The Authority will install visual barriers between stationary construction work areas and sensitive residential (e.g. where residences are directly adjacent to construction areas) and recreational receptors (e.g., where parks are directly adjacent to construction areas) to reduce impacts from the invasion of privacy and the change in visual quality. Barriers will not need to be placed along the Tri-Valley Alignment or in proximity to the Dublin/Pleasanton Station, Isabel Station, Southfront Road Station because construction would be occurring within the median or in close proximity to I-580, where residential and recreational receptors do not come in to direct visual contact with the construction site, and there are no residences or recreational areas that would be affected by staging areas identified for the Tri-Valley Alignment. Barriers will be placed to obscure views of stationary work areas (e.g., staging areas or areas of fixed construction) in other locations (not noted above) where construction activity and equipment would be disruptive and likely to lower the existing visual quality and residential or recreational receptors are directly adjacent to the construction areas. These efforts will include the following actions and performance standards: ● The Authority will install visual barriers to minimize sensitive receptors' (i.e., residents and recreational areas) views of construction work areas. ○ The visual barriers will be placed to protect residents and recreational areas within 0.25 mile of Project element construction sites where residents or recreationalists would have unobstructed views of the construction area. Recreational areas close to the project corridor that may require barriers can be found listed within the *Existing Visual Resources* section for each alignment, station, parking facility, and operations and maintenance facility. The visual barrier may be chain link fencing with privacy slats, fencing with windscreen material, a wood barrier, or other similar barrier. ○ The visual barrier will be a minimum of 6 feet high to help maintain the privacy of residents and block ground-level views toward stationary construction activities. Although the visual barriers would introduce a visual intrusion, they would greatly reduce the visual effects associated with visible construction activities, and screening construction activities and protecting privacy is deemed desirable. The visual barriers are an effective means for reducing the visibility of active construction work areas, thereby minimizing the impact on existing localized visual quality.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include in construction plans for Authority review prior to construction.	Authority review and approval of visual screening plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
AES-1.2: Limit construction near residences to daylight hours Construction activities scheduled to occur between 7 a.m. and 6 p.m. near residential areas within 0.25 mile of construction sites, other than construction in I-580, will not take place before or past daylight hours, which vary according to season. This will reduce the amount of construction experienced by viewer groups because most construction activities would occur during business hours when most viewer groups are likely to be at work and eliminate the need to introduce high-wattage lighting sources that would operate near residences. Construction of the Tri-Valley Alignment along I-580 will be required to control nighttime construction lighting per Mitigation Measure AES-1.3.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include in construction plans for Authority review prior to construction.	Authority review and approval of construction plan prior to construction.
AES-1.3: Minimize fugitive light from portable sources used for construction Any nighttime lighting used for nighttime construction will be evaluated for its ability to safely light the construction work area while reducing light spill and glare. At a minimum, the construction contractor will minimize Project-related light and glare to the maximum extent feasible, given safety considerations, for all viewer groups. Color-corrected halide lights or balloon lights, if suitable for construction of the Project, will be used. Portable lights will be operated at the lowest allowable wattage and height and raised to a height no greater than 20 feet, except for pedestrian bridge and flyover work. All lights will be screened and directed downward toward work activities and away from the night sky and nearby residential areas to the maximum extent possible. The number of nighttime lights used will be minimized to the greatest extent possible. This measure will also help to ensure that glare is minimized for nighttime drivers along I-580.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include in construction plans for Authority review prior to construction.	Authority review and approval of construction plan prior to construction.
AES-2.1: Landscape parking facilities at stations This mitigation measure would apply to parking lots and parking structures at all stations. Surface parking lots will be planted with trees and groundcover to improve aesthetics and provide shade. Parking structures will also provide landscaping in planter beds, which will be located around the perimeter of the structures. If space allows, street trees will also be planted in association with surface parking lots and parking structures. Shrubs may also be used if space allows. All landscaping will be designed to ensure passenger safety (e.g., so that security cameras and safety lighting are not obscured). No invasive plant species will be used under any circumstances. In addition, plant palettes will use drought-tolerant plant species and have a strong emphasis on California native plant species that are appropriate for a given site. An irrigation and maintenance program will be implemented during the plant establishment period and continued, as needed, to ensure plant survival. The landscaping plan will maximize the use of planting zones that are water efficient. Landscaped areas will be irrigated with a “smart” watering system that evaluates site conditions and plant materials and compares them against weather conditions to avoid overwatering. To avoid undue water flows, the irrigation system will be managed so that any broken spray heads, pipes, or other components are fixed within 1 to 2 days or the zone or system will be shut down until it can be repaired.	Contractor shall assume responsibility for landscaping implemented as part of construction. Operator for landscaping during operations.	X	X	X	X	Authority shall include as contract requirement. Contractor shall include landscaping plans in construction plans for Authority review prior to construction. Contractor shall include irrigation and maintenance plan. Operator shall follow same procedures as construction Contractor.	Authority review and approval of landscaping plans prior to construction. Authority review and approval of irrigation and maintenance plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
AES-2.2: Apply aesthetic design treatments to parking structures, pedestrian overcrossings, Interim OMF, viaduct structures, and retaining walls with high visibility along I-580 and from roadways within the Altamont Hills The project will implement an aesthetic design treatment for new pedestrian bridges over tracks, and bridges with high visibility. Choosing earth-toned colors for the surfaces will be less distracting to viewers than light or brightly colored surfaces. In general, light buff/tan or light gray colors stand out more than darker colors such as darker browns, red-browns, and warm grays that have the ability to complement the surrounding vegetation. The design motif applied to structures will reflect a combination of naturally colored surfaces and surfaces that are textured to appear as natural materials (e.g., rock or cobble) or that incorporates a design theme (e.g., wildlife and plants of local, native oak woodlands; traditional architectural elements such as inset panels; or other design reflecting local heritage or environment) using form liners. This will reduce visual monotony, soften verticality, reduce glare, and be more visually pleasing to viewers than plain surfaces for exterior facing barriers and girders on bridges that will be visible to traffic or recreational viewers passing under the overcrossing, decking, abutments and side supports, and columns. Nearby examples of such treatments include the I-5/French Camp interchange in Stockton and the SR 99/Sheldon Road overcrossing in Elk Grove. Non-local examples include Maryland 216 in Prince Georges County, Maryland; US 54/East Kellogg Drive and South Oliver Street interchange in Wichita, Kansas; and Roberts Road Bridge in Los Gatos, California. Roughened surfaces would soften the verticality of the surfaces by providing visual texture and reducing the amount of smooth surface that can reflect light.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include in construction plans for Authority review prior to construction.	Authority review and approval of construction plans prior to construction.
AES-2.3: Use selective grading and planting techniques in the Altamont Hills Prior to construction mobilization, the Authority and/or its' contractor will develop a grading and planting plan that identifies site-specific measures to remediate exposed soil and terrain issues, create a smooth transition between disturbed and natural habitats, and mitigate visual effects within the Altamont Hills. The term *construction mobilization* refers to the moment approval is given for materials and supplies, construction equipment, construction facilities and staging, and personnel to be physically on-site and for site modifications to begin. Existing information, such as topographical maps, vegetative surveys or records, and photographs, that show pre-existing site-specific (or reference-site) conditions prior to construction will be evaluated and used as tools for restoring disturbed sites. In general, however, the majority of sites will be evaluated for restoration to native habitat because of the amount of terrain alteration as well as vegetation and habitat loss that could result from construction of the proposed alignment and stations in the Altamont Hills. At a minimum, the grading and revegetation plans will meet the following performance standards. • Access roads to stations in the Altamont Hills will use the existing terrain as an asset to create curvilinear roadways that locate access roads parallel to slopes. Access roads running perpendicular to slopes will be avoided. This will reduce the visibility of the access road and make it more harmonious with the natural terrain. This technique will not be used where doing so would constitute a negative impact on sensitive habitats or sensitive species that outweighs the reduction of visual effects. • Surface parking areas will use the natural terrain as well, except where slopes exceed Americans with Disabilities Act access standards. This will create subtle, gently undulating surface parking lots with visual variety. • All terrain will be designed and graded to be rounded, avoiding sharp angles and steep or abrupt grade breaks or slope cuts. All exposed slopes will be seeded for erosion control and aesthetics. The Authority will require construction contractors to incorporate native grass to standard seed mixes, which may be non-native; however, under no circumstances will any	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include in construction plans for Authority review prior to construction.	Authority review and approval of construction plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
invasive grass plant species be incorporated into the seed mix. • Special attention will be paid to transitions between undisturbed and disturbed terrain to ensure that the transition appears as natural as possible and blend the lines between the two for a natural, organic appearance.							
AES-2.4: Underground new electric transmission lines in visually sensitive areas Where feasible, the Authority will underground new electric transmission line utilities (e.g., connections to TPSS sites, utilities supplying power to traction power stations) in visually sensitive areas to minimize their visual intrusion upon the landscape. This mitigation applies to new electric transmission lines in the Altamont Segment east of Greenville Road that may be associated with the Greenville TPSS connection to PG&E only. This mitigation does not apply to the connection between the proposed new TPSS that is approximately 0.3 mile east of the PG&E Midway substation and the PG&E Midway substation. OCS lines must be overhead and thus this measure does not apply to the OCS lines along the alignment. Undergrounding will not be required where existing transmission poles are used to carry additional power lines associated with the project or within urban areas where existing transmission corridors are present and the city has provided an exemption to undergrounding new utilities. Undergrounding will be a priority in the Altamont Hills. However, undergrounding will not be used where implementation constitutes an additional adverse impact on sensitive habitats or sensitive species that outweighs the reduction in visual effects. Therefore, underground electric transmission lines may daylight to avoid such areas. In such cases, the Project engineer will identify site-specific location adjustments to minimize tree removal and strategically locate new transmission lines along designated scenic routes in a manner that reduces the visual impacts on scenic resources and views along those routes. Implementation of this measure will minimize the effects on existing visual quality and character that result from new electric transmission lines in visually sensitive locations and due to associated removal and pruning of mature vegetation along proposed new transmission lines.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include in construction plans for Authority review prior to construction.	Authority review and approval of construction plan prior to construction; documentation of acceptance by affected utilities.
AES-2.5: Apply aesthetic surface treatments to certain structures in visually sensitive areas This measure applies to new fencing, pedestrian bridge safety barriers, safety railings, TPSS, OCS and steel transmission poles in the Altamont Hills. This measure also applies to the solar array infrastructure at the Tracy OMF. This measure also applies to all signal houses associated with the proposed alignments that would be visible to residents and from recreational areas and local roadways. These features will be colored or painted a shade that is two to three shades darker than the general surrounding area. Colors will be chosen from U.S. Department of the Interior, Bureau of Land Management, Standard Environmental Colors Chart CC-001, June 2008, which provides suitable colors for a variety of landscape types. Because color selection will vary by location, the facility designer will employ the use of color panels, which will be evaluated from KOPs during common lighting conditions (e.g., front lighting versus backlighting) to aid in the selection of an appropriate color. Color selections will be made from the coloring of the most prevalent season. Panels will be a minimum of 3 by 2 feet and evaluated from various distances, within 1,000 feet, to ensure the best possible color. If the TPSS contains a non-metal structure, then the building exterior will also utilize the color selection techniques described above to improve aesthetics, such as by using integral-colored concrete. All paints used for the color panels and structures will be color matched directly from the physical color chart rather than	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include in construction plans for Authority review prior to construction.	Authority review and approval of construction plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
digital or color-reproduced versions of the color chart. Paints will be a dull, flat, or satin finish to reduce the potential for glare; the use of glossy paints for surfaces will be avoided. Appropriate paint types will be selected that ensure durability for the finished structures. The appropriate operating agency or organization will maintain the paint color over time. In addition, OCS and steel transmission poles in the Altamont Hills will be designed in a manner that allows these features to blend with the surrounding built and natural environments so that the new features complement the visual landscape. Aesthetic considerations shall be considered when selecting OCS pole design. Different pole designs, including round poles, square poles, and multi-face poles, have different characteristics. Some individuals find square poles to be aesthetically less desirable due to their angularity. In addition, the Authority shall consider options to reduce pole diameter with increased pole thickness instead of wider poles with lesser thickness. Aesthetic considerations shall be balanced with other considerations including cost, safety, maintenance, and durability. The Authority shall also evaluate the potential to house OCS wire-tensioning weights inside larger diameter poles.							
AES-3.1: Replace disturbed vegetation along landscaped freeways The Authority will work with the appropriate Caltrans district landscape architect to determine if disturbed portions of landscaped freeways (as defined in Table 3.1-2 in this section) require replanting and to what extent. At a minimum, trees and shrubs will be replaced at a 1:1 ratio. Container sizes and species will be determined in coordination with the appropriate Caltrans district landscape architect. Disturbed groundcover will be replanted to match existing groundcover unless the Caltrans district landscape architect specifies otherwise. Irrigation of replacement plants will also be coordinated with the appropriate Caltrans district landscape architect because watering may occur with existing irrigation systems or irrigation systems may need to be installed. Any irrigation lines that are damaged within the state right-of-way because of Project construction will be replaced per Caltrans standards in coordination with the appropriate Caltrans district landscape architect. No invasive plant species will be planted under any circumstances.	Contractor	X	X	X		Authority shall include as contract requirement. Contractor shall include landscaping plans in construction plans for Authority review prior to construction. Contractor shall include irrigation and maintenance plan to Caltrans satisfaction.	Authority review and approval of landscape, irrigation and maintenance plans prior to construction. Caltrans approval of landscaping, irrigation, and maintenance plan.
AES-5.1: Apply minimum lighting standards This measure applies to all permanent sources of lighting installed as part of the Proposed Project. All artificial outdoor lighting will be limited to safety and security requirements, designed using the Illuminating Engineering Society's design guidelines, and in compliance with International Dark-Sky Association–approved fixtures. All lighting will be designed to have minimum impact on the surrounding environment and use downcast cut-off type fixtures that direct light only toward objects requiring illumination. Shielding will be used where needed to ensure that light pollution is minimized. Therefore, lights will be installed at the lowest allowable height to cast low-angle illumination that minimizes incidental light spill onto adjacent properties and open spaces or backscatter into the nighttime sky. The lowest allowable illuminance level will be used for all lighted areas, and the number of nighttime lights needed to light an area will be minimized to the highest degree possible. Light fixtures will have non-glare finishes that will not cause reflective daytime glare. Lighting will be designed for energy efficiency, with daylight sensors or timed with an on/off program. Parking garage lighting will be designed to meet safety requirements but will use locational motion-activated sensing, with regular-intensity lighting when a person is near a row of vehicles, then lower-intensity lighting after a period of inactivity when no one is near the vehicles. Lights will provide good color rendering, with natural light qualities and the minimum intensity feasible for security, safety, and personnel access	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include in construction plans for Authority review prior to construction.	Authority review and approval of construction plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
needs. Lighting, including light color rendering and fixture types, will be designed to be aesthetically pleasing. All LED lighting will avoid the use of BRWL lamps or a correlated color temperature that is higher than 3,000 degrees K (International Dark-Sky Association 2010a, 2010b, 2015). Wherever possible and pragmatic, the Authority will use fixtures and lighting control systems that conform to the International Dark-Sky Associations' Fixture Seal of Approval program. In addition, LED lights will use shielding to ensure that nuisance glare and light spill do not affect sensitive residential viewers. Luminaires will be chosen for the ability to provide horizontal and vertical beam control for better control in directing what is illuminated. Luminaires will also incorporate photometric reflector systems that are designed to reduce light pollution. Lights in parking lots and along pathways and station platforms will employ shielding to minimize off-site light spill, ambient light glow, and glare. They will also be screened and directed away from residences and adjacent uses to the highest degree possible. The amount of nighttime lights used will be minimized to the highest degree possible to ensure that spaces are not unnecessarily over-lit while still maintaining minimum adequate lighting to provide necessary visibility for security. For example, the amount of light can be reduced by limiting ornamental light posts to higher-use areas and using bollard lighting on travelway portions of the pathways. To ensure safety, interior parking structure lighting would be allowed, but the unnecessary overuse of interior nighttime lighting would be minimized such that the structure is not over-lit when not actively in use. Technologies to reduce light pollution evolve over time. Current design measures may help control light pollution but may not be the most effective means of control once the Project is designed. Therefore, all design measures used to reduce light pollution will employ the technologies available at the time of Project design to allow for the highest potential reduction in light pollution.							
AG-1.1: Restore Important Farmlands used for temporary staging areas Prior to any ground-disturbing activities at the site of a temporary disturbance area located on Important Farmland, the contractor will engage a qualified restoration specialist or soil scientist to prepare a site restoration plan. The purpose of the plan will be to return each disturbed site to similar slope and soil conditions after construction is complete. This restoration plan will address site-specific actions (e.g., topsoil salvage and replacement, soil decompaction), the sequence of implementation, and the parties responsible for implementation and successful achievement of restoration. Before beginning construction on Important Farmland, the contractor will (1) submit the qualifications of the restoration specialist or soil scientist to the Tri-Valley–San Joaquin Valley Regional Rail Authority (Authority) for review and approval and (2) after Authority approval, coordinate with the specialist to develop a draft restoration plan and will submit the restoration plan to the Authority for review and obtain Authority (and, if applicable, the landowner) approval. The restoration plan will also include time-stamped photo documentation of the pre-construction conditions of all temporary disturbance areas. The Authority will ensure that the contractor will return all construction access, mobilization, material laydown, and staging areas on Important Farmlands to a condition equal to the pre-construction staging condition through implementation of the restoration plan. This requirement will be included in the construction contract requirements.	Contractor	X	X	X		Authority shall include as contract requirement. Contractor shall include restoration plans for Authority review prior to construction. Contractor shall document farmland restoration after construction.	Authority review and approval of restoration plans prior to construction. Authority review and approval of restoration documentation after construction

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
AG-1.2: Conserve Important Farmlands (Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland) The Authority will enter into an agreement with the California Department of Conservation and its California Farmland Conservancy Program to implement agricultural land mitigation. The Authority will fund the California Farmland Conservancy Program's work to identify suitable agricultural land for mitigation of impacts and fund the purchase of agricultural conservation easements from willing sellers. The performance standards for this measure are to preserve Important Farmland in an amount commensurate with the quantity and quality of the converted farmlands, within the same agricultural regions where the impacts occur, at a replacement ratio of not less than 1:1 for Important Farmlands that are permanently converted to nonagricultural use by the Proposed Project and 0.5:1 for Important Farmland parcels that are divided into severed or remnant parcels that are not viable for continued agricultural production. The Authority will document implementation of Mitigation Measure AG-1.2 through completion of the agreement and a report to the Authority Board showing completion of conservation easement acquisition.	Authority	X	X	X		Authority shall develop agreement and fund the agreement by no later than the end of construction.	Authority shall report completion of the agreement to the Authority Board prior to the completion of construction.
AG-3.1: Notify agricultural property owners or leaseholders Prior to the start of any construction or maintenance activity on or adjacent to Important Farmland that would result in temporary use of Important Farmland, the Authority will provide written notification to agricultural property owners or leaseholders immediately adjacent to the footprint of the alignment, station, or OMF. The notification will indicate the intent to begin construction or maintenance, including the estimated date for the start of construction or maintenance activities. In order to provide agricultural property owners or leaseholders sufficient lead time and make any changes to their operations due to construction or maintenance, this notification shall be provided at least 3 months but no more than 12 months prior to the start of the activity.	Contractor	X	X	X	X	Authority shall include as contract requirement. Contractor shall notify property owners prior to construction and maintenance.	Authority review and approval of notifications
AG-3.2: Coordinate with utility and energy service providers Prior to construction, the contractor will prepare a technical memorandum documenting how construction or maintenance activities that could affect utility or energy service deliveries would be coordinated with service providers to minimize or avoid interruptions. The technical memorandum will be provided to the Authority for review and approval.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include utility coordination plan in construction plans for Authority review prior to construction.	Authority review and approval of utility coordination plan prior to construction.
AG-3.3: Verify new irrigation facilities are operational before disconnecting the original facility Where relocating an irrigation facility is necessary, the contractor will verify the new facility is operational prior to disconnecting the original facility, where feasible. The contractor will document all relocations in a memorandum for Authority review and approval.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include utility coordination plan in construction plans for Authority review prior to construction.	Authority review and approval of utility coordination plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
AG-3.4: Maintain access to Important Farmlands Where construction would temporarily affect existing farm access roads with valid use rights serving Important Farmland, the Authority will coordinate with agricultural property owners or leaseholders to provide temporary access, as necessary to maintain routine agricultural operations and normal business activities during Project construction. If temporary crossings are necessary, they shall comply with State legal requirements for railroad crossings.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include in construction plans for Authority review prior to construction.	Authority review and approval of construction plan prior to construction.
AG-3.5: Provide permanent equipment crossings on affected access roads Where construction would permanently affect existing farm access roads with valid use rights serving Important Farmland, the Authority will coordinate with agricultural property owners or leaseholders to provide permanent access, as necessary to maintain routine agricultural operations and normal business activities. If new crossings are necessary, they shall comply with State legal requirements for railroad crossings.	Contractor	X	X	X		Authority shall include as contract requirement. Contractor shall include in construction plans for Authority review prior to construction.	Authority review and approval of construction plan prior to construction.
AQ-2.1: Implement advanced emissions controls for off-road equipment during construction The Tri-Valley–San Joaquin Valley Regional Rail Authority (Authority) shall require the following construction equipment exhaust emissions requirements to be included in construction contract specifications: • All off-road equipment greater than 25 horsepower and operating for more than 20 total hours over the entire duration of construction activities shall have engines that meet or exceed either USEPA or CARB Tier 4 Final off-road emission standards, if commercially available. Lesser-tier engines shall be allowed on a case-by-case basis when the contractor has documented that no engine equipment or emissions equivalent retrofit equipment is available for a particular equipment type that must be used to complete construction. Documentation shall consist of signed written statements from at least two construction equipment rental firms or equivalent. • A copy of each unit's certified tier specification and any required CARB or air pollution control district operating permit shall be collected by the contractor at the time of mobilization of each piece of equipment and included in monthly reporting to the Authority. • Construction contractor(s) shall utilize portable electrical equipment where commercially available and practicable to complete construction. Construction contractors shall utilize electrical grid power instead of diesel generators when (1) grid power is available at the construction site; (2) when construction of temporary power lines are not necessary in order to provide power to portions of the site distant from existing utility lines; (3) when use of portable extension lines is practicable given construction safety and operational limitations; and (4) when use of electrical grid power does not compromise construction schedules. When electrical equipment is not practicable for portable equipment and/or electrical grid power is not practicable, then diesel construction equipment that can utilize renewable diesel safely and effectively shall use renewable diesel provided renewable diesel is available within reasonably distance from the construction site. Contractors shall provide the Authority (or the Authority's oversight contractor) with documentation prior to construction showing their evaluation of the availability of portable electrical equipment, potential use of grid power, and their plans to use renewable diesel in fulfillment of these requirements and shall document implementation of those plans during	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include an emissions control plan in construction plans for Authority review prior to construction. Contractor shall document field compliance with the equipment requirements and provide to Authority periodically during construction.	Authority review and approval of emissions control prior to construction. Authority shall review compliance with equipment requirements during construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
construction.							
AQ-2.2: Implement off-road engine maintenance and idling restrictions during construction The Authority shall require the following construction equipment exhaust emissions requirements to be included in construction contract specifications: • The construction contractor shall minimize off-road equipment idling times either by shutting equipment off when not in use or reducing the maximum idling time to 2 minutes. Clear signage will be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. • All equipment shall be checked by a certified visible emissions evaluator.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include an emissions control plan in construction plans for Authority review prior to construction. Contractor shall document field compliance with the equipment requirements and provide to Authority periodically during construction.	Authority review and approval of emissions control prior to construction. Authority shall review compliance with equipment requirements during construction.
AQ-2.3: Implement advanced emissions controls for trains during construction The Authority shall require the following construction equipment exhaust emissions requirements to be included in construction contract specifications: • The construction contractor shall require that all diesel-powered trains used during Project construction have engines that meet or exceed either USEPA or CARB Tier 4 train emission standards. • A copy of each unit's certified tier specification and any required CARB or air pollution control district operating permit shall be collected by the contractor at the time of mobilization of each piece of equipment and included in monthly reporting to the Authority.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include an emissions control plan in construction plans for Authority review prior to construction. Contractor shall document field compliance with the equipment requirements and provide to Authority periodically during construction.	Authority review and approval of emissions control prior to construction. Authority shall review compliance with equipment requirements during construction.
AQ-2.4: Utilize modern fleet for on-road material delivery and haul trucks during construction The Authority shall require the following material-hauling truck fleet mix requirements to be included in construction contract specifications: • The construction contractor shall ensure that all on-road heavy-duty diesel trucks with a gross vehicle weight rating of 19,500 pounds or greater used at the project site will comply with USEPA 2007 on-road emission standards for PM10 (0.01 grams per brake horsepower-hour) where commercially available. These PM10 standards were phased in through the 2007 and 2010 model years on a percent of sales basis (50 percent of sales in 2007 to 2009 and 100 percent of sales in 2010). This measure assumes that all on-road heavy-duty diesel trucks will be model year 2010 and newer, with all trucks compliant with USEPA 2007 on-road emission standards. While impacts are associated with PM2.5 concentrations and the USEPA 2007 on-road emission standards address PM10 emission, the newer engine technologies that are required to meet	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include an emissions control plan in construction plans for Authority review prior to construction. Contractor shall document field compliance with the equipment requirements and provide to	Authority review and approval of emissions control prior to construction. Authority shall review compliance with equipment requirements during construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
the PM10 emission standards will also reduce PM2.5 concentrations. In finalizing the 2007 emission standards, USEPA concluded that the standards finalized in the rule would significantly reduce Heavy-Duty Vehicle emissions of SOX, NOX, VOCs and elemental carbon, and thus contribute to reductions in ambient concentrations of PM10 and PM2.5 (USEPA 2001). • For specialty delivery or hauling vehicles, lesser-tier engines shall be allowed on a case-by-case basis when the contractor has documented that no engine equipment or emissions equivalent retrofit equipment is available for a particular delivery or hauling vehicles that must be used to complete construction. Documentation shall consist of signed written statements from at least two truck rental or supplier firms or equivalent. • Copies of truck fleet compliance with this requirement shall be collected and included in monthly reporting to the Authority.						Authority periodically during construction.	
AQ-2.5: Implement fugitive dust controls during construction The Authority shall require the following fugitive dust control requirements to be included in construction contract specifications. The construction contractor shall implement basic and enhanced control measures at all construction and staging areas to reduce construction-related fugitive dust. The following measures are based on BAAQMD's CEQA guidelines and are in conformance with SJVAPCD fugitive dust control requirements (Regulation VIII). <u>Basic Fugitive Dust Control Measures</u> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day. • All haul trucks transporting soil, sand, or other loose material offsite will be covered. • All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used. • Post a publicly visible sign with the telephone number and the name of the person to contact at the lead agency regarding dust complaints. This person will respond and take corrective action within 48 hours. The phone number of the district will also be visible to ensure compliance. <u>Enhanced Fugitive Dust Control Measures for Land Disturbance</u> • All exposed surfaces will be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. • All excavation, grading, and/or demolition activities will be suspended when average wind speeds exceed 20 mph. • Wind breaks (e.g., trees, fences) will be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include an emissions control plan in construction plans for Authority review prior to construction. Contractor shall document field compliance with the equipment requirements and provide to Authority periodically during construction.	Authority review and approval of emissions control prior to construction. Authority shall review compliance with equipment requirements during construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
• Vegetative ground cover (e.g., fast-germinating native grass seed) will be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. • The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time will be limited. Activities will be phased to reduce the amount of disturbed surfaces at any one time. <u>Measures for Entrained Road Dust</u> • The Project shall comply with applicable trackout prohibition, trackout cleanup, monitoring, and recordkeeping requirements in BAAQMD Regulation 6, Rule 6, as applicable to the Project in addition to the requirements below. • All trucks and equipment, including their tires, will be washed off prior to leaving the site. • Site accesses to 100 feet from the paved road will be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel. • Sandbags or other erosion control measures will be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent. • All vehicle speeds on unpaved roads will be limited to 15 mph. • All unpaved roads will be watered twice daily.							
AQ-2.6: Enter into a Voluntary Emissions Reduction Agreement for Project Construction Emissions over BAAQMD emissions in the SFBAAB The Authority shall require the following fugitive dust control requirements to be included in contract specifications. Prior to construction, the Authority or its contractor will enter into a memorandum of understanding (MOU) with the Bay Area Clean Air Foundation (Foundation), a public non-profit and supporting organization for the BAAQMD, to reduce VOC and NO_X to below the appropriate CEQA threshold levels through a voluntary emissions reduction agreement. The mitigation fee amount will be determined at the time of mitigation to fund one or more emissions reduction projects within the SFBAAB. The Foundation will require an additional administrative fee of no less than 5 percent. The mitigation fee will be determined by the Authority or its contractor and the Foundation based on the type of projects available at the time of mitigation. When the CEQA threshold is exceeded, these funds may be spent to reduce either VOC or NO_X emissions (ozone precursors). This fee is intended to fund emissions reduction projects to achieve reductions, with the estimated tonnage of emissions reductions required starting in the first year of construction. Documentation of payment will be provided to the Authority or its designated representative. The MOU will include details regarding the annual calculation of required mitigation amounts the Authority must achieve, funds to be paid, administrative fee, and the timing of the emissions reduction projects. Acceptance of this fee by the Foundation will serve as an acknowledgment and commitment by the Foundation to: (1) implement an emissions reduction project(s) within a timeframe to be determined based on the type of project(s) selected after receipt of the mitigation fee designed to achieve the emission reduction objectives; and (2) provide documentation to the Authority or its contractor describing the project(s) funded by the mitigation fee, including the amount of emissions reduced (tons per year) in the	Authority	X	X			Authority shall enter into a MOU with the Bay Area Clean Air Foundation.	Authority to report implementation of the MOU to Authority Executive Director prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
SFBAAB from the emissions reduction project(s). To qualify under this mitigation measure, the specific emissions reduction project(s) must result in emission reductions in the SFBAAB that are real, surplus, quantifiable, enforceable, and will not otherwise be achieved through compliance with existing regulatory requirements or any other legal requirement. Funding will need to be received prior to contracting with participants and should allow enough time to receive and process applications to fund and implement off-site reduction projects prior to commencement of project activities being reduced. This will roughly equate to 1 year prior to the required mitigation; additional lead time may be necessary depending on the level of offsite emission reductions required for a specific year. The implementation of this mitigation measure would not be expected to affect air quality in the BAAQMD because funding emissions reductions would not result in any physical change to the environment, and therefore would not result in other secondary environmental impacts. In addition to VOC and NO_X, the implementation of emission-reduction projects could result in reductions of other criteria pollutants and/or GHGs. However, this would be a secondary effect of this mitigation measure and is not a required outcome to mitigate any impacts of the project.							
AQ-2.7: Enter into a Voluntary Emissions Reduction Agreement for Project Construction Emissions over SJVAPCD emissions in the SJVAB The Authority shall require the following fugitive dust control requirements to be included in construction contract specifications. The Authority or its contractor will enter into a Voluntary Emissions Reduction Agreement (VERA) with the SJVAPCD that will establish the framework for fully mitigating construction emissions of NO_X, VOC, PM10, and PM2.5 below the SJVAPCD thresholds in the SJVAB. The project-level VERA must be executed prior to commencement of construction and the mitigation fees and reductions delivered and achieved according to the requirements of the VERA. The implementation of this mitigation measure would not be expected to affect air quality in the SJVAPCD because purchasing emissions reductions would not result in any physical change to the environment, and therefore would not result in other secondary environmental impacts. In addition to NO_X and PM10, the implementation of emissions reduction projects could result in reductions of other criteria pollutants, GHGs, or both. However, this would be a secondary effect of this mitigation measure and is not a required outcome to mitigate any impacts of the project.	Authority		X	X		Authority shall enter into a Voluntary Emissions Reduction Agreement (VERA) with the SJVAPCD.	Authority to report implementation of the agreement to Authority Executive Director prior to construction.
BIO-1.1: Conduct preconstruction surveys for special-status plant species The Authority will retain a qualified botanist to conduct preconstruction surveys for special-status plant species specified in Table 3.4-2. During appropriate species-specific identification periods at least 1 year prior to the initiation of construction, the qualified botanist will survey suitable habitat in the work areas for the species, in accordance with CDFW protocols (California Department of Fish and Wildlife 2018b). The results of the surveys, which will require multiple visits because of varying blooming periods and differences in work area construction initiation, will be documented in brief reports or technical memoranda. If the survey demonstrates the absence of special-status plant species in the improvements area, no further actions will be required. If special-status plant species are present in the area and can be avoided, a 20-foot no-disturbance buffer will be installed around the plants. If special-status plant species are present in the area and cannot be avoided (work within 20 feet), then Mitigation Measure BIO-1.2 described below will be employed. If Mitigation Measure BIO-1.2 is infeasible, then compensatory mitigation per the applicable regional habitat conservation plans (i.e., 5:1 mitigation ratio for covered plant	Contractor		X			Authority shall include as contract requirement. Contractor shall develop a plant survey plan for Authority review and approval, conduct surveys and report results to Authority prior to construction.	Authority review and approval of survey plan and survey report prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
species under the EACCS and 3:1 for plants under the SJMSCP) will be followed for all special-status plant species. At minimum at 3:1 mitigation ratio will apply for permanent impacts to special-status plant species. If a federal- and/or state-listed species is present, the Authority will notify USFWS and/or CDFW to discuss avoidance and mitigation measures. Acquisition of incidental take permits will be pursued with the applicable resource agencies prior to construction activities if avoidance of federal- and/or state-listed plant species are infeasible.							
BIO-1.2: Prepare a salvage, relocation, or propagation and monitoring plan for special-status plant species If the protocol-level botanical survey reveals the presence of special-status plant species in the study area, the Authority will notify USFWS and/or CDFW. A qualified botanist or restoration ecologist will prepare a salvage, relocation, or propagation and monitoring plan in coordination with USFWS and/or CDFW prior to construction to address affected special-status plant species. The plan will include provisions that address the techniques, location, and procedures required for the successful establishment of the plant populations. The plan will include provisions for performance that address survivability requirements, maintenance, monitoring, implementation, and the annual reporting requirements. The following performance standards will apply. Monitoring and success criteria applicable to special-status plant salvage, relocation, or propagation will require the following. • At least two surveys by a qualified botanist or ecologist per monitoring year. • At least 80 percent of the planted area must support vegetation composition and density consistent with reference population conditions. • At least 80 percent of the planted area must support target species amounts similar to reference feature conditions. • A minimum of 5 consecutive years of monitoring to ensure success criteria are met. • Remedial actions to restore intended ecological function of planted areas that fail to meet the success criteria for 3 consecutive years.	Contractor	X	X	X		Authority shall include as contract requirement. Contractor shall prepare a salvage, relocation, or propagation and monitoring plan prior to disturbance of special-status plant species for Authority and USFWS and/or CDFW. Contractor shall implement plan after Authority, USFWS and/or CDFW approval including meeting success criteria and monitoring requirements. A completion report will be submitted to Authority, USFWS and/or CDFW.	Authority review and approval of salvage, relocation or propagation and monitoring plan prior to submittal to USFWS and/or CDFW. USFWS and/or CDFW review and approval prior to construction. Mitigation completion report review and approval by Authority, USFWS, and/or CDFW.
BIO-1.3: Document affected special-status plant species All directly affected areas of special-status plants will be documented by a qualified botanist or ecologist retained by the Authority prior to impacts. Documentation will include density and percent cover; key habitat characteristics, including soil type, associated species, hydrology, and topography; and photographs of preconstruction conditions.	Contractor	X				Authority shall include as contract requirement. Contractor shall develop a plant survey plan for Authority review and approval, conduct surveys and report results in Authority prior to construction.	Authority review and approval of survey plan and survey report prior to construction.
BIO-1.4: Prevent introduction or spread of invasive plant species The Authority will implement the following actions to avoid and minimize the spread or introduction of invasive plant species. • Clean construction equipment and vehicles in a designated wash area prior to entering and exiting the construction site. • Educate construction supervisors and managers about invasive plant identification and the importance of controlling and	Contractor	X	X	X		Authority shall include as contract requirement. Contractor shall include in an invasive species control plan construction plans for	Authority review and approval of invasive species control plan prior to construction. Authority review and

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
preventing the spread of invasive plant infestations. • Treat small, isolated infestations with eradication methods that have been approved by or developed in conjunction with CDFW and USFWS to prevent or destroy viable plant parts or seeds. • Minimize surface disturbance to the greatest extent feasible to complete the work. • Use native, noninvasive species or nonpersistent hybrids in erosion-control plantings to stabilize site conditions and prevent invasive plant species from colonizing. • Use weed-free imported erosion-control materials (or rice straw) in upland areas. One year after construction, conduct a monitoring visit to each active or previously active (within 1 year) improvement footprint to ensure that no new occurrences of invasive plant species not previously present have become established.						Authority review prior to construction. Contractor shall complete post-construction monitoring and conduct remedial action if needed and submit monitoring report to Authority.	approval of post construction monitoring report.
BIO-2.1: Obtain coverage from, be consistent with, and tier from existing conservation strategies as feasible The Authority will either obtain coverage through the applicable HCP, NCCP, or other biological conservation plan, where applicable, or follow the guidance in these conservation plans and strategies in developing compensatory mitigation strategies. Construction activities within Alameda County will either obtain compensatory habitat mitigation through the EACCS or use the mitigation prescribed in the EACCS as a basis for mitigation and obtain coverage under separate applicable state and federal permits from CDFW and USFWS. Similarly, construction within San Joaquin County will either obtain compensatory habitat mitigation through the SJMSCP or use the mitigation prescribed in the SJMSCP as a basis for mitigation and obtain coverage under separate applicable state and federal permits from CDFW and USFWS. The Authority will be responsible for acquiring, funding, monitoring, restoring, enhancing, reporting, and implementing compensatory habitat mitigation and contingency actions per the applicable state and federal permits. If impacts occur outside of applicable HCP, NCCP, or other biological conservation plan or regional conservation strategy coverage area, the Authority will implement compensatory mitigation for impacts on habitat for the species listed below, at the corresponding mitigation ratios. • Longhorn fairy shrimp and vernal pool fairy shrimp—10:1 ratio (mitigation area to impact area) • Valley elderberry longhorn beetle—3:1 • California tiger salamander and California red-legged frog—3:1 • Giant garter snake—3:1 • Swainson's hawk (includes foraging habitat in the San Joaquin Valley)—1:1 to 0.25:1, (dependent on nest location) • Burrowing owl—3:1 • Riparian brush rabbit and riparian woodrat—3:1 • San Joaquin kit fox and American badger—3:1	Authority shall obtain coverage from applicable plans and implement compensatory mitigation for special-status species, as necessary. As may be necessary, Authority shall obtain coverage under separate applicable state and federal permits from CDFW and USFWS.	X	X			Authority shall obtain coverage prior to construction. Authority shall prepare a compensatory mitigation plan prior to construction and shall implement all required compensatory activities prior to the end of construction.	Authority shall report completion of the compensatory mitigation to the Authority Executive Director at the end of construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
Where feasible during construction, the Authority will employ a 250-ft no-disturbance buffer around habitats including vernal pools, freshwater wetlands, and riparian habitats that may support special-status species. Impacts that occur within the region-specific plan coverage areas will be mitigated at amounts consistent with the respective plan.							
BIO-2.2: Conduct a worker environmental training program for construction personnel Before any equipment staging, grading, or vegetation removal in areas supporting or potentially supporting sensitive biological resources (e.g., aquatic, riparian, and wetlands habitat; habitat for special-status wildlife species; active bird nests, active bat roosts), The Authority will prepare and implement a worker environmental awareness training program. The training program will be provided to all construction personnel (contractors and subcontractors) to brief them on the need to avoid effects on sensitive biological resources and penalties for not complying with applicable state and federal laws and permit requirements. The training program will be delivered by a biologist and will include information on the life history and habitat requirements of special-status species potentially occurring in or adjacent to the improvements footprint, the importance of protecting habitat, and the terms and conditions of the BOs and other applicable permits. The training program will also cover general restrictions and guidelines that must be followed by all construction personnel to reduce or avoid effects on sensitive biological resources during construction.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include in an environmental awareness training plan as part of construction plans for Authority review prior to construction.	Authority review and approval of environmental awareness plan prior to construction.
BIO-2.3: Implement noise reduction measures for pile driving in or adjacent to streams and wetlands as feasible Potential injury and mortality associated with pile driving, which may be required for the pile installation for the new and replacement bridges, will be minimized by implementing the measures listed below. The contractor will be required to implement the following measures, developed in coordination with the design engineers, to minimize the exposure of special-status fish and aquatic wildlife species to potentially harmful underwater sounds: • If feasible, the contractor will vibrate all piles to the maximum depth possible before using an impact hammer. • During impact driving, the contractor will limit the number of strikes per day to the minimum necessary to complete the work. • The smallest pile driver and minimum force necessary will be used to complete the work. • During impact driving, the contractor will be required to use a bubble ring or similar device to minimize the extent to which the interim peak and cumulative SEL thresholds are exceeded. • Pile driving activity will not occur at night. • If feasible, in-water work will occur behind a dewatered cofferdam. A biologist will be present at initial dewatering to salvage and rescue any stranded fish and/or wildlife.	Contractor	X	X			Authority shall include as contract requirement. The Contractor shall prepare a noise reduction and monitoring plan, including hydroacoustic monitoring for Authority review.	Authority review of noise study and review and approval of noise reduction and monitoring plan prior to construction.
BIO-2.4: Implement seasonal restrictions for in-water work as feasible There will be a construction work window of June 15 to October 15 for all work within creek and river channels. This time period will minimize impacts on migrating special-status fish species, such as adult steelhead and Chinook salmon. In-water	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a	Authority review and approval of biological resources avoidance and minimization plan prior to

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
work within flowing streams will dewater only up to half of the wetted stream at any time to allow fish passage. Seasonal restrictions for in-water work are also applicable to special-status aquatic wildlife species.						biological resources avoidance and minimization plan for Authority review prior to construction.	construction.
BIO-2.5: Protect wetlands during construction The Authority will ensure that a qualified resource specialist (i.e., wetland biologist, ecologist, soil scientist) will clearly identify wetland areas to be preserved abutting construction areas and wetland areas outside of the direct construction area, with high-visibility construction fencing or markers (e.g., lathe or pin flags) before site preparation. Construction will not encroach upon jurisdictional wetlands to be preserved that are identified by the resource specialist. The resource specialist will use the Project's verified wetland delineation to confirm the location of wetland boundaries, based on existing conditions at the time of the avoidance marking. Exclusion fencing or markers will be installed before construction activities are initiated, and the fencing will be maintained throughout the construction period. No construction activity, traffic, equipment, or materials will be permitted in fenced wetland areas to be preserved. Exclusion fencing and markers will be removed following the completion of construction activities. All conditions imposed by the state and federal permits will be implemented. The conditions will be clearly identified in the construction plans and specifications and monitored during and after construction to ensure compliance.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a biological resources avoidance and minimization plan for Authority review prior to construction.	Authority review and approval of biological resources avoidance and minimization plan prior to construction.
BIO-2.6: Protect sensitive natural communities, including riparian habitat, during construction The Authority will ensure that a qualified resource specialist (i.e., biologist, botanist, ecologist, soil scientist) will clearly identify sensitive natural communities, including riparian habitat, to be preserved abutting the construction areas and outside of the direct construction area with high-visibility construction fencing or markers (e.g., lathe or pin flags) before site preparation. Construction will not encroach upon sensitive natural communities identified by the resource specialist to be preserved. The resource specialist will use the verified wetland delineation, soils data, and land cover data to confirm the location of sensitive natural community boundaries, based on existing conditions at the time of the avoidance marking. Exclusion fencing or markers will be installed before construction activities are initiated, and the fencing will be maintained throughout the construction period within the segment. No construction activity, traffic, equipment, or materials will be permitted in fenced sensitive natural community areas to be preserved. Exclusion fencing and markers will be removed following completion of construction activities. All conditions imposed by the state and federal permits will be implemented. The conditions will be clearly identified in the construction plans and specifications and monitored during and after construction to ensure compliance.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a biological resources avoidance and minimization plan for Authority review prior to construction.	Authority review and approval of biological resources avoidance and minimization plan prior to construction.
BIO-2.7: Protect vernal pool-endemic species If any work remains to be completed after the start of the rainy season (October 15 to June 1), the Authority or its contractor will install exclusion fencing and erosion control measures prior to any ground disturbance within 50 feet of wetlands and vernal pools under the guidance of an agency-approved biologist. The fencing will be installed around the perimeter of vernal pools and other seasonal wetlands. The contractor, under the supervision of the biologist, will erect and maintain the exclusion fencing.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a biological resources avoidance and minimization plan for Authority review prior to construction.	Authority review and approval of biological resources avoidance and minimization plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
BIO-2.8: Protect valley elderberry longhorn beetle Before ground disturbance within 165 feet of any elderberry shrubs (U.S. Fish and Wildlife Service 2017a) to be preserved, a biologist will identify any shrubs in and along improvement areas with potential to support valley elderberry longhorn beetle, and the Authority or its contractor will establish a 20-foot buffer between shrubs and the environmental footprints by installing concrete barriers (K-rails) at locations where daily construction activities will persist for more than 4 weeks or temporary orange construction fencing (4-foot-high commercial-quality woven polypropylene). Within buffer areas, signs will be posted along fencing for the duration of construction. The signs will contain the following text: This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the federal Endangered Species Act of 1973 (ESA), as amended. Violators are subject to prosecution, fines, and imprisonment. Buffers around elderberry shrubs or clusters of shrubs will be inspected weekly by the qualified biologist during ground-disturbing activities and monthly after ground-disturbing activities until construction is complete or until the fences are removed, as approved by the biologist and the resident engineer. The biologist will be responsible for ensuring that the contractor maintains the buffer area fences around elderberry shrubs throughout construction. The monitor will provide monthly biological inspection reports to the Authority and USFWS. The Authority will ensure that the construction area is watered down as necessary to prevent fugitive dust from becoming airborne and accumulating on elderberry shrubs in environmental footprints and adjacent to construction areas activities (including unpaved access routes).	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a biological resources avoidance and minimization plan for Authority review prior to construction.	Authority review and approval of biological resources avoidance and minimization plan prior to construction.
BIO-2.9: Protect California tiger salamander, western spadefoot toad, and California red-legged frog In advance of project activities, a qualified biologist will conduct a habitat assessment for California tiger salamander to determine if the alignment contains suitable upland and aquatic habitat for Calfornia tiger salamander. If the habitat assessment determines California tiger salamander habitat is present and project activities have the potential to impact tiger salamander and/or its habitat, the Authority will discuss with CDFW how to implement the project and avoid impacts to the species. The Authority will retain a USFWS- and/or CDFW-approved biologist (as appropriate) to identify and flag (pin flags or 4-foot lath) all suitable aquatic habitat to be preserved for California tiger salamander, western spadefoot toad, and California red-legged frog outside of, but within 250 feet of the environmental footprint and ground-disturbance areas prior to staging, vegetation clearing, grading, or other construction activities. Where feasible within the Proposed alignment and construction methods, the Authority or its contractor will protect habitat areas by installing orange exclusion and erosion control fencing at the maximum practicable distance from the work site or, if feasible, at least 250 feet from the aquatic habitat edge, wet or dry, to make it easily visible by construction crews. If a 250 -foot buffer cannot be feasibly provided, then the Authority will assess the potential for hydrologic changes to aquatic habitat and adopt best management practices for controlling/limiting hydrologic changes (e.g., restoring hydrologic conditions after disturbance and/or providing compensatory habitat). To the maximum extent feasible, impacts to small mammal burrows from construction activities will be avoided. Where feasible, a 50-foot no-disturbance buffer around small mammal buffers will be maintained.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a biological resources avoidance and minimization plan for Authority review prior to construction.	Authority review and approval of biological resources avoidance and minimization plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
A qualified biologist will conduct a preconstruction survey each morning before construction activities begin and continue to monitor ground-disturbing construction activities where suitable habitat occurs during all phases of construction to remove any California tiger salamander, western spadefoot toads, and California red-legged frogs found in the environmental footprint. Individual salamanders, toads, and frogs will be moved immediately to a relocation site, a minimum of 300 feet from the construction boundary. The relocation site will be determined in coordination with USFWS and/or CDFW prior to the commencement of construction activities. Construction activities near drainages and wetland complexes identified as potential movement corridors will take place between July 1 and October 1 when the California tiger salamander, western spadefoot toad, and California red-legged frog are least likely to be present in the construction area. To discourage California tiger salamander, western spadefoot toad, and California red-legged frogs from entering the construction areas from ditches, ditches will be equipped with lightweight one-way flow gates. These will be designed so that water can easily pass from the construction site to the ditches, but small vertebrates, such as the salamander, toad, or frog, cannot move upstream from ditches to the construction area.							
BIO-2.10: Protect foothill yellow-legged frog Within 3 to 5 days prior to entering or working near stream/riparian habitat within foothill yellow-legged frog range, a biologist will survey the construction site for frogs (adults, subadults, tadpoles, or egg masses) and at least 500 feet upstream and downstream (California Department of Fish and Wildlife 2018b). If construction activities are expected to result in effects beyond 500 feet downstream, the CDFW recommends the survey area be extended. Additionally, a qualified biologist will conduct a preconstruction survey each morning before construction activities begin and continue to monitor ground-disturbing construction activities where suitable habitat occurs during all phases of construction to remove any foothill-yellow legged frog found within the active construction work area. If no foothill yellow-legged frogs, tadpoles, or egg masses are found during the survey and no surface water is present in the construction area, work may commence without further surveys. If frogs, tadpoles, or egg masses are detected, individual frogs, tadpoles, or egg masses will be moved immediately to a relocation site that is a minimum of 300 feet from the construction boundary. The relocation site will be determined in coordination with CDFW prior to the commencement of construction activities. To avoid transferring disease or pathogens of handling of amphibians, the approved-biologist will follow the Declining Amphibian Task Force's "Code of Practice" (U.S. Fish and Wildlife Service 2017). If feasible, construction activities within the stream and riparian habitat will avoid the foothill yellow-legged frog breeding season; the Authority will ensure that activities involving construction and heavy equipment use (e.g., excavation, grading, contouring) that are conducted in streams, ponds, and riparian areas are limited generally to July 15 to October 15, unless otherwise approved by CDFW. Impacts on oviposition sites will be avoided when possible; if avoidance is not possible and surveys confirm egg masses occur in high numbers (e.g., more than 100 eggs masses/kilometer), CDFW will be immediately contacted for further guidance. Where appropriate, exclusion fencing, as described in the CDFW (2018c) *Considerations for Conserving the Foothill Yellow-legged Frog*, will be installed to prevent frogs from entering the work area. If avoidance is not feasible, the Authority will apply for an Incidental Take Permit (ITP), pursuant to Fish and Game Code	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a biological resources avoidance and minimization plan for Authority review prior to construction.	Authority review and approval of biological resources avoidance and minimization plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
Section 2081 subdivision (b).							
BIO-2.11: Protect western pond turtle and giant garter snake The Authority will implement the measures listed below to protect western pond turtle and giant garter snake during construction. Giant garter snake • Where feasible, construction activities involving construction with heavy equipment use (e.g., excavation, grading, contouring) within suitable giant garter snake habitat will avoid the snake's inactive/dormant period (generally October 2 to April 30). • To the maximum extent possible, all construction activities within giant garter snake habitat will be conducted during the snake's active period (May 1 to October 1). • To reduce the likelihood of snakes entering the active construction areas that include or are adjacent to freshwater wetlands, slow-moving riverine aquatic habitat, marshes, ditches, and canals in the Central Valley during construction activities, the Authority or its contractor will install exclusion fencing along the freshwater marsh, aquatic riverine features, and open water areas outside of the environmental footprint (areas within 200 feet of suitable habitat). The exclusion fencing will be installed and maintained for the duration of construction within or adjacent to these features. The fencing will consist of 3- to 4-foot-tall erosion fencing buried at least 6 to 8 inches below the ground. To ensure that construction equipment and personnel do not affect aquatic habitat for giant garter snake outside the construction corridor, a combination of orange barrier fencing will be erected (in addition to the exclusion fencing) to clearly define the aquatic habitat to be avoided. • A qualified biologist will conduct a preconstruction survey in suitable habitat no more than 24 hours before construction. Prior to construction each morning, construction personnel will inspect exclusion and orange barrier fencing to ensure they are in good condition. Observations of snakes within the environmental footprint and access routes will be immediately reported to the biologist, and all activities will cease until appropriate corrective measures have been completed, the snake leaves the construction site under its own volition, or the biologist determines that the snake will not be harmed. The area undergoing construction will be re-inspected and surveyed by the biologist whenever a lapse in construction activity of 2 weeks or more occurs. • Any ground-disturbing activities within 200 feet of giant garter snake habitat that occur after October 1 will be monitored by a USFWS- and a CDFW-approved biologist for the duration of the work. • Vegetation clearing within 200 feet of the banks of potential giant garter snake aquatic habitat will be limited to the minimum area necessary. Giant garter snake habitat outside of but adjacent to the construction areas will be flagged and designated as an environmentally sensitive area to be avoided by all construction personnel. • The movement of heavy equipment within 200 feet of the banks of potential giant garter snake aquatic habitat will be confined to designated access and haul routes to minimize habitat disturbance. • Staging areas will be located at least 200 feet from suitable giant garter snake aquatic habitat.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a biological resources avoidance and minimization plan for Authority review prior to construction.	Authority review and approval of biological resources avoidance and minimization plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
Western pond turtle • Where feasible, construction activities involving construction with heavy equipment (e.g., excavation, grading, contouring) within suitable western pond turtle upland habitat will avoid the western pond turtle egg laying period (generally mid-May to early July). • Prior to the start of construction within western pond turtle habitat (i.e., any undeveloped areas within 400 feet of riverine aquatic habitat, ponds, seasonal wetlands), the Authority will retain a biologist approved by the CDFW to survey and handle western pond turtles and conduct preconstruction surveys. Surveys will be conducted at each habitat area no more than 7 days prior to the initiation of ground disturbance at that location. • If ground-disturbing activities occur during the nesting or overwintering seasons, 1 week before and within 24 hours of beginning work in suitable aquatic habitat, a qualified biologist will conduct surveys for western pond turtle. The surveys will be timed to coincide with the time of day when turtles are most likely to be active (the cooler part of the day between 8:00 a.m. and 12:00 p.m. during spring and summer). Prior to conducting the surveys, the biologist will locate the microhabitats for turtle basking (logs, rocks, brush thickets) and determine a location to quietly observe turtles. Each survey will include a 30-minute wait time after arriving on the site to allow startled turtles to return to open basking areas. The survey will consist of a minimum 15-minute observation time per area where turtles could be observed. If western pond turtles are observed during either survey, a biological monitor will be present during construction activities in the aquatic habitat where the turtle was observed and capture and relocate, if possible, any entrapped turtle. The biological monitor also will be mindful of suitable nesting and overwintering areas in proximity to suitable aquatic habitat and periodically inspect these areas for nests and turtles.						

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
BIO-2.12: Protect California legless lizard, California glossy snake, coast horned lizard, and San Joaquin coachwhip The Authority will implement the measures listed below to protect California legless lizard, California glossy snake, coast horned lizard, and San Joaquin coachwhip during construction. A qualified biologist will conduct preconstruction surveys and construction monitoring in suitable habitat (i.e., open grassland and scrub with sandy, friable soils) to protect special-status lizards. Prior to construction or restoration activities in California annual grassland, riparian habitat, and California scrub with sandy soils or dense leaf litter, the biologist will conduct a preconstruction survey for special-status reptiles. This survey will include the following steps: • Ensuring that all motorized vehicles and equipment observe a 5 mph speed limit during construction activities while not on existing rails within the environmental footprints. • Conducting systematic subsurface searching by raking leaf litter and sandy soil. • Staking the limits of the construction work areas and fencing them with small-mesh construction fencing, buried to a minimum depth of 6 to 10 inches below the ground, to reduce the likelihood of lizards reentering the active construction area. • Capturing and releasing special-status lizards into similar nearby habitat areas, as designated by the biologist. • Removing lizard exclusionary fence following completion of construction. During construction in special-status lizard habitat, a qualified biologist will be present and have the authority to temporarily stop construction activities if he or she finds California legless lizard, California glossy snake, coast horned lizard, or San Joaquin coachwhip in the environmental footprint. Work will not resume until the biologist has successfully relocated the animals and determined that they would not be harmed by construction.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a biological resources avoidance and minimization plan for Authority review prior to construction.	Authority review and approval of biological resources avoidance and minimization plan prior to construction.
BIO-2.13: Protect special-status and non-special-status nesting birds To the maximum extent feasible, the Authority will schedule vegetation removal (e.g., tree removal, herbaceous plant removal, mowing, control burn) during the nonbreeding season of birds (September 1–January 31). If vegetation removal cannot be removed in accordance with this timeframe, preconstruction surveys for nesting birds and additional protective measures will be implemented, as described below. In advance of project activities, a qualified biologist will conduct a habitat assessment for tricolored blackbird to determine if the alignment contains suitable habitat for tricolored blackbird. If the habitat assessment determines tricolored blackbird habitat is present and project activities have the potential to impact tricolored blackbird and/or its habitat, the Authority will discuss with CDFW how to implement the project and avoid impacts to the species. Authority or its contractor will conduct construction activities outside the bird nesting season (February 1 to September 15) to the extent feasible. If construction activities are unavoidable, Authority or its contractor will retain a qualified wildlife biologist with demonstrated nest-searching experience to conduct preconstruction surveys for nesting birds (including raptors but excluding golden eagle, Swainson's hawk, and burrowing owl, which have separate mitigation measures below) within 500 feet of the active construction work area. A 300-foot survey buffer will be used for raptors and a 100-foot radius for passerines.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a biological resources avoidance and minimization plan for Authority review prior to construction.	Authority review and approval of biological resources avoidance and minimization plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
Adjacent lands outside the active construction work area will be scanned with binoculars from the limit of ground disturbance, the UPRR ROW, and publicly accessible areas. Preconstruction surveys will occur no more than 7 days prior to the onset of ground-disturbing and vegetation-disturbing activities (including clearing, grubbing, staging, and vegetation trimming or removal) at each construction area. If active nests are found in the active construction work area, the biologist will establish a no-disturbance buffer around the nest and mark the buffer perimeter with high-visibility fencing, flagging, or wood stakes. The size of the no-disturbance buffer will be based on the species' sensitivity to disturbance and planned work activities in the vicinity; typical buffer sizes are 250 feet for raptors and 50 feet for other birds. However, in some cases the no-disturbance buffer may need to be adjusted (increased or decreased) based on site specific conditions such as the individual tolerance of specie; increases in the no-disturbance buffer size will be determine by a qualified biologist based on site specific conditions (e.g. type of project activity, topography, duration of project activity, line-of-site from project activity to nest etc.). The buffer will remain in place until the nest is no longer active, as determined by the biologist. Buffers for any nests found outside but within 300 feet of the construction area will be established, based on the biologist's best professional judgment as to whether the work would result in nest abandonment. If a lapse in construction activities of 15 days or longer at a previously surveyed environmental footprint occurs, another preconstruction survey will be conducted. If construction activities in or within 300 feet of freshwater marsh or streambank habitat occur during the breeding season (February 1 through September 15), and active nesting colonies of tricolored blackbird, yellow-headed blackbird, or bank swallow are observed by the qualified biologist, then a no-disturbance buffer of 300 feet will be established until the end of the breeding season or until the nesting colony or nest is determined inactive by the biologist (Bank Swallow Technical Advisory Committee 2013; California Department of Fish and Wildlife 2015). Nest buffers may be reduced if site-specific conditions reduce the possibility of construction activity disturbance, as determined by the qualified biologist in coordination with CDFW. To the extent possible, the Authority or its contractor will initiate structure demolition/ modification outside of the nesting season to avoid impacts on active nests affixed to structures before they become active during the nesting season (February 1 to September 15). If structure demolition activities cannot occur outside of the nesting season, the Authority or its contractor will remove inactive nests from the structure to be demolished and install nest exclusion measures (e.g., fine mesh netting, panels, metal projectors) outside the nesting season. All exclusionary devices will be monitored and maintained throughout the breeding season to ensure that they are successful in preventing the birds from accessing the cavities or nest sites. No more than 7 days prior to structure demolition activities, a qualified biologist will conduct a preconstruction survey of all potential nesting habitat on the structures to be demolished/ modified and the surrounding areas for the presence of active nests. If active nests are found on the structures or in the affected area, then demolition/modification activities will not proceed until the biologist verifies that all nests on the structures are inactive. After all surveys and/or nest deterrence activities are completed at each improvement environmental footprint within a given segment (e.g., Tri-Valley, Altamont, Tracy to Lathrop), the biologist will complete a memorandum detailing the survey effort and results and submit the memorandum to the Authority within 7 days of survey completion.							
BIO-2.14: Protect golden eagles Prior to construction activities between February 1 and September 15, surveys for golden eagles will be conducted within 0.5 mile of, and inclusive of, the construction areas in the Tri-Valley, Altamont, and Tracy to Lathrop segments. Surveys will be conducted consistent with the guidance of the *Protocol for Evaluating Bald Eagle Habitat and Populations in California* (Garcia and Associates & Pacific Gas and Electric Company 2004) and *Interim Golden Eagle Inventory and Monitoring Protocols and*	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a biological resources avoidance and minimization plan for	Authority review and approval of biological resources avoidance and minimization plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
Other Recommendations (U.S. Fish and Wildlife Service 2010). The size of the buffer area surveyed will be based on the type of habitat present and line of sight from each improvement environmental footprint by segment to surrounding suitable breeding habitat. Buffer areas containing unsuitable nesting habitat or with an obstructed line of sight to the respective location of construction activity will not be surveyed. Biologists will focus on suitable nest trees within and immediately adjacent to construction areas that have the highest likelihood for disturbance. The number of surveys needed to determine the status of nesting will be dependent on the conditions during the surveys and behavior of the eagles. If needed, biologists will coordinate with USFWS regarding the extent and number of surveys. Surveys would generally be conducted between January and July. Survey methods and results will be reported to USFWS. If active nests are found, the Authority or its contractor will maintain a 0.5-mile buffer, or other distance determined appropriate through consultation with USFWS, between construction activities and the active nest(s) until it has been determined that young have fledged.						Authority review prior to construction.	
BIO-2.15: Protect Swainson's hawk nests Prior to construction activities occurring between March 1 and September 15, focused surveys for nesting Swainson's hawks will be conducted within 0.5 mile of, and inclusive of, the construction areas located in the Central Valley. The survey buffer may be smaller in areas where topography (e.g., hills) obstructs the line of sight from the Project footprint. Survey buffer areas lacking suitable nest trees or with an obstructed line of sight will not be surveyed. Biologists will focus on suitable nest trees within and immediately adjacent to the construction areas that have the highest likelihood for disturbance. The number of surveys needed to determine the status of nesting will be dependent on the conditions during the surveys and observed Swainson's hawk behavior. Survey methods will follow those prescribed in *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000) and generally be conducted between February and July. Survey methods and results will be reported to CDFW. If active nests are found, the Authority or its contractor will maintain a minimum of 0.25-mile no-disturbance buffer between construction activities and the active nest(s) until it has been determined that young have fledged. The buffer may be reduced in consultation with CDFW if a biological monitor demonstrates through daily observations (minimum of 2 hours before and during construction activity) that adults tending the nest (on eggs or feeding nestlings) are not disturbed by construction noise. If the biological monitor observes signs of adult agitation or stress from construction (e.g., alarm calling, flying away from nest when construction starts), construction activities will cease until the qualified biologist, in consultation with CDFW, increases the size of the no-disturbance buffer and/or determines that young have fledged. The no-disturbance buffer size will be adjusted, as needed, based on the professional judgment of a qualified biologist during biological monitoring and be based on site specific conditions (e.g. type of project activity, topography, individual tolerance of species etc.).	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a biological resources avoidance and minimization plan for Authority review prior to construction.	Authority review and approval of biological resources avoidance and minimization plan prior to construction.
BIO-2.16: Compensate for Swainson's hawk foraging habitat loss The Authority will provide compensatory mitigation for Swainson's hawk foraging habitat loss (i.e., replacement of existing grassland or agricultural field with new structures) in the Central Valley through or in an amount consistent with the SJMSCP. To compensate for impacts on Swainson's hawk foraging habitat outside of the HCP coverage area, the Authority or its contractor will preserve offsite habitat management lands, as described in California Department of Fish and Game's (now	Authority shall implement compensatory mitigation for special-status species, as necessary.	X	X			Authority shall prepare a compensatory mitigation plan prior to construction and shall implement all required compensatory activities prior to the end of construction.	Authority shall report completion of the compensatory mitigation to the Authority Executive Director at the end of construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
CDFW) *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California* (California Department of Fish and Game 1994) at a 1:1 to 0.25:1 ratio (acreage preserved: acreage affected), depending on the distance between the affected areas and the nearest active nest. The location of the closest nest to a given segment in which impacts will occur will be identified during Swainson's hawk surveys conducted under Mitigation Measure BIO-2.15. If acceptable to CDFW, the Authority may alternatively or additionally purchase mitigation credits for Swainson's hawk foraging habitat from a CDFW-approved mitigation or conservation bank that offers service coverage for the impact location. If no active nests are found during the surveys, a search of the CNDDB will be conducted, and CDFW will be contacted to determine the nearest active nest in relation to each construction site by segment.							
BIO-2.17: Protect burrowing owls and burrowing owl habitat Prior to any construction activity in burrowing owl nesting (February 1 through August 31) or wintering habitat, the Authority will retain a qualified wildlife biologist to conduct a preconstruction survey for burrowing owls. Burrowing owl take avoidance surveys will be conducted no less than 14 days prior to and 24 hours before initiating ground disturbance, pursuant to the California Department of Fish and Game's *Staff Report on Burrowing Owl Mitigation* (California Department of Fish and Game 2012). The survey will encompass construction areas with suitable burrowing owl habitat. The survey will include a search of all suitable nesting habitat (trees, shrubs, scrub, grassland). If any burrowing owls are found within the disturbance area, the Authority will notify CDFW and proceed under CDFW direction. If burrows occupied by western burrowing owl are found in a survey area that would be directly affected by vegetation removal or any other ground-disturbing activities, no-disturbance buffers will be established by a qualified biologist (experienced with avian nesting behavior) around the sites to avoid disturbance or destruction of the occupied burrows or active nests. The biologist, in coordination with the Authority, will consult with CDFW about the appropriate size of no-disturbance buffers. If disturbance cannot be avoided with implementing buffers, other appropriate avoidance and minimization measures will be discussed with CDFW. The methods and results of the surveys will be submitted to CDFW prior to the start of work. If active nests or burrows are not detected during the surveys, additional measures will not be required and construction will proceed. If construction is planned to occur during the nesting season (February 1 through August 31), Authority will retain a qualified wildlife biologist to conduct a breeding season burrowing owl survey in the year prior to construction. The survey will be conducted to determine if there is a breeding pair within approximately 500 feet of the environmental footprint, unless the biologist determines that a smaller survey buffer around the Project footprint is warranted, based on pre-existing background disturbance and conditions. Survey visits will be timed in accordance with CDFW guidelines (California Department of Fish and Game 2012). This will provide the Project team advance notice of nesting owls in the construction area and allow ample time to discuss appropriate avoidance measures with CDFW.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a biological resources avoidance and minimization plan for Authority review prior to construction.	Authority review and approval of biological resources avoidance and minimization plan prior to construction.
BIO-2.18: Compensate for burrowing owl habitat loss The Authority will provide compensatory mitigation for burrowing owl habitat loss through, or in amounts consistent with, either the SJMSCP or the EACCS, depending on the impact locality, or as agreed upon with CDFW.	Authority shall implement compensatory mitigation for special-status species, as necessary.	X	X	X		Authority shall prepare a compensatory mitigation plan prior to construction and shall implement all required	Authority shall report completion of the compensatory mitigation to the Authority Executive

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
For impacts on burrowing owl habitat that occur outside of the SJMSCP and EACCS coverage areas (i.e., western Alameda County), the Authority will provide compensatory mitigation for the loss of occupied owl habitat before construction impacts occur. Occupancy of owl habitat will be determined during implementation of Mitigation Measure BIO-2.17, in the area that will be permanently affected. Compensatory mitigation may occur in the form of mitigation credit purchase from a CDFW-approved bank with burrowing owl habitat credits and/or preservation of suitable habitat. Mitigation credit purchase or habitat preservation will occur at a 3:1 ratio (compensation area to habitat loss area). • Habitat preservation will require the development and implementation of a management plan with the following success criteria to ensure the preserved area is managed as suitable burrowing owl habitat in perpetuity: • Perform routine mowing or grazing to maintain vegetation height consistent with burrowing owl habitat requirements. • Conduct biological monitoring surveys to confirm suitable owl habitat conditions and document ground squirrel and burrowing owl presence for a minimum of 5 years. • Restrict deeds to maintain and manage the preserve for burrowing owl in perpetuity, with the ability to grant the preserve to the EACCS Conservancy or to the SJMSCP Joint Powers Authority. • Preserve maintenance and funding reserves.						compensatory activities prior to the end of construction.	Director at the end of construction.
BIO-2.19: Protect special-status and non-special-status roosting bats Where feasible, construction activities that have potential to affect bats with potential to occur within the construction site (i.e., pallid bat, Townsend's big-eared bat, western mastiff bat, hoary bat, other common species of bats) will be conducted outside of the maternity season of bats (April 1 to September 15) and prior to the beginning of the hibernation period (November 1). Measures to avoid and minimize impacts on sensitive bats species will be determined in coordination with CDFW and may include the following: Trees • To avoid and minimize impacts on maternity roosts and hibernating bat species, trees will be removed or trimmed between September 1 and October 30. • A qualified biologist (i.e., a biologist with experience with tree-roosting habitats and life histories of local bats) will examine trees for suitable bat roosting habitat (e.g., large tree cavities, loose or peeling bark, basal hollows, large snags) 7 to 14 days before tree removal or trimming. Trees will also be evaluated to determine if they provide suitable habitat for foliage-roosting bats. • If the biologist determines that trees to be removed or trimmed provide suitable bat roosting habitat, the biologist will monitor tree removal/trimming. The biologist will make recommendations to implement measures to avoid and minimize disturbance or mortality of bats, such as conducting trimming and removal in the late afternoon or evening when it is closer to the time that bats would normally arouse, removing the tree in pieces rather than felling an entire tree, and gently shaking each tree with construction equipment and waiting several minutes before felling trees or removing limbs to allow bats time	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a biological resources avoidance and minimization plan for Authority review prior to construction.	Authority review and approval of biological resources avoidance and minimization plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
to arouse and leave the tree. The biologist will search downed vegetation for dead and injured bats. The presence of dead or injured bats that are species of special concern will be reported to CDFW. The biologist will prepare a biological monitoring report, which will be provided to the Project lead and CDFW. Human-made Structure and Natural Structures • At least 30 days prior to structure removal or disturbance, a bat biologist will conduct an initial daytime survey to assess the structure for potential bat roosting habitat and look for bat sign (e.g., guano, urine staining). The biologist will examine the entire structure (i.e., inside and outside for human-made structure and all cracks, seams, and fissures for natural structures) for potential roosting habitat as well as routes of entry to the structure. • If no habitat or limited habitat for roosting bats is present and no signs of bat use are present, a preconstruction survey of the entire structure by qualified biologists will be conducted within 24 hours of demolition. • If signs of bat use are found or if all areas of the structure cannot be examined and the structure provides moderate or high potential habitat, the bat biologist will prepare a memo with recommended measures to exclude bats from using the structure as a roost site. The memo will include recommendations for excluding bats from using the structure to roost, such as sealing off entry points or using lights and other means to deter bats. The memo will include specifications on when and how exclusion measures should be implemented and will be provided to the Project lead and CDFW.							
BIO-2.20: Protect riparian brush rabbit The Authority will retain a USFWS- and CDFW-approved biologist to conduct surveys of riparian habitat in and within 250 feet of the Tracy to Lathrop (Paradise Cut to the San Joaquin River) segment to determine presence or absence of riparian brush rabbit no more than 5 days before construction. The biologist will identify and flag nest locations during this initial survey. Five days will allow time for the biologist to inform the Authority and its contractor where construction would occur within or near occupied habitat and develop a schedule for the biologist to monitor construction activities in these areas. To the extent feasible, a 250-foot no-disturbance buffer will be established around habitat determined to be occupied by either species. If occupied habitat is determined to be present within the construction area, and will be affected by construction or vegetation removal activities, then the approved biologist will monitor all unavoidable construction activities within occupied habitat to avoid injuring or killing any individuals present or destroying any nests. If occupied nests are located within the Project footprint, CDFW and USFWS will be consulted to determine nest relocation or other alternatives to avoid mortality or active nest destruction. The biologist will prepare a report documenting the results of construction monitoring, which will be provided to the Authority, CDFW, and USFWS.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a biological resources avoidance and minimization plan for Authority review prior to construction.	Authority review and approval of biological resources avoidance and minimization plan prior to construction.
BIO-2.21: Compensate for riparian brush rabbit habitat loss The Authority will provide compensatory mitigation for riparian brush rabbit habitat loss through or in an amount consistent with the Authority for impacts within San Joaquin County. For impacts on riparian brush rabbit habitat that occur outside of the SJMSCP coverage area, the Authority will provide compensatory mitigation for the loss of occupied riparian brush rabbit habitat, as agreed upon with USFWS and CDFW, before construction impacts occur. The occupancy of suitable habitat will be determined during implementation of Mitigation Measure BIO-2.20. Compensatory mitigation may occur in the form of mitigation credit purchase from a USFWS- and CDFW-	Authority shall implement compensatory mitigation for special-status species, as necessary.	X	X	X		Authority shall prepare a compensatory mitigation plan prior to construction and shall implement all required compensatory activities prior to the end of construction.	Authority shall report completion of the compensatory mitigation to the Authority Executive Director at the end of construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
approved bank with riparian brush rabbit and riparian woodrat habitat credits or preservation and enhancement of suitable habitat. Mitigation credit purchase or habitat preservation and enhancement will occur at a 3:1 ratio (compensation area to habitat loss area). Habitat preservation and enhancement will require the development and implementation of a management plan with the success criteria listed below to ensure that the preserved area is managed as suitable riparian brush rabbit habitat in perpetuity. Compensatory riparian habitat mitigation is inclusive of other riparian habitat mitigation described below, including the following measures: • Perform routine eradication of invasive species to maintain the intended vegetation diversity and structural strata consistent with riparian brush rabbit habitat requirements. • Conduct biological monitoring surveys to confirm suitable riparian brush rabbit habitat conditions and document riparian vegetation presence and maturity for a minimum of 10 years. • Restrict deeds to maintain and manage the preserve for riparian brush rabbit in perpetuity, with the ability to grant the preserve to a habitat conservancy, public agency, or other local habitat management entity. • Preserve maintenance and funding reserves.							
BIO-2.22: Protect American badger, San Joaquin kit fox, mountain lion, and their habitat. <u>American badger and San Joaquin kit fox</u> Within 1 year but no less than 3 months prior to initiating construction at the Altamont and Tracy to Lathrop segments, the Authority will retain a qualified biologists to identify potential San Joaquin kit fox dens in the Project footprint and surrounding 200 feet in accordance with the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (2011 USFWS Standard Recommendations) (U.S. Fish and Wildlife Service 2011). USFWS and CDFW will be consulted in the final survey design and will be given the environmental footprints. This survey will also identify potential American badger dens. The biologists will prepare a report summarizing the survey observations and results, including maps depicting the locations of potential kit fox dens and badger dens and, if possible, occupancy. The report will be submitted to the Authority, USFWS, and CDFW. Different San Joaquin kit fox den types will be defined, per the 2011 USFWS guidance: Known Den—Any existing natural den or human-made structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records; past or current radio telemetry or spotlighting data; kit fox sign, such as tracks, scat, and/or prey remains; or other reasonable proof that a given den is being or has been used by a kit fox. The [U.S. Fish and Wildlife] Service discourages use of the terms ”active” and “inactive” when referring to any kit fox den because a great percentage of occupied dens show no evidence of use and kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly. Potential Den—Any subterranean hole within the species’ range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens will include the following: (1) any suitable subterranean hole or (2) any den or burrow of another species (e.g., coyote, badger, red fox, ground	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a biological resources avoidance and minimization plan for Authority review prior to construction.	Authority review and approval of biological resources avoidance and minimization plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool

squirrel) that otherwise has appropriate characteristics for kit fox use.

Natal or Pupping Den—Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger, with more numerous entrances, than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two; therefore, for purposes of this definition, either term applies.

Prior to construction, the Authority will retain qualified biologists to implement preconstruction surveys of previously identified potential kit fox dens to determine if they are known dens, natal or pupping kit fox dens, or American badger dens. As per the 2011 USFWS Standard Recommendations, preconstruction surveys are to be conducted no less than 14 days and no more than 30 days before the initiation of construction at each environmental footprint (e.g., 1 week ahead of the construction crew for linear components). Construction activities will not occur within 100 feet of a potential den during the natal period (February 1 to September 30). If a known den or natal or pupping den is present and located 100 feet outside of the permanent Project footprint, then a 200-foot no-disturbance exclusion zone during the natal period (100-foot buffer during the non-natal period) will be established around the den, with orange construction fence at the edge of the disturbance limits nearest the den. If a known den or natal or pupping den is present within the permanent Project footprint or within 200 feet of the Project footprint during the natal period (100-foot buffer during the non-natal period), the foxes or badger(s) will be excluded outside of the natal period (from November 1 to January 31). A summary report will be prepared by the biologists and submitted to the Authority, CDFW, and USFWS following completion of all fox and badger avoidance and exclusion activities.

Mountain lion

Implementation of some of these measures may require that the Authority obtain an ITP from CDFW if mountain lion remains a candidate or is formally listed under CESA before construction begins. Additional conservation measures or conditions of approval may be required in applicable project permits (e.g., CESA ITP).

Within 1 year but no less than 3 months prior to initiating construction, the Authority will retain a qualified biologist to identify known and potential wildlife corridors, wildlife crossings, and known mountain lion movement data in the Project footprint and surrounding 5 miles. Qualified biologist(s) will identify potential mountain lion movement areas, potential denning areas, and compile mountain lion movement and territory data from mountain lion telemetry and other studies, followed by camera and track surveys to determine the location of transit areas, communication posts, and potential denning areas. Based on research documenting mountain lion avoidance behavior of human disturbance and roads, camera and track surveys would be conducted within 2,000 feet of the Project footprint (Wilmers et al. 2013). CDFW will be consulted in the final survey design and will be given the environmental footprints. The biologists will prepare a report summarizing the survey observations and results, including maps depicting the locations of potential mountain lion use area and den sites and, if possible, occupancy. The report will be submitted to the Authority and CDFW.

Mountain lion den types will be defined as follows (terminology generally consistent with the 2011 USFWS guidance for San Joaquin kit fox),

Known Den—Any existing natural den or human-made structure that is used or has been used at any time in the past by a

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
mountain lion. Evidence of use may include historical records; past or current radio telemetry or tracking study data; mountain lion sign, such as tracks, scat, and/or prey remains; or other reasonable proof that a given den is being or has been used by a mountain lion. USFWS discourages use of the terms ”active” and “inactive” with other species when referring to any den because denning animals may change dens often, with the result that the status of a given den may change frequently and abruptly. Mountain lions may move the litter to one or more additional den sites throughout her home range by the time kittens are weaned at 2 to 3 months (Pierce and Bleich 2003). Potential Den—Any thick vegetation, boulder piles, rocky outcrops or undercut cliffs within the species' range for which available evidence is insufficient to conclude that it is being used or has been used by a mountain lion (Logan and Sweanor 2001). Potential dens will include the following characteristics: (1) refuge from predators (e.g., coyotes, golden eagles, other cougars) or (2) shielding of litter from heavy rain and hot sun. Prior to construction, the Authority will retain qualified biologists to implement preconstruction surveys of previously identified potential mountain lion dens to determine if mountain lion sign is in the vicinity. Preconstruction surveys are to be conducted no less than 14 days and no more than 30 days before the initiation of construction at each environmental footprint (e.g., 2 weeks ahead of the construction crew for linear components). Construction activities will not occur within 2,000 feet of a potential den during the breeding and natal period (February 1 to September 30). If a known den is present within the permanent Project footprint or within 2,000 feet of the Project footprint, consultation with CDFW will occur. A summary report will be prepared by the biologist(s) and submitted to the Authority and CDFW following completion of all mountain lion avoidance and minimization activities. If special-status mammal species are determined to not be present in the Project area or a qualified biologist (experienced with predatory mammals) concludes that there is a very low likelihood that the special-status mammal species is present, then no additional mitigation is required. If special-status mammal species are determined to be present in the Project area, then the Project proponent will implement Mitigation Measure BIO-2.23.						
BIO-2.23: Compensate for American badger, San Joaquin kit fox, and mountain lion habitat loss. If it is determined through preconstruction surveys conducted pursuant to Mitigation Measure BIO-2.22 that special-status mammal species (i.e., American badger, San Joaquin kit fox, and/or mountain lion) are present within the Project area, the following measures will be implemented to ensure that the Proposed Project does not have a significant impact on American badger, San Joaquin kit fox, and/or mountain lion. <u>American badger and San Joaquin kit fox</u> The Authority will provide compensatory mitigation for San Joaquin kit fox and American badger habitat loss through, or in an amount consistent with, either the EACCS or SJMSCP for impacts within Alameda County and San Joaquin County (see Mitigation Measure BIO-2.1). For impacts on San Joaquin kit fox and American badger habitat that occur outside of the EACCS or SJMSCP coverage area, the Authority will provide compensatory mitigation for the loss of occupied San Joaquin kit fox and American badger habitat as agreed upon with USFWS and CDFW before construction impacts occur. The occupancy of suitable habitat will be determined during implementation of Mitigation Measure BIO-2.22. Compensatory mitigation may occur in the form of mitigation credit purchase from a USFWS- and CDFW-approved bank with San Joaquin kit fox habitat credits or preservation and enhancement	Authority shall implement compensatory mitigation for special-status species, as necessary.	X	X	X	Authority shall prepare a compensatory mitigation plan prior to construction and shall implement all required compensatory activities prior to the end of construction.	Authority shall report completion of the compensatory mitigation to the Authority Executive Director at the end of construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
of suitable habitat. Mitigation credit purchase or habitat preservation and enhancement will occur at a 3:1 ratio (compensation area to habitat loss area). Habitat preservation and enhancement will require the development and implementation of a management plan with the following success criteria to ensure the preserved area is managed as suitable San Joaquin kit fox and American badger habitat in perpetuity: • Conduct routine eradication of invasive species to maintain the intended vegetation diversity, density, and height consistent with San Joaquin kit fox and American badger habitat requirements for a minimum of 5 years. • Conduct biological monitoring surveys to confirm suitable San Joaquin kit fox and American badger habitat conditions and document ground squirrel presence. • Restrict deeds to maintain and manage the preserve for San Joaquin kit fox and American badger in perpetuity, with the ability to grant the preserve to a habitat conservancy, public agency, or other local habitat management entity. • Preserve maintenance and funding reserves. <u>Mountain lion</u> The Authority will provide compensatory mitigation for mountain lion habitat loss as agreed upon with CDFW before construction impacts occur. Compensatory mitigation may be in the form of mitigation credit purchase from a CDFW-approved bank, preservation and enhancement of suitable habitat, or other agreed-upon form of mitigation. Habitat preservation and enhancement will require the development and implementation of a management plan with the following success criteria to ensure the preserved area is managed as suitable mountain lion habitat in perpetuity. • Conduct routine inspection and maintenance of existing wildlife crossings and new wildlife crossing options along the Altamont Alignment and the Stone Cut Alignment and portions of the Tracy to Lathrop Alignment. • Conduct routine eradication of invasive plant species to maintain the intended vegetation diversity, density, and height consistent with maintaining native faunal population habitat requirements for a minimum of 5 years. • Conduct biological monitoring surveys of habitat preserved and/or enhanced to confirm suitability for mountain lion habitat conditions. • Document species presence and use of preserved habitat. • Restrict deeds to maintain and manage the preserve for mountain lion in perpetuity, with the ability to grant the preserve to a habitat conservancy, public agency, or other local habitat management entity. • Preserve maintenance and funding reserves.						
BIO-2.24: Protect Crotch bumble bee and western bumble bee nesting habitat and floral resources *Implementation of some of these measures may require that the Authority obtain an ITP from CDFW if Crotch bumble bee and western bumble bee remain candidates or are formally listed under CESA before construction begins.*	Contractor		X	X		Authority shall include as contract requirement. Contractor shall prepare a	Authority review and approval of biological resources avoidance and minimization plan prior to

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
Prior to the start of construction, qualified biologist(s) will conduct botanical surveys in late spring/early summer to identify and map concentrations of flowering plants that provide food resources for special-status bumble bees. The areas containing higher densities and varieties of flowering plants will be evaluated by a qualified invertebrate biologist to determine if these areas provide suitable foraging habitat for special-status bumble bees. The habitat evaluation surveys would follow recommendations in the Rusty Patched Bumble Bee Habitat Assessment Form and Guide (Xerces Society for Invertebrate Conservation 2017). If moderate to high quality foraging habitat for Crotch and/or western bumble bee is identified in the Project area based on the habitat evaluation, these areas will be surveyed by a qualified invertebrate biologist(s) (with experience conducting bumble bee surveys) within 1 year prior to the start of construction. Surveys would be conducted during four evenly spaced sampling periods during the flight season (March through September) (Thorp et al. 1983). For each sampling event, the biologist(s) would survey suitable habitat using nonlethal netting methods for 1 person-hour per 3 acres of the highest quality habitat or until 150 bumble bees are sighted, whichever comes first. If initial sampling of a given habitat area indicates that the habitat is of low quality or nonexistent, no further sampling of that area would be required. General guidelines and best practices for bumble bee surveys would follow USFWS' Survey Protocols for the Rusty Patched Bumble Bee (*Bombus affinis*) (U.S. Fish and Wildlife Service 2019c), which are consistent with other bumble bee survey protocols used by The Xerces Society (Hatfield et al. 2017; Washington Department of Fish and Wildlife et al. 2019). If special-status bumble bee is determined to not be present in the Project area or a qualified invertebrate biologist (experienced with bumble bees) concludes that there is a very low likelihood that the species is present, then no additional mitigation is required. If surveys identify occupied Crotch and western bumble bee habitat within the project footprint, the project biologist would then conduct additional preconstruction surveys of such habitat for active bee nest colonies and associated floral resources (i.e., flowering vegetation on which bees from the colony are observed foraging) no more than 30 days prior to any ground disturbance between March and September. The purpose of this preconstruction survey would be to identify active nest colonies and associated floral resources outside of permanent impact areas that could be avoided by construction personnel. The project biologist would establish, monitor, and maintain no-work buffers around nest colonies and floral resources identified during surveys. The size and configuration of the no-work buffer would be based on best professional judgment of the project biologist. At a minimum, the buffer would provide at least 20 feet of clearance around nest entrances and maintain disturbance-free airspace between the nest and nearby floral resources. Construction activities would not occur within the no-work buffers until the colony is no longer active (i.e., no bees are seen flying in or out of the nest for three consecutive days indicating the colony has completed its nesting season and the next season's queens have dispersed from the colony).						biological resources avoidance and minimization plan for Authority review prior to construction.	construction.
BIO-2.25: Compensate for Crotch bumble bee and western bumble bee habitat loss If Crotch bumble bee and/or western bumble bee are formally listed under CESA, the Authority will work with CDFW to discuss compensatory mitigation for impacts on occupied habitat. At this time, compensatory mitigation for Crotch bumble bee and western bumble bee is not proposed. If and/or when compensatory mitigation is proposed, it may include the following activities and would be determined during consultation with CDFW.	Authority shall implement compensatory mitigation for special-status species, as necessary.	X	X	X		Authority shall prepare a compensatory mitigation plan prior to construction and shall implement all required compensatory activities prior to the end of construction.	Authority shall report completion of the compensatory mitigation to the Authority Executive Director at the end of construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
• To encourage growth of additional nectar and pollen producing plants within the Project area, disturbed grasslands that are revegetated in accordance with Mitigation Measure BIO-7.2 will use a seed mix combination that includes nectar and pollen producing plants commonly used as a food source by Crotch and western bumble bee. Plants of the following genus are appropriate: *Cirsium* sp., *Erigonum* sp., *Solidago* sp., *Aster* sp., *Centaurea* sp., and *Penstemon* sp. These annual plants will be incorporated into the seed mix, as applicable for the existing habitat conditions. • To minimize impacts on bees from herbicide drift, herbicide application around stations and rail facilities will be performed using handheld equipment and will be restricted to a 20-foot buffer around facility structures. The contractor will use an herbicide that has been shown to be less toxic to amphibians and invertebrates such as 2, 4 D. Herbicides containing the surfactant POEA, considered toxic to aquatic and terrestrial wildlife (Relyea 2011), will not be used in the Project area. The most current information on herbicide toxicity on wildlife will be used to inform future decisions about herbicide use during operations. • Impacts on occupied habitat (confirmed through surveys as described in Mitigation Measure BIO-2.24) would be compensated for at a ratio of 3:1, unless a higher ratio is required pursuant to an authorization issued under CESA, through the purchase of CDFW-approved bank credits or through preservation of habitat in perpetuity, including suitable habitat currently preserved by the Authority.						
BIO-3.1: Develop and implement a hydroacoustic monitoring plan to minimize noise effects on fish The contractor will develop and implement a hydroacoustic monitoring plan. The monitoring plan will be submitted to the resource agencies (i.e., CDFW, NMFS, USFWS) for approval at least 60 days before the start of construction activities. The plan will include the following requirements: • The contractor will monitor underwater noise levels during all impact pile-driving activities on land and in water to ensure that that peak and cumulative SELs do not exceed estimated values. • The monitoring plan will describe the methods and equipment that will be used to document the extent of underwater sounds produced by pile driving, including the number, location, distances, and depths of the hydrophones and associated monitoring equipment. • The monitoring plan will include a reporting schedule that includes provision of daily summaries of the hydroacoustic monitoring results to the resource agencies and more comprehensive reports on a monthly basis during the pile-driving season. • The reports will include the number of piles installed per day, the number of strikes per pile, the interval between strikes, the peak sound pressure level, SEL, root mean square per strike, and accumulated SEL per day at each monitoring station.	Contractor	X	X			Authority shall include as contract requirement. The Contractor shall prepare a noise reduction and monitoring plan, including hydroacoustic monitoring for Authority review.	Authority review of noise study and review and approval of noise reduction and monitoring plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
BIO-4.1: Protect nesting birds during maintenance activities The Authority or its contractor will conduct vegetation and structural maintenance activities associated with the operation of Valley Link outside of the bird nesting season (February 1 to September 15) to the extent feasible. If vegetation and structural maintenance during the nesting season is unavoidable, the Authority or its contractor will retain a qualified wildlife biologist with demonstrated nest-searching experience to conduct preconstruction surveys for nesting birds within 300 feet of the vegetation and structural maintenance locations. Adjacent lands outside the ROW will be scanned with binoculars, including any Project operations areas, the ROW, and/or publicly accessible areas. The preconstruction surveys will occur no more than 7 days prior to maintenance activities (including removing or trimming vegetation, modifying structures that provide nesting habitat, clearing ground, grubbing, staging) at each contiguous maintenance area. If active nests are found in the area to undergo maintenance activities, no-disturbance species-specific buffer zones will be established by the biologist and marked with high-visibility fencing, flagging, or pin flags. No maintenance activities will be allowed within the buffer zones. The size of the buffer will be based on the species' sensitivity to disturbance and planned work activities in the vicinity; typical buffer sizes are 250 feet for raptors and 50 feet for other birds (i.e., passerines). The buffer will remain in effect until the nest is no longer active, as determined by the biologist. Buffers for any nests found outside of the area to undergo maintenance activities, but within 250 feet of the maintenance location, will be established, based on the biologist's best professional judgment as to whether the work would result in nest disturbance and/or abandonment. If a lapse in maintenance activities of 7 days or longer at a previously surveyed area occurs, another preconstruction survey will be conducted. After all surveys activities are completed at each continuous maintenance activity area within a given segment (e.g., Tri-Valley, Altamont, Tracy to Lathrop), the biologist will complete a memorandum detailing the survey effort and results and submit the memorandum to the Authority within 7 days of survey completion.	Authority, Project Operator				X	The Authority will include requirements for vegetation maintenance contracts in accordance with this measure. The Project Operator will prepare vegetation management guidelines for the Project. For facilities within the UPRR ROW, Authority will coordinate with UPRR. After UPRR approval, the Project Operator will provide the guidelines to CDFW for approval. Vegetation maintenance guidelines shall only apply to areas in the vicinity of nesting birds and roosting bats. Project Operator to prepare annual vegetation maintenance monitoring reporting.	Project Operator completion of vegetation management guidelines and review by CDFW. Authority review of annual vegetation maintenance monitoring reports.
BIO-4.2: Protect roosting bats during maintenance activities The Authority or its contractor will conduct maintenance activities (e.g., operational tree removal and trimming, structure modification or removal) in roosting bat habitat from September 15 to October 30 to the extent feasible to avoid maternity bat roosts, roosting bats in torpor (reduced metabolic function, similar to hibernation), or nonvolant (flightless) young. If operational maintenance activities cannot be conducted between September 15 and October 30, the Authority or its contractor will retain qualified biologists who will examine structures to be removed or modified and trees to be removed or trimmed for suitable bat roosting habitat no more than 2 weeks before conducting the maintenance activity. High-quality habitat features (large tree cavities, basal hollows, loose or peeling bark, larger snags, palm trees with intact thatch, seams, weep holes, crevices on sides of buildings) will be identified and the area around these features searched for bats and bat signs (e.g., guano, culled insect parts, urine staining). Riparian woodland, orchards, and stands of mature broadleaf trees should be considered potential habitat for solitary foliage-roosting bat species. Passive monitoring using full spectrum bat detectors may be needed if identification of bat species is required. Survey methods will be discussed with CDFW prior to the start of surveys. Measures to avoid and minimize impacts on sensitive bats species will be determined in coordination with CDFW and may include the following: Tree removal, tree trimming, structure modification, or removal of trees that provide suitable habitat for bats will be avoided	Authority, Project Operator				X	The Authority will include requirements for vegetation maintenance contracts in accordance with this measure. The Project Operator will prepare vegetation management guidelines for the Project. For facilities within the UPRR ROW, the Project Operator will coordinate with UPRR. After UPRR approval, the Project Operator will provide the guidelines to CDFW for approval. Vegetation maintenance guidelines shall only apply to	Project Operator completion of vegetation management guidelines and review by CDFW. Authority review of annual vegetation maintenance monitoring reports.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
between April 1 and September 15 (the maternity period) to avoid effects on pregnant females and active maternity roosts (whether colonial or solitary). Tree removal, tree trimming, structure modification, or removal of trees that provide suitable habitat for bats will be conducted between September 15 and October 30, which corresponds to a time period when bats have not yet entered torpor or caring for nonvolant young. Trees that provide suitable habitat for bats will be removed in pieces rather than felling the entire tree. Trees and tree limbs that do not provide habitat will be removed prior to removing trees and limbs that do provide roosting habitat. If possible, tree trimming and removal should occur in the late afternoon or evening when it is closer to the time that bats would normally arouse. Prior to removal and trimming, each tree will be shaken gently and several minutes will pass before felling trees or limbs to allow bats time to arouse and leave the tree. If a maternity roost is located, whether solitary or colonial, that roost will remain undisturbed until September 15 or until a qualified biologist has determined the roost is no longer active. If avoidance of a non-maternity roost site is not possible, and the maintenance activity must occur between October 30 and September 15, qualified biologists will monitor the maintenance activity that has the potential to affect roosting bat habitat. The biologists will search downed vegetation and debris for dead and injured bats. The presence of dead or injured bats that are species of special concern, or candidate threatened or endangered species, will be reported to CDFW. The biologist will prepare a biological monitoring report, which will be provided to the Authority and CDFW no more than 30 days following the completion of all bat surveys.						areas in the vicinity of nesting birds and roosting bats. Project Operator to prepare annual vegetation maintenance monitoring reporting.	
BIO-4.3: Minimize permanent intermittent impacts on avian and bat wildlife species due to the Altamont OCS and aerial structures The Authority will implement an array of deterrent and diversion features for avian species. These features include the following: • Install pigeon wire or other features to discourage birds from perching on the Altamont OCS poles. • Modify Altamont OCS poles to preclude bird and/or bat entrapment in hollow poles and at the top of poles (e.g., avoid the use of tubular poles or cap openings in all poles) • Design aerial structures to discourage bats from roosting in expansion joints or other crevices.	Contractor		X			Authority shall include as contract requirement. Contractor shall design deterrent and diversion features.	Authority review and approval of design for deterrent and diversion features.
BIO-4.4: Implement removal of carrion that may attract raptors and carnivores During operations in raptor foraging areas, the Authority or its contractor will implement a program of track inspections and reporting to detect the presence of a carcass (carrion) within the ROW that could be an attractant to raptors and other carrion eating birds. Dead and injured wildlife found in the ROW will be removed as soon as safely feasible. This measure would apply to the Altamont Pass.	Project Operator				X	The Authority will include requirements in operational contracts in accordance with this measure. Project Operator shall develop inspection and monitoring	Authority review and approval of inspection and monitoring protocols.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
						protocols.	
BIO-4.5: Avoid use of second-generation anticoagulant rodenticides During operations, the Authority or its contractor will avoid the use of second-generation anticoagulant rodenticides, such as brodifacoum, bromadiolone, difenacoum, and difethialone in Central Coast mountain lion, San Joaquin kit fox, American badger, and burrowing owl habitat areas. The Authority will limit the use of other pesticides and herbicides that may have negative effects on special-status wildlife species.	Project Operator				X	The Authority will include requirements in operational contracts in accordance with this measure. Project Operator shall develop protocols for rodenticide, pesticide, and herbicide use.	Authority review and approval of protocols for rodenticide, pesticide, and herbicide use.
BIO-6.1: Compensate for impacts on jurisdictional wetlands and non-wetland waters of the United States (aquatic resources) prior to impacts during construction The Authority will develop an aquatic resource (wetlands and non-wetland waters of the United States) mitigation plan, subject to approval by the resource agencies, which will ensure no net loss of wetlands. The plan will detail the amount and type of wetlands that will be compensated for impacts on existing wetlands and non-wetland waters of the United States. The plan will also outline the monitoring and success criteria for the compensation wetlands and non-wetland waters of the United States. Additional enhancement options include fish barrier removal, riparian restoration, floodplain restoration, and streambank layback to improve overall ecologic function and connectivity of wetland and non-wetland waters. Enhancement sites will be located as near to the impact location as possible but, in the event that local enhancement opportunities are not available, such activities will occur within the same stream system or watershed to provide improved ecologic function and connectivity for wetlands and non-wetland waters affected by the Proposed Project. • Monitoring and success criteria applicable to created or restored wetlands will require the following: • At least two surveys by a qualified wetland biologist, botanist, or ecologist per monitoring year. • At least 80 percent of the created or restored features support vegetation, consistent with reference feature conditions. • At least 80 percent of the created or restored features support hydrologic regimes, similar to reference feature conditions. • A minimum of 5 consecutive years of monitoring to ensure success criteria are met. • Remedial actions to restore intended ecological function of created or restored features that fail to meet the success criteria for 3 consecutive years. Once the plan is approved, the Authority will implement the aquatic resource compensation measures prior to the initiation of construction. The Authority will be responsible for funding compensatory mitigation, monitoring of the created or restored features per the mitigation plan, and any remedial actions necessary. All conditions that are attached to the state and federal permits will be implemented. The conditions will be clearly identified in the construction plans and specifications and monitored during and after construction to ensure compliance.	Contractor	X	X	X		Authority shall include as contract requirement. Contractor shall prepare an aquatic resource mitigation plan and obtain approval from the regulatory agencies prior to the end of construction. Contractor shall implement the aquatic resource mitigation plan at the same time as construction. Post-construction monitoring shall be performed for a minimum of 5 consecutive years, as necessary.	Authority review and approval of aquatic resource mitigation plan. Regulatory agency approval of aquatic resource mitigation plan. Authority to submit annual monitoring reports to regulatory agencies. Authority will report completion of this measure to the Authority Executive Director.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
BIO-7.1: Compensate for loss of riparian habitat For direct effects on woody riparian trees that cannot be avoided, the Authority will compensate for the loss of riparian habitat to ensure no net loss of habitat functions and values. Compensation ratios will be based on site-specific information and determined through coordination with the appropriate state and federal agencies during the permitting process. At a minimum, the compensation ratio will be 2:1 (e.g., 2 acres restored/created/enhanced or credits purchased for every 1 acre removed) for permanent impacts and 1:1 for temporary impacts (where riparian habitat will regenerate to pre-activity character within 1 year). Compensation may be a combination of offsite restoration or mitigation credits. The Authority or its contractor will develop a restoration and monitoring plan that describes how riparian habitat will be enhanced or recreated and monitored over at least 5 years, or as determined by the appropriate state and federal agencies. If the Authority identifies suitable onsite areas (adjacent to the permanent Project footprint) that are outside the ROW vegetation management zone and chooses to compensate onsite or in the Project vicinity, a revegetation plan will be prepared. The revegetation plan will be developed prior to the removal of existing riparian vegetation and conducted onsite or in the Project vicinity to the extent feasible. The revegetation plan will be prepared by a qualified botanist or restoration specialist with experience in riparian restoration and reviewed by the appropriate agencies. The revegetation plan will specify the planting stock appropriate for each riparian land cover type and each mitigation site, ensuring the use of genetic stock from the corresponding Project area by segment. The plan will employ the most successful techniques available at the time of planting. Success criteria will be established as part of the plan and will include a minimum of 70 percent revegetation success after 3 years, 80 percent revegetation success at the end of 5 years, and 75 percent vegetative coverage after 5 years. The Authority or its contractor will retain a qualified botanist, restoration ecologist, or biologist with experience in riparian restoration to monitor the plantings as necessary for 5 years. The Authority or its contractor will be responsible for maintaining the plantings, including managing invasive plants (as defined by the California Invasive Plant Council) and other weeds and implementing irrigation and plant protection if necessary. The Authority or its contractor will submit annual monitoring reports to the regulatory agencies issuing permits related to habitat effects, including CDFW, USACE, NMFS, and USFWS. Replanting will be necessary if success criteria are not met, and replacement plants will be monitored and maintained subsequently to meet the success criteria. The riparian habitat mitigation will be considered successful when the sapling trees established meet the success criteria, the habitat no longer requires substantial active management, and vegetation is arranged in groups that, when mature, replicate the area, natural structure, stratification, and species composition of similar riparian habitats in the region.	Contractor	X	X	X		Authority shall include as contract requirement. Contractor shall prepare a riparian habitat restoration and monitoring plan and obtain approval from regulatory agencies prior to construction. Contractor shall implement the riparian habitat restoration and monitoring plan at the same time as construction. Post-construction monitoring shall be performed for a minimum of 5 years, as necessary.	Authority review and approval of riparian habitat restoration and monitoring plan. Regulatory agency approval of riparian habitat restoration and monitoring plan. Authority to submit annual monitoring reports to regulatory agencies. Authority will report completion of this measure to the Authority Executive Director.
BIO-7.2: Compensate for loss of sensitive natural communities (excluding riparian and wetland habitat) For direct effects on non-riparian sensitive natural communities (e.g., salt grass flats) that cannot be avoided, the Authority will compensate for the loss of these communities to restore habitat functions and values. Compensation ratios will be based on site-specific information and determined through coordination with the appropriate state and federal agencies during the permitting process. Compensation will be based on the ratio determined in coordination with appropriate state and federal agencies. At a minimum, the compensation ratio for affected sensitive natural communities will be 2:1 (e.g., 2 acres restored/created/enhanced or credits purchased for every 1 acre removed) for permanent impacts and 1:1 for temporary impacts (where a sensitive natural community will regenerate to pre-activity character within 1 year). Compensation may be a combination of offsite restoration or mitigation credits. The Authority or its contractor will develop a restoration and monitoring	Contractor	X	X	X		Authority shall include as contract requirement. Contractor shall prepare a sensitive natural communities restoration and monitoring plan and obtain approval from regulatory agencies prior to construction. Contractor shall implement the	Authority review and approval of sensitive natural communities restoration and monitoring plan. Regulatory agency approval of sensitive natural communities restoration and

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
plan that describes how affected sensitive natural communities will be enhanced or recreated and monitored over at least 5 years, as determined by the appropriate state and federal agencies. If the Authority identifies suitable onsite areas (adjacent to the permanent Project footprint) that are outside the ROW vegetation management zone and chooses to compensate onsite or in the Project vicinity, a revegetation plan will be prepared. The revegetation plan will be developed prior to the removal of existing vegetation within the sensitive natural community and conducted onsite or in the Project vicinity to the extent feasible. The revegetation plan will be prepared by a qualified botanist or restoration specialist with experience in corresponding sensitive natural communities and reviewed by the appropriate agencies. The revegetation plan will specify the seed or seedbank harvest prior to construction impacts; reference site selection for each sensitive natural community to be affected; propagation methods or seed application, depending on the target species' requirements; and replanting methods appropriate for each sensitive natural community affected and each mitigation site, ensuring the use of genetic stock from the corresponding Project area by segment. The plan will employ the most successful techniques available at the time of planting. Success criteria will be established as part of the plan and include a minimum of 70 percent revegetation success after 3 years, 80 percent revegetation success at the end of 5 years, and 75 percent vegetative coverage consistent with appropriate reference conditions after 5 years. The Authority or its contractor will retain a qualified botanist, restoration ecologist, or biologist with experience in corresponding sensitive natural communities to monitor the plantings or vegetation growth as necessary for 5 years. The Authority or its contractor will be responsible for maintaining the sensitive natural community and associated plantings, including managing invasive plants (as defined by the California Invasive Plant Council) and other weeds and implementing irrigation and plant protection if necessary. The Authority or its contractor will submit annual monitoring reports to the regulatory agencies with jurisdiction of such sensitive natural communities, including CDFW, USACE, and USFWS. Replanting or reseeding will be necessary if success criteria are not met, and replacement plant growth will be monitored and maintained subsequently to meet the success criteria. Each area and type of sensitive natural community mitigation will be considered successful when the vegetation established meets the success criteria, the habitat no longer requires substantial active management, and vegetation grows such that, when mature, it replicates the natural structure, stratification, and species composition of appropriate reference sites in the region.						sensitive natural communities restoration and monitoring plan at the same time as construction. Post-construction monitoring shall be performed for a minimum of 5 years, as necessary.	monitoring plan. Authority to submit annual monitoring reports to regulatory agencies. Authority will report completion of this measure to the Authority Executive Director.
BIO-8.1: Design curbs to permit California tiger salamander and California red-legged frog movement The Authority will design all curbs associated with the Isabel Station and Interim OMF to be rounded, with no vertical component exceeding 1 inch tall, to permit salamander movement between habitat areas.	Contractor		X	X		Authority shall include as contract requirement. Contractor shall design curbs according to this mitigation.	Authority review and approval of curb designs.
BIO-8.2: Install station lighting controls and fencing limitations This mitigation measure applies to the following stations, which are in or adjacent to sensitive habitat: parking lot of Greenville Station, parking lot of Isabel Station, Interim OMF, Mountain House Station Alternative, Tracy OMF, River Islands Station, and North Lathrop Station. Lighting will be designed to have controls that limit nighttime lighting to the minimum necessary. All lighting will be focused and downward facing to limit illuminated areas to only the platforms and parking lot. All lighting will shut off during periods of non-use (defined as more than 30 minutes before or after scheduled trains).	Contractor		X	X		Authority shall include as contract requirement. Contractor shall design station lighting and fencing according to this mitigation.	Authority review and approval of station lighting and fencing design.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
If fencing is required, wildlife-safe fencing will be used and installed in such a manner so as not to entrap wildlife species at fence lines. Wildlife crossings will be installed along the fence line and designed to facilitate movement by common and special-status species (including San Joaquin kit fox, American badger, California tiger salamander, California red-legged frog, and riparian brush rabbit where suitable habitat is present for these species). Wildlife crossings will be designed in consultation with and approved by USFWS and CDFW.						
BIO-8.4: Improve existing wildlife crossings and/or implement new wildlife crossing options along the Altamont Alignment and the Stone Cut Alignment The Authority will evaluate wildlife movement conditions along the new rail lines in these areas and consult with USFWS and CDFW in the wildlife crossing study and design. If feasible wildlife crossings are identified, the Authority will implement these crossings concurrent with the development of new rail facilities in the Altamont Alignment (and in the development of the Stone Cut Alignment). Wildlife crossings will be designed to facilitate movement by common and special-status species, including mountain lion, San Joaquin kit fox, California tiger salamander, and California red-legged frog, across the Altamont Alignment and the Stone Cut Alignment. The Authority will implement the following wildlife movement improvements between Greenville Station and I-580 west of Tracy as follows, unless the Authority, USFWS, and CDFW mutually agree to alternative measures: • The Authority will install culverts along drainages and streams and periodically in upland areas along the Altamont Alignment between Greenville Station and I-580 west of Tracy to allow for wildlife passage through grassland and other habitats in the Altamont Hills as determined in consultation with USFWS and CDFW. • The Authority will install underpasses or under-road tunnel systems along the Altamont Alignment where the alignment is located adjacent to protected conservation lands between Jess Ranch Road and west of I-580 to allow for wildlife passage between conservation lands. Actual locations of underpasses will be based on consultation with USFWS, CDFW, and UPRR. • At the Altamont Alignment I-580 crossing between Flynn Road and North Grant Line Road, the Authority will install directional fencing to assist wildlife wayfinding. The intent of the fencing will be to direct wildlife to the Altamont undercrossing of I-580 eastbound and the UPRR undercrossing of I-580 westbound. Actual locations of fencing will be based on consultation with USFWS, CDFW, Caltrans, and UPRR. • The Authority will also fund a study of improvement of existing crossings and/or potential new wildlife crossings under or over I-580 between Greenville Road and North Grant Line Road. The study will include a particular focus on a potential new wildlife overcrossing between the CCWD Habitat Management Units located west of North Grant Line. The study will include the participation of CDFW, USFWS, and the Alameda County Resource Conservation District, and CCWD. The Authority is not obligated to implement any recommended improvements as part of this measure. In lieu of improvements along the specific Altamont Alignment improvements described above, the Authority may place a contribution in escrow for the use in implementing one or more other improvements to existing wildlife crossings of I-580 or a new wildlife crossing of I-580. As described earlier in this section, I-580 has a substantial existing effect on north–south wildlife movement in the Altamont Hills. The Project does not change that existing effect and would not physically block	Authority and its Contractor	X	X		Authority to consult with USFWS, CDFW, and UPRR, and Caltrans. Authority to determine whether to pursue (1) implementation of wildlife movement improvements or (2) place a contribution in escrow for implementation of wildlife crossings. If wildlife movement improvements are the selected method, then the Authority shall include improvements as contract requirement and the Contractor shall develop design of wildlife crossings for Authority review and approval prior to construction. After Authority approval, the plan shall be provided to USFWS and CDFW for review and approval.	Authority review and approval of wildlife crossings designs prior to construction. As may be warranted by final wildlife crossing designs, review and approval of crossing designs by UPRR and/or Caltrans. USFWS and CDFW review and approval prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
wildlife movement along the Altamont Alignment but would introduce impediments to wildlife movement in certain areas. The Authority will make such a contribution only if feasible plans to implement such other improvements are being advanced by parties other than the Authority that will be completed within 10 years of the commencement of construction of the Altamont Alignment. The Authority will also make such a contribution only if the Authority, USFWS, and CDFW can mutually agree on a contribution amount by the Authority, based on an estimate of the Project's fair-share of impacts on wildlife movement in the Altamont Hills, taking into account other existing wildlife movement impediments (most prominently I-580, Altamont Pass Road, as well as Patterson Pass Road). Wildlife crossings will be approved by USFWS and CDFW prior to implementation.							
BIO-8.5: Improve existing wildlife crossings and/or implement new wildlife crossing options along certain portions of the Tracy to Lathrop Alignment The Authority will evaluate wildlife movement conditions along the new rail lines in the areas described below and will consult with USFWS and CDFW in the wildlife crossing study and design. If feasible and effective wildlife crossings are identified, the Authority will implement them at the same time as development of new rail facilities in the Tracy to Lathrop area. • *Croplands west of urbanized portions of Tracy near South Lammers Road*: The Authority will study the potential for periodic wildlife crossings under the railroad alignment between a point approximately 3,300 feet west of South Lammers Road to South Lammers Road to facilitate movement by common and special-status species, including San Joaquin kit fox, California tiger salamander, and California red-legged frog. If feasible and effective, the Authority will include wildlife crossings in construction contracts. • *Croplands east of Tracy east of Grant Line Road (east of Banta) to Paradise Cut*: The Authority will study the potential for periodic wildlife crossings under the railroad alignment between Grant Line Road to the farm access road west of Paradise Cut to facilitate movement by common and special-status species, including California tiger salamander, California red-legged frog, and riparian brush rabbit, under the Tracy Subdivision. If feasible and effective, the Authority will include wildlife crossings in construction contracts. • *Paradise Cut*: In addition to expanding the Paradise Cut bridge, without any new piles placed in the waterway, the Tracy to Lathrop Alignment will also be elevated on columns west of the Paradise Cut bridge for approximately 300 feet (to the farm access road west of Paradise Cut) and east of the bridge for approximately 700 feet (to the farm access road east of Paradise Cut) to improve wildlife movement opportunity and riparian habitat colonization and restoration along the banks of the riparian corridor. Wildlife crossings will be approved by USFWS and CDFW prior to implementation.	Authority and its Contractor	X	X			Authority to consult with USFWS and CDFW. Authority shall include wildlife crossings as contract requirement. Contractor shall develop design of wildlife crossings for Authority review and approval prior to construction. After Authority approval, the plan shall be provided to USFWS and CDFW for review and approval.	Authority review and approval of wildlife crossings designs prior to construction. USFWS and CDFW review and approval prior to construction.
BIO-10.1: Compensate for tree removal during construction A tree avoidance, minimization, and replacement plan will be developed in consultation with a certified arborist and in consultation with cities, counties, and affected property owners along the project route. The plan will contain the following provisions. • The definition of what is and is not a tree for the purposes of this mitigation will be the same as the tree definition used in	Contractor	X	X	X		Authority shall include as contract requirement. Contractor shall conduct a 100% tree survey of the construction footprint prior to construction and submit a tree	Authority review of tree survey report, review, and approval of avoidance memorandum, review, and approval of tree replacement plan.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
each municipality (Table 3.4-13). • Prior to the construction phase, the Authority will assess the potential to modify the construction methods and access of alignment, stations, and other facilities to avoid or minimize the amount of tree removal or pruning necessary to be consistent with maintenance, operational, and safety requirements. The Authority or its contractor will consult with each jurisdiction along the route to identify where tree removals can and cannot be avoided with near-term and longer-term design measures. • Tree pruning during construction will be done in accordance with arboricultural industry–recommended practices. • If pruning will result in the loss of 25 percent or more of an individual tree's canopy, then the Authority will consider the tree removed, and it will be replaced in a manner consistent with the following replacement requirements: ○ For trees removed outside of the UPRR ROW, the following requirements will apply: ○ Where specific replacement ratios or specifications are provided in the local tree ordinance or guidance (e.g., City of Tracy, City of Lathrop, San Joaquin County), the Authority will replace protected trees using the local requirements (as specifically described in Table 3.4 13). ○ Where specific replacement ratios or specifications are not provided in local tree ordinances (City of Pleasanton, City of Dublin, City of Livermore, and Alameda County, as specifically described in Table 3.4 13), the Authority will replace protected trees on a 2:1 basis using 15-gallon trees (i.e., two 15-gallon trees would be planted for each protected tree removed). ○ For unprotected trees in all locations outside the ROW, the Authority will replace trees on a 1:1 basis using 15-gallon trees (i.e., one 15-gallon tree would be planted for each unprotected tree removed). ○ For trees within the UPRR ROW, the following requirements will apply: ○ Protected trees will be replaced on a 1:1 basis using 15-gallon trees (i.e., one 15-gallon tree will be planted for every tree removed), where feasible. Unprotected trees will be replaced on the same basis, where feasible, in nonindustrial areas. Unprotected trees in industrial areas will not be replaced. ○ Trees will be replaced with a tree of the same species wherever possible, unless that species is a nonnative, invasive, or an undesirable species (see discussion below). Alternative species to the tree removed may be planted with concurrence from the landowner and local municipality. ○ If onsite tree replacement cannot occur on the UPRR ROW (where trees are removed from the ROW) or on adjacent property (where trees are removed outside of the ROW), then tree replacement may occur on other parts of the affected property (with concurrence from the landowner) or other parts of the local area (with concurrence from the local municipality). Alternatively, the Authority may pay into a local urban forestry fund to support local tree planting programs, provided the Authority and local municipalities can agree on the appropriate fund and amount. The replacement requirements described above will apply in determining the equivalent funding amount. Consistent with Executive Order 13112 on invasive species, when the Authority or its contractor replaces trees, the Authority will use native tree species insofar as it is practicable. Within the UPRR ROW, the Authority will not plant invasive tree species,					survey report to Authority. Contractor shall review construction plans to identify where trees can be avoided and where they cannot and provide a technical memorandum for Authority approval prior to construction. Contractor shall coordinate with local jurisdictions about tree removal. Contractor shall prepare a tree replacement plan, including a plan for maintenance and monitoring (including a minimum 5-year monitoring period) for Authority approval prior to tree removals. Contractor shall report on tree replacement implementation annually until completion.	Authority review of implementation and completion reports.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
as defined by the California Invasive Plant Council. For replacement of trees outside the UPRR ROW, the Authority will replant (or pay for others to replant) trees that are desired by the landowner or local municipality. Landowners may prefer that replacement trees be nonnative trees to match nonnative trees that were removed or to match surrounding vegetation.							
CUL-1.1: Prepare and submit Historic American Engineering Record documentation Before any alteration of historical resources or any nearby Project construction (including, but not limited to, tree removal/vegetation clearing; ground-disturbing activities such as earthmoving, grading, excavation; equipment/vehicle and trailer staging; and installation of temporary or permanent fencing), the Authority shall retain a professional who meets the SOI's Professional Qualifications Standards for Architectural History and/or History to prepare written and photographic documentation of historical resources that would be potentially significantly affected by the Project. The documentation of historical resources should be prepared based on the National Park Service's Historic American Engineering Record (HAER) historical report guidelines. The written historical data should follow the HAER three-part outline format for engineering structures, which includes (1) historical information (physical history, historical context), (2) structural/design information (general statement, description, mechanicals, site information), and (3) sources of information. The written historical data should be printed on 8.5- by 11-inch archival bond paper. Efforts should also be made to locate original construction drawings/plans and photographs of the historical resource during its period of significance. If located, these drawings/plans/photographs should be photographed, reproduced, and included in the dataset. Prior to the start of construction, large-format (4- by 5-inch or larger negative-size) black-and white archival photographs would be taken. Photograph views for the dataset should include (1) contextual views; (2) views of each side of the structure and interior views, where possible/applicable; (3) oblique views; and (4) detail views of character-defining features. The photographs would be processed for archival permanence in accordance with HAER photographic specifications. Each view would be fully captioned and, if necessary, perspective corrected. All views also would be referenced on a photographic key. The photographic key would be on a map of the resource and show the photograph number with an arrow to indicate the direction of the view. The archival recordation would be submitted by the Authority to the California Railroad Museum (Sacramento) and the California State Library (Sacramento) for their permanent collections.	Contractor	X				Authority shall include as contract requirement. Contractor shall develop Historic American Engineering Record documentation for Authority review prior to construction.	Authority review and approval of Historic American Engineering Record documentation prior to construction and prior to delivery to the California Railroad Museum (Sacramento) and the California State Library (Sacramento).
CUL-1.2: Prepare interpretive exhibits Interpretive exhibits would provide information regarding the specific historical resources that would be affected as part of the Project. The interpretive exhibits would utilize images, narrative history, drawings, or other material produced for the mitigation described above, including the HAER documentation, or other archival sources. The interpretive exhibits would be display panels and would be installed at proposed stations/platforms nearest the historical resource that may be adversely affected by the Project. The signage would provide a brief history of the resource, engineering features and characteristics, historic photographs, and the reason for alteration.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall develop interpretive exhibits for installation prior to the end of construction.	Authority review and approval of interpretive exhibits prior to installation.
CUL-2.1: Develop and implement an archaeological testing plan This measure would apply to the Tracy to Lathrop Alignment Variant 1, Single Track and Tracy to Lathrop Alignment Variant 2, Double Track because one previously recorded CEQA resource is located within these alignments. One prehistoric archaeological property (P-39-000141/CA-SJO-3) were identified within the Tracy to Lathrop segment. One historic-era farm dump (P-39-000013) is also located adjacent to the Tracy to Lathrop Alignment Variant 1, Single Track and Tracy to Lathrop Alignment Variant 2, Double Track. Although this is likely a small assortment of isolated farm equipment, it is unknown if	Contractor	X	X			Authority shall include as contract requirement. Contractor shall develop an archaeological testing plan for Authority review prior to construction.	Authority review and approval of archaeological testing plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
subsurface historic artifacts or features are present at this location. It has not been formally evaluated or determined ineligible. Tracy to Lathrop Alignment Variant 1, Single Track includes construction of a new siding east of the UPRR undercrossing of the I-5 bridge. This proposed siding would be located within the current boundaries of P-39-000141 (CA-SJO-03). Due to the presence of known archaeological resources in the proposed work area, archaeological testing should occur to determine the extent of the specifically identified resources as well as its significance under CEQA. Prior to construction (any ground-disturbing activity) the Authority will retain a qualified archaeologist to prepare an archaeological testing plan (ATP). The ATP should include the following items: • Background and Anticipated Resource Types • Research Questions that can be addressed by the collection of data from the defined resource types • Field Methods and Procedures • Cataloging and Laboratory Analysis • Findings and Interpretation The ATP will be implemented to determine the extent of archaeological resources within any area where there will be ground disturbance. The results of the study will be summarized into a technical document that will determine whether further study is necessary. The technical document will also determine whether additional mitigation will be needed, and can lead to additional studies and, if needed, even further mitigation.							
CUL-2.2: Conduct cultural resources awareness training This measure would apply to construction of all Proposed Project. Prior to construction (any ground-disturbing activity) contractor personnel who conduct or are associated with ground disturbance will attend a preconstruction cultural resources awareness tailboard training session provided by the contract archaeologist. The training will address measures to avoid or protect artifacts and archaeological features, cultural resources identification, and the mandatory procedures to follow should potential cultural resources be exposed during construction.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall develop an environmental awareness training plan for Authority review prior to construction.	Authority review and approval of environmental awareness plan prior to construction.
CUL-2.3: Develop an archaeological monitoring plan This measure would apply to the Tracy to Lathrop Alignment Variant 1, Single Track and Tracy to Lathrop Alignment Variant 2, Double Track. Prior to construction (any ground-disturbing activity), the Authority will retain a qualified archaeologist to prepare an archaeological monitoring plan (AMP). The AMP will identify areas considered archaeologically sensitive and where archaeological monitoring will be required. The AMP will include protocol that outlines archaeological monitoring best practices, anticipated resource types, and an unanticipated discovery protocol. The unanticipated discovery protocol will describe steps to follow if unanticipated archaeological discoveries are made during construction activities and will identify the chain of contact. The lead agency will review and approve the AMP prior to any ground-disturbing activities.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall develop an archaeological monitoring plan for Authority review prior to construction.	Authority review and approval of archaeological monitoring plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
CUL-2.4: Implement avoidance and protection measures This measure would apply to the Tracy to Lathrop Alignment Variant 1, Single Track and Tracy to Lathrop Alignment Variant 2, Double Track. Changing the rail alignment to avoid newly discovered sites is likely infeasible; however, access areas and laydown sites may be relocated, where feasible, should their location be found to be on archaeological sites. All avoidance and protection measures for archaeological resources will be delineated on construction drawings.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall incorporate avoidance and protection measures in construction drawings prior to construction.	Authority review and approval of construction drawings prior to construction.
CUL-2.5: Conduct archaeological monitoring This measure would apply to the Tracy to Lathrop Alignment Variant 1, Single Track and Tracy to Lathrop Alignment Variant 2, Double Track. During construction (any ground-disturbing activity) the Authority will be responsible for providing qualified archaeological and tribal monitors to observe any ground-disturbing construction activities with potential to affect archaeological remains in areas that have been identified as archaeologically sensitive. Archaeological sensitivity is based on areas in proximity to known archaeological sites, areas identified by the tribal consulting parties as sensitive, and/or geo-archaeological analysis.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall develop an archaeological monitoring plan for Authority review prior to construction.	Authority review and approval of archaeological monitoring plan prior to construction.
CUL-2.6: Implement procedures in case of unanticipated discoveries This measure would apply to construction of all Proposed Project. If archaeological deposits are encountered during ground disturbance, work in the area is to stop immediately. The Authority will retain a qualified archaeologist who will be contacted to assess the discovery. Archaeological deposits include, but are not limited to, flaked stone or groundstone, midden and shell deposits, historic-era refuse, and/or structure foundations. The unanticipated discovery protocol outlines the processes to follow in the event of an unanticipated discovery. Should the discovery include human remains, all parties will comply with federal and state regulations and guidelines regarding the treatment of human remains, including relevant sections of NAGPRA (§ 3(c)(d)), California Health & Saf. Code Section 8010 et seq., and Cal. Public Res. Code Section 5097.98, and consult with NAHC, tribal groups, and the SHPO.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall develop an inadvertent discovery plan for Authority review prior to construction.	Authority review and approval of inadvertent discovery plan prior to construction. In the event of inadvertent discoveries involving human remains, the Authority and/or its Contractor shall , consult with the appropriate entities.
CUL-3.1: Comply with state laws relating to Native American remains If human remains of Native American origin are discovered during ground-disturbing activities, it will be necessary to comply with state laws regarding the disposition of Native American burials, which fall within the jurisdiction of the NAHC (Pub. Res. Code § 5097). If human remains are discovered or recognized in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: 1. The county coroner has been informed and has determined that investigation of the cause of death is required; and 2. If the remains are of Native American origin: a. The descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human	Contractor	X	X			Authority shall include as contract requirement. Contractor shall develop an inadvertent discovery plan. Including for human remains for Authority review prior to construction.	Authority review and approval of cultural resource monitoring and inadvertent discovery plan, including for human remains prior to construction. In the event of inadvertent discoveries involving human remains, the Authority and/or its

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
remains and any associated grave goods as provided in Pub. Res. Code § 5097.98; or b. The NAHC was unable to identify a descendent or the descendent failed to make a recommendation within 24 hours after being notified by the commission. According to California Health & Saf. Code, six or more human burials at one location constitute a cemetery (§ 8100), and disturbance of Native American cemeteries is a felony (§ 7052). Section 7050.5 requires that excavation be stopped in the vicinity of the discovered human remains until the coroner can determine whether the remains are those of a Native American.							Contractor shall , consult with the appropriate entities.
GEO-4.1: Monitor for discovery of paleontological resources, evaluate found resources, and prepare and follow a recovery plan for found resources The following measure will be undertaken during construction of the following proposed alignments, stations, and OMFs: Tri-Valley Alignment; Isabel Station; Altamont Alignment, including the Owens-Illinois Industrial Lead Variant 1, Single Track and the Owens-Illinois Industrial Lead Variant 2, Double Track; Interim OMF; Tracy OMF; Tracy to Lathrop Alignment Variant 1, Single Track; Tracy to Lathrop Alignment Variant 2, Double Track; River Islands Station; North Lathrop Station; Southfront Road Station; Stone Cut Alignment; and Mountain House Station Alternative. Before the start of ground-disturbing activities, the Authority will retain a qualified paleontologist, as defined by the SVP, who is experienced in identifying potential for occurrence of significant fossils at construction sites, and who is experienced in teaching non-specialists. The qualified paleontologist will conduct appropriate studies of the construction site before any ground-disturbing activities occur, including onsite investigations, to determine likelihood of significant fossils at the site, in particular small fossils. Particular attention will be given to smaller vertebrate fossils in those areas where the Tassajara Formation or San Pablo Group occur (i.e., geologic units known to contain an abundance of rodent or lagomorph fossils), which includes the Tri-Valley Alignment; Isabel Station; Greenville Station; Altamont Alignment, including the Owens-Illinois Industrial Lead Variant 1, Single Track and the Owens-Illinois Industrial Lead Variant 2, Double Track; and the Mountain House Station. If vertebrate fossils are determined likely to be discovered at the construction site, the qualified paleontologist or his/her appointee will conduct onsite monitoring during construction activities. In addition, the qualified paleontologist will train all construction personnel who are involved with earthmoving activities, including the site superintendent, regarding the possibility of encountering fossils, the appearance and types of fossils that are likely to be seen during construction, and proper notification procedures should fossils be encountered. Procedures to be conveyed to workers include halting construction within 50 feet of any potential fossil find and notifying a qualified paleontologist, who will evaluate the significance. The qualified paleontologist will also make periodic visits during earthmoving in high sensitivity sites to verify that workers are following the established procedures. If paleontological resources are discovered during earthmoving activities either by the paleontological monitor or the construction personnel, the construction crew will immediately cease work near the find and notify the Authority. Construction work in the affected areas will remain stopped or be diverted to allow recovery of fossil remains in a timely manner. The Authority will retain a qualified paleontologist to evaluate the resource and prepare a recovery plan in	Contractor	X	X			Authority shall include as contract requirement. Contractor shall develop a paleontological resource monitoring and recovery plan for Authority review prior to construction.	Authority review and approval of paleontological resource monitoring and recovery plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
accordance with SVP guidelines (SVP 2010). The recovery plan may include a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the Authority to be necessary and feasible will be implemented before construction activities can resume at the site where the paleontological resources were discovered. The Authority will be responsible for ensuring that the monitor's recommendations regarding treatment and reporting are implemented.							
HAZ-2.1: Conduct site investigations Prior to construction, the Authority will hire a certified environmental professional to prepare work plans and conduct Phase I and, if necessary, Phase II, Environmental Site Assessments (ESAs) for all Proposed Project improvements within each segment to evaluate the chemical quality of soil, ballast, and/or groundwater that could be disturbed during construction and maintenance activities. The work plans will describe how representative samples of soil, ballast, and groundwater will be collected and analyzed for potential contamination within each segment from the following potential sources of hazardous materials. • Railroad corridors • Roadways with yellow pavement markings • Hazardous materials release sites • Petroleum pipelines • Agricultural land Work plans will be submitted to the appropriate oversight agency for review and approval. In accordance with the approved work plans, the Phase I (and Phase II, if necessary) ESAs will be conducted and evaluated by a licensed professional for the Proposed Project improvements. The Phase I (and Phase II, if necessary) ESAs will summarize the field activities and analytical results and will be submitted to the appropriate oversight agency for review and approval.	Contractor	X				Authority shall include as contract requirement. Contractor shall conduct a site investigation for hazardous materials and prepare a site investigation report for Authority and agency review and approval prior to construction.	Authority review and approval of site investigation plan prior to submission to RWQCB or DTSC. Authority review and site investigation report prior to submission to RWQCB or DTSC.
HAZ-2.2: Implement construction risk management plan Prior to construction, the Authority will prepare a construction risk management plan (CRMP) for the Proposed Project improvements that provides a framework for proper characterization and management of contaminated soil, ballast, and groundwater that could be disturbed during construction and maintenance activities. The CRMP will describe how to meet the following key objectives. • Identify various scenarios under which large volumes of soil and railroad ballast generated during construction and maintenance can be safely reused. • Identify maximum acceptable contaminant levels to protect workers, passengers, the public, and ecological receptors for each soil and ballast reuse scenario. • Identify maximum acceptable contaminant levels to protect station workers and passengers potentially exposed to vapor intrusion, if any, from soil or groundwater contamination.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a CRMP for construction and obtain RWQCB or DTSC agreement after Authority review prior to construction. Authority shall modify the construction CRMP to develop maintenance controls to minimize risk and incorporate CRMP requirements in	Authority review and approval of CRMP prior to submission to RWQCB or DTSC. Authority inclusion in maintenance contracts.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
• Identify sampling and analysis, stockpiling, transportation, health and safety, and other procedures by which soil and ballast must be managed in order to meet safety, regulatory and other standards. • Define how the groundwater that could be encountered during construction and maintenance will be characterized, properly managed, and discharged or treated. Based on the analytical results of the site investigations required under Mitigation Measure HAZ-2.1 Conduct site investigations, maximum acceptable contaminant levels will be established for the following soil and ballast reuse scenarios. • "Unrestricted Onsite Reuse" in which soil and ballast excavated from the Proposed Project footprints can be reused in any onsite area. • "Stations Reuse" in which soil and ballast excavated from the Proposed Project footprints can be reused in station areas where there would be relatively frequent potential exposure. • "Right-of-Way Reuse" in which soil and ballast excavated from the Proposed Project footprint can be reused in areas where there would be relatively infrequent potential exposure along the right-of-way of railroad tracks. • "Encapsulation" in which soil and ballast excavated from the Proposed Project footprint can be reused under barriers or other structures (and covered on all exposed sides by clean material or asphalt paving). To protect ecological receptors, the reuse scenarios will incorporate additional limitations (as necessary) near creeks, surface waters, or other aquatic habitats based on the findings of an ecological risk assessment. Soil or ballast that contains chemical constituents at levels greater than the acceptable reuse scenarios will be disposed of in accordance with RCRA and Cal. Code Regs. at a facility permitted to accept the waste. Imported fill materials will be characterized to demonstrate they satisfy the criteria for "Unrestricted Onsite Reuse" established in the CRMP. All extracted groundwater will be considered potentially contaminated and will require characterization to determine the appropriate treatment requirements (if necessary) for discharge. The extracted groundwater will be collected and managed prior to discharge in compliance with local and state regulations and permit requirements, including the SWRCB and Regional Water Resources Control Boards. Health and safety procedures described in the CRMP will include requirements for an air quality monitoring program during excavation in areas with elevated contaminants of concern to ensure that fugitive dust emissions do not pose an unacceptable health risk to workers or the public. The air monitoring program will identify action levels for total particulates that require respiratory protection, implementation of engineering controls, and ultimately work stoppage. This monitoring program will be in addition to the fugitive dust controls required under Mitigation Measure AQ-2.5 Implement fugitive dust controls during construction. A licensed professional will prepare the CRMP and submit it to the appropriate oversight agency for review and approval prior to construction. The approved CRMP will be implemented during construction and maintenance of the Proposed Project improvements within each segment.						maintenance contracts.	

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
HYD-3a.1: Prevent construction materials from being exposed to storm flooding hazards. Construction materials (particularly soil stockpiles and hazardous materials such as fuels, lubricants, and oils) will not be stored in areas of potential storm flooding inundation (i.e., 100-year or 200-year flood zones and within drainage courses) during the winter rainy season (i.e., November 1 through April 31).	Contractor	X	X			Authority shall include as contract requirement. Contractor shall include storm event monitoring and contingency plans in construction plans for Authority review prior to construction.	Authority review and approval of construction plan prior to construction.
HYD-3b.1: Perform detailed hydraulic evaluations and implement new or modify existing stormwater controls as required to prevent storm drainage system capacity exceedance and reduce pollutant transport. Detailed hydraulic evaluations will be performed and completed during the Project design phase for improvements that include alteration of drainage patterns such as alteration and construction of trackside ditches, construction of new impervious pavement and stormwater drainage systems at stations and parking lots, and construction of new connections to existing stormwater drainage systems, to ensure that the new stormwater control infrastructure is appropriately designed and that runoff from near-term improvements would not exceed the capacity of storm drainage systems or result in substantial additional pollutant transport. The detailed hydraulic evaluations will be performed in accordance with the requirements of the latest edition of the Caltrans *Highway Design Manual* for track areas and station platforms, and in accordance with regulations and design requirements of local municipalities for other improvements associated with stations. A professional engineer will perform and certify the following detailed hydraulic evaluations. • Improvements comply with regulations and design requirements of local municipalities for discharges to storm drainage systems within those jurisdictions. • Improvements are designed to accommodate storm frequencies, precipitation data, and runoff calculations. • The capacity of existing or proposed storm drainage systems that would receive discharges is adequate. If improvements could result in exceedance of existing or proposed storm drainage systems and subsequent downstream pollutant transport, modification of onsite stormwater control designs or offsite storm drainage systems will be performed to reduce and control runoff and potential for flooding. These modifications may include the following measures. • Reducing impervious surfaces through use of permeable pavement surfaces for station improvements. • Increasing the size of drainage ditches, swales, retention basins, infiltration basins, trenches, and cross-drainage facilities within track and station areas. • Increasing the capacity of downstream stormwater drainage systems by increasing the size of offsite storm drains, drainage canals, and retention and infiltration basins. In general, the drainage design for Proposed Project improvements would involve the following features. • Construct trackside swales or ditches to collect runoff from the track areas.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall conduct hydraulic evaluations for all improvements within drainage courses and flood zones to determine flood impacts and shall modify designs to reduce flooding impacts to existing conditions. The Hydraulic Study shall be submitted along with modified designs to Authority prior to submission to any necessary regulatory agencies.	Authority review and approval of hydraulic study and modified designs prior to submission to regulatory agencies. Regulatory agency review and approval prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
• Allow infiltration and detention onsite and offsite, if feasible. • Evaluate or improve the capacity of the existing drainage system to carry runoff from near-term improvements, if required. • Construct cross-culverts under the existing or new tracks to carry runoff across the trackway system to maintain the flow pattern. • Construct catch basins as required to convey excess flows from the near-term improvements to the local drainage system, and install and operate appropriate BMPs to reduce and/or treat (as required by the appropriate jurisdiction) pollutants washed from new, Project-related impervious surfaces.						
HYD-4.1: Perform hydrologic and hydraulic studies for project improvements to be located in floodplains, coordinate with regulatory agencies, and obtain required permits. During the detailed Proposed Project design phase, the Authority will prepare site-specific detailed hydrologic and hydraulic studies for improvements that are proposed within the 100- and 200-year floodplains. The results of these studies will be used to inform the design of Proposed Project-related facilities, such that they are specifically designed to pass 100- and 200-year flows without impedance as required by FEMA, DWR, USACE, and CVFPB standards so that upstream, onsite, and downstream flooding would not occur. Furthermore, during the detailed Proposed Project design phase, the Authority will consult with DWR and CVFPB regarding Proposed Project-related work that is proposed in the Paradise Cut area, to ensure that Proposed Project facilities are designed so they will not impair any of the flood improvements that are planned by DWR and CVFPB as part of the CVFPP and the San Joaquin Basin-Wide Feasibility Study. Finally, prior to the start of any earthmoving activities, the Authority will obtain all necessary permits and will provide copies of engineering plans and consult with any necessary agencies with levee jurisdiction, such as DWR, CVFPB, USACE, or local reclamation districts, for all Proposed Project-related work that would be required in or through existing levees. Proposed Project-related work in or through existing levees will be performed in accordance with the terms of the permits, which would contain site-specific measures to protect public safety and water quality, as issued by the applicable regulatory agency.	Contractor	X	X		Authority shall include as contract requirement. Contractor shall conduct hydraulic evaluations for all improvements within drainage courses and flood zones to determine flood impacts and shall modify designs to reduce flooding impacts to existing conditions. The Hydraulic Study shall be submitted along with modified designs to Authority prior to submission to any necessary regulatory agencies.	Authority review and approval of hydraulic study and modified designs prior to submission to regulatory agencies. Regulatory agency review and approval prior to construction.
NOI-1.1a: Implement a construction noise control plan A noise control plan that incorporates, at a minimum, the following best management practices into the construction scope of work and specifications to reduce the impact of temporary construction-related noise on nearby noise-sensitive receptors (if present in the construction area) will be prepared and implemented. • Install temporary construction site sound barriers near noise sources. • Use moveable sound barriers at the source of the construction activity. • Avoid the use of impact pile drivers where possible near noise-sensitive areas or use quieter alternatives (e.g., drilled piles) where geological conditions permit. • Locate stationary construction equipment as far as possible from noise-sensitive sites. • Re-route construction-related truck traffic along roadways that will cause the least disturbance to residents. • Use low-noise emission equipment.	Contractor	X	X		Authority shall include as contract requirement. Contractor shall prepare a construction noise control plan for Authority review prior to construction.	Authority review and approval of construction noise control plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
• Implement noise-deadening measures for truck loading and operations. • Line or cover storage bins, conveyors, and chutes with sound-deadening material. • Use acoustic enclosures, shields, or shrouds for equipment and facilities. • Use high-grade engine exhaust silencers and engine-casing sound insulation. • Minimize the use of generators to power equipment. • Limit use of public address systems. • Grade surface irregularities on construction sites. • Monitor and maintain equipment to meet noise limits. • Establish an active community liaison program to keep residents informed about construction and to provide a procedure for addressing complaints.							
NOI-1.1b: Implement a phased program to reduce train noise along the Valley Link corridor as necessary to address noise increases over FTA's severe impact thresholds. This mitigation applies mandatorily to noise increases over FTA's severe impact thresholds. Mitigation is recommended for moderate impacts particularly when already addressing severe impacts in an area, but is not mandatory for the purposes of CEQA. The Authority will require new rolling stock for Valley Link operation to meet FRA vehicle noise requirements and will require train horn height and noise level to be as low as possible while complying with the FRA Train Horn Rule per FRA regulations (49 C.F.R. Part 222). The Authority will also establish safety warning requirements for trains transiting through stations that minimize train horn noise, as and where feasible, while also providing adequate safety awareness for station users. The Authority will also coordinate with other rail operators, local jurisdictions (including the cities of Tracy and Lathrop), transportation funding agencies, and state and federal agencies to implement incremental the noise-reduction measures described below at the locations of severe cumulative noise impacts (as funding becomes available), where such measures are acceptable to the local community, and where measures are determined feasible. This mitigation applies to the locations where the Proposed Project would substantially contribute to severe cumulative noise impacts. Where the Proposed Project would not contribute to severe cumulative noise impacts, the Authority is not required to participate in mitigation. The Authority will work with local, state, and federal partners to establish priorities for noise reduction measures to be implemented as funding becomes available. The Authority will also work with other willing rail operators to seek additional funding from other parties that contribute to cumulative noise levels. Improvements will be phased as needed to address changes in rail service over time and the associated rail noise over FTA's severe impact thresholds. If funding participation by other parties is limited, the Authority may not be able to fund all potential noise mitigation on its own, particularly where the mitigation to address cumulative noise impacts far exceeds the Authority's fair share of the impact.	Authority and its contractor	X	X	X	X	Authority shall include as contract requirement. Authority shall determine the preferred approach for reducing noise impacts. If a quiet zone is selected, Authority will coordinate with applicable municipalities to determine if a quiet zone is feasible. If a quiet zone is feasible, then Authority will direct the contractor to determine the necessary improvements for the quiet zone, design the improvements, and construct them. If the quiet zone is not feasible or is not selected, Authority will direct the contractor to conduct a noise study to determine the feasibility and cost effectiveness of wayside horns, building insulation, or noise	Authority review and approval of design of selected mitigation approach.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
Train Horn Location The Authority will require train horns on new train equipment used for Valley Link service to be placed at the minimum height above the top of rail (ATOR) and to use the minimum noise level that is compliant with the FRA Train Horn Rule. Placement of train horns at lower heights on trains can reduce the spillover of noise in adjacent areas while meeting FRA noise warning requirements for vehicular, pedestrian and other users of at-grade crossings. For example, future trains procured for the California High-Speed Rail system would feature horns mounted at 7 feet ATOR with an Lmax of 96 dBA at 100 feet from the track. Future electric multiple unit trains procured by Caltrain as part of its electrification project would feature horns mounted at 3 feet ATOR. *Station Warning Requirements Concerning Train Horn Sounding* The FRA Train Horn Rule applies to public at-grade crossings of rail rights of way; it does not apply to trains transiting through stations. Operational safety warning requirements concerning warnings at stations are determined by the host railroad. For stations within the Authority's dedicated right-of-way (e.g. west of the Owens-Illinois Industrial Lead) where significant impacts to sensitive noise receptors are identified due to sounding of train horn noise, the Authority will evaluate whether safety warning procedures can provide adequate safety without full sounding of train horns. Safety warning procedures could include: reduced duration of horn sounding, use of a secondary train horn with a lower noise level than the FRA Train Horn Rule compliant horn (such as a horn with similar sound level as used by BART for their station entry), and/or wayside horns, bells, verbal announcements, visual warnings, or other means. Auditory warnings will be required (e.g. visual warnings alone will not be considered sufficient to provide adequate safety). The Authority will determine what kind of warnings will provide adequate safety for these stations as necessary to address significant noise effects. For stations within UPRR right-of-way, the Authority will consult with UPRR to determine what auditory and visual warning will be required when transiting through stations. UPRR is the host railroad for its right-of-way and thus may mandate the sounding of FRA Horn Rule compliant horns when entering or transiting through stations and not allow the use of other safety warning methods. Where revised warning methods at stations are inadequate to avoid significant noise impacts to sensitive receptors due to horn noise, the Authority will consider targeted noise barriers between the areas of horn sounding and sensitive receptor locations (see discussion of noise barriers below). *Wayside Horns and Residential Building Sound Insulation* The Authority, in cooperation with the other parties noted above, will evaluate the potential to reduce noise impacts through the installation of wayside horns and building sound insulation improvements at residences projected to have a sound increase greater than the FTA severe impact criteria. Building sound insulation methods may include extra wall insulation, window glazing, and sealing of exterior surfaces. During final design, a technical study will be completed to evaluate the effectiveness of reducing impacts to less than the FTA severe impact threshold through these methods. If the study determines it is feasible to reduce the impact to less than the threshold at an affected sensitive noise receptor, then no additional mitigation at that location will be required. Building sound insulation measures will only be installed to the extent necessary to meet the impact threshold at the receptor location and will					barriers. Authority will select the preferred method and direct the contractor to design and implement them. The selected option shall be implemented prior to operations.	

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
only be installed if building owners are willing to accept such measures. *Quiet Zones* The lead agency for a quiet zone designation is the local jurisdiction (typically the city or county) responsible for traffic control and law enforcement on the roads at the at-grade crossings. The Authority, in cooperation with the other parties, noted above, and the affected local jurisdictions (i.e., the cities of Tracy and Lathrop) will implement a phased program considering the potential establishment of quiet zones along the Valley Link corridor at all locations where train noise is predicted to exceed FTA severe impact thresholds. The Authority will work closely with local jurisdictions including the cities of Tracy and Lathrop to prepare the engineering studies and coordination agreements to design, construct, and enforce potential quiet zones. Options for establishing quiet zones could include implementation of the following FRA pre-approved supplemental safety measures (SSMs). • Four-quadrant gate system. This measure involves the installation of at least one gate for each direction of traffic to fully block vehicles from entering the crossing. • Gates with medians or channelization devices. This measure keeps traffic in the proper travel lanes as it approaches the crossing, thus denying the driver the option of circumventing the gates by traveling in the opposite lane. • One-way street with gates. This measure consists of one-way streets with gates installed so that all approaching travel lanes are completely blocked. This option may not be feasible or acceptable to local jurisdictions at all locations where the establishment of quiet zones would reduce noise impacts. • Road closure. This measure consists of closing the road to through travel at the at-grade crossing. This option may not be feasible or acceptable to local jurisdictions at all locations where the establishment of quiet zones would reduce noise impacts. In addition to these pre-approved SSMs, FRA also identifies a range of other measures that may be used to establish a quiet zone. These measures could be modified SSMs or non-engineering measures that might involve law enforcement or public awareness programs. Such safety measures must be approved by FRA based on the prerequisite that they provide an equivalent level of safety as the sounding of train horns. Wayside horns can also be used as part of a quiet zone. While not avoiding the sounding of a horn, wayside horns affect a smaller area than train-mounted horn. Wayside horns can be used when the other measures above are not adequate to avoid the use of a horn. The lead agency for a quiet zone designation is the local public authority, which is the only authority that can implement a quiet zone. The Authority or the other rail operators cannot, on their own, designate the quiet zone. However, only with the implementation of the quiet zone can the Authority, other tenant railroads, and freight operators be relieved of the requirement to sound their horns when crossing at-grade crossings. Thus, if a local city does not agree to implement the quiet zone, then even if the required SSMs are present, the Authority, freight, and other rail operators would continue to use train horns as a safety device in compliance with FRA requirements.							

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
Noise Barriers For noise barriers to be effective, they must be constructed to intercept the line of sight between a noise source and receptors. Noise barriers can be constructed from a range of potential materials, such as concrete, brick or masonry blocks, metals, wood, rubber, or transparent panels. The height of each noise barrier would depend on engineering design on the conditions at each specific location; typical noise barriers are 8 to 10 feet in height. The Authority will follow the California High Speed Rail Noise and Vibration Guidelines (CHSRA 2018) as it relates to noise barriers. The Authority will take steps to reduce noise substantially through the use of noise barriers that are reasonable, physically feasible, practical, cost-effective, and locally accepted. The following criteria will be used for evaluating the reasonableness of noise barriers as mitigation for severe noise impacts. • Calculations and computations for barrier geometry. • Increase over existing noise levels. • Number of noise sensitive sites affected. • The minimum number of affected sites should be at least 10, and the length of a noise barrier should be at least 800 feet. • A minimum outdoor noise reduction of 5 decibels (dB) using the applicable criterion for the property is considered substantial. • Barrier heights up to a maximum of 14 feet will be considered. Mitigation options for areas that require barriers over 14 feet will be studied on a case-by-case basis. • The “reasonable allowance” for the noise barriers is calculated using the Caltrans base cost allowance for the current year, which is published at ttp://www.dot.ca.gov/hq/env/noise/. • The affected sensitive receptors should approve of implementation of the recommended noise barriers (75 percent of all affected parties). • Noise mitigation measure must be designed, constructed, installed, or implemented in compliance with structural requirements related to ground conditions, wind loading, seismic risk, safety considerations, accessibility, material maintainability and longevity, and applicable engineering design practices and technology. • Noise mitigation measures must not result in an adverse environmental impact, such as significant visual intrusions, blocked views, or adverse effects to a historical site. • Noise mitigation measures must be designed, constructed, installed, and implemented in a manner that does not result in adverse impacts to the visual resources in the area. Sound barriers will consist of a solid barrier no more than 6 feet in height. Above 6 feet, the sound barrier will be made of transparent materials. For example, a 13-foot-high sound barrier							

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool

would consist of 6 feet of solid material on the bottom topped by 7 feet of transparent material.

- Two factors are required to determine cost effectiveness of mitigation by noise barriers: the unit construction cost and the number of benefited receptors.[1] The cost for constructing a noise barrier along the at-grade portion of the alignment is estimated to be $70.00 per square foot, and the cost to construct a noise barrier along the elevated portion of the alignment is $65.00 per square foot. The total cost of mitigation cannot exceed $95,000 per benefitted receiver. This cost is determined by dividing the total cost of the mitigation measure by the number of noise-sensitive buildings that receive a substantial (i.e., 5 dBA or greater) outdoor noise reduction. This calculation will generally limit the use of mitigation in rural areas that have few and/or isolated residential buildings. If the density of residential dwellings is insufficient to make the measure cost-effective, then other noise abatement measures, such as sound insulation, will be considered on a case-by-case basis. If sound insulation is identified as a mitigation measure, the treatment must provide a substantial increase in noise reduction (i.e., 5 dBA or greater) between the outside and inside noise levels for interior habitable rooms.

Potential Noise Barriers

The following is a discussion of potential noise barriers and quiet zones to reduce noise impacts within the Altamont segment and the Tracy to Lathrop segment at locations where project noise levels would exceed FTA's severe impact thresholds. The potential use of noise barriers to address noise levels that exceed FTA's moderate impact threshold is also discussed, but is not mandatory. Noise barriers would need to be meet the effectiveness and acceptability criteria noted above. In addition, these recommendations are subject to funding limitations, and the actual improvements will be determined in consultation with local cities and in consideration of public input received.

For residential uses adjacent to the alignment, creation of quiet zones at the at-grade crossings and at the station areas, in combination with noise barriers in impacted areas, could mitigate moderate and severe noise impacts as described below.

- Altamont Segment—There would be at-grade crossings and stations in Altamont segment. Trains approaching the at-grade crossings and the station platforms would use horns. The use of revised safety warning measures for stations (as described above) may lower the level of impacts and may avoid or reduce the need for potential noise barriers. Establishing quiet zones at the grade crossing, in combination with noise barriers in impacted areas, if meeting all of the effectiveness and acceptability criteria noted above, could mitigate all moderate and severe noise impacts in the Altamont segment.
  - Establishing quiet zones at the grade crossings between Midway Road and Hansen Road in combination with noise barriers would mitigate the severe noise impacts at the receptors represented by site LT-07 because of train horns approaching the at-grade crossings and the station platforms in the Altamont segment.
- Tracy to Lathrop Segment—There would be at-grade crossings from South Lammers Road to Grant Line Road, also at Canal Road, Stewart Road, D'Arcy Parkway, and East Louise Avenue. The use of revised safety warning measures for stations (as described above) may lower the level of impacts and may avoid or reduce the need for potential noise barriers. Establishing quiet zones at the at-grade crossings in combination with noise barriers in impacted areas, if meeting all of the effectiveness

[1] The unit construction cost for noise barriers is based on an evaluation of the design requirements regarding noise barrier mitigation. The typical base cost for transportation noise abatement screen-wall type barriers is available from the Federal Highway Administration's national inventory of noise barriers, Caltrans, qualified barrier manufacturers, and construction cost historical databases. These sources in (2016/2017 dollars) were used to estimate probable costs per square foot for typical high-speed rail noise barriers that incorporate opaque and transparent materials. The estimate of probable costs for barriers having special requirements (e.g., special foundations, highly curved sections, higher than standard height, etc.) should be evaluated on an individual basis.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
and acceptability criteria noted above, could mitigate all moderate and severe noise impacts in the Tracy to Lathrop segment as follows. ○ Establishing quiet zones at the at-grade crossings at South Lammers Road and Corral Hollow Road in combination with noise barriers along the properties to the north and south of the railway between South Lammers Road and Corral Hollow Road would mitigate the severe noise impacts at the receptors represented by sites LT-09, LT-21 and LT-20 because of train horns approaching the at-grade crossings in the Tracy to Lathrop segment. ○ Establishing quiet zones at the at-grade crossings at Corral Hollow Road and West Schulte Road in combination with noise barriers along the properties to the north and south of the railway between Corral Hollow Road and West Schulte Road would mitigate the severe noise impacts at the receptors represented by site LT-19 because of train horns approaching the at-grade crossings in the Tracy to Lathrop segment. ○ Establishing quiet zones at the at-grade crossings at West Schulte Road and South Tracy Boulevard in combination with noise barriers along the properties to the north and south of the railway between West Schulte Road and South Tracy Boulevard would mitigate the severe noise impacts at the receptors represented by site LT-18 because of train horns approaching the at-grade crossings in the Tracy to Lathrop segment. ○ Establishing quiet zones at the at-grade crossings at South Tracy Boulevard, North Central Avenue, and North McArthur Drive in combination with noise barriers along the properties to the north and south of the railroad from South Tracy Boulevard to North Central Avenue, and to North McArthur Drive would mitigate the severe noise impacts at the receptors represented by sites LT-17 and LT-16 because of train horns approaching the at-grade crossings and the Downtown Tracy Station platform in the Tracy to Lathrop segment. ○ Establishing quiet zones at the at-grade crossings at Banta Road and West Grant Line Road in combination with noise barriers along the properties to the north and south of the railway between Banta Road and West Grant Line Road would mitigate the severe noise impacts at the receptors represented by site LT-15 because of train horns approaching the at-grade crossings in the Tracy to Lathrop segment. ○ Establishing quiet zones at the grade crossings at East Louise Avenue in combination with noise barriers along the properties to the west of the railway from East Louise Avenue to the end of the Proposed Project limits north of the North Lathrop Station would mitigate the severe noise impacts at the receptors represented by site LT-12 because of train horns approaching the at-grade crossings and the North Lathrop Station platform in the Tracy to Lathrop segment.							
NOI-2.1a: Implement construction vibration control plan A vibration control plan that incorporates, at a minimum, the following best management practices into the construction scope of work and specifications to reduce the impact of temporary construction-related vibration on nearby noise-sensitive receptors will be prepared and implemented. • Avoid the use of impact pile drivers where possible near vibration-sensitive areas or use alternative construction methods (e.g., drilled piles) where geological conditions permit. • Avoid vibratory compacting/rolling in close proximity to structures. • Designate a Preservation Director and post contact information in a conspicuous location near the Proposed Project site, so	Contractor		X	X		Authority shall include as contract requirement. Contractor shall prepare a construction vibration control plan for Authority review prior to construction.	Authority review and approval of construction vibration control plan prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
that it is clearly visible to nearby receptors most likely to be disturbed. The coordinator will manage complaints and concerns resulting from vibration inducing activities. The severity of the vibration concern would be assessed by the director, and, if necessary, evaluated by a qualified vibration control engineer. • Before construction activity begins within 45 feet of one or more residences or businesses, written notification will be provided to the potentially affected residents or business owners, identifying the type, duration, and frequency of construction activities. Notification materials will also identify a mechanism for residents or business owners to register complaints with the appropriate jurisdiction if construction vibration levels are overly intrusive. • Before construction activity begins within 45 feet of one or more residences or businesses, the pre-existing condition of all buildings within a 45-foot radius within the immediate vicinity of proposed construction activities will be recorded in the form of a preconstruction survey. The preconstruction survey will determine conditions that exist before construction begins for use in evaluating damage caused by construction activities. Fixtures and finishes within a 45-foot radius of construction activities susceptible to damage will be documented (photographically and in writing) prior to construction. All damage will be repaired back to its pre-existing condition following the completion of construction activities and post-construction surveys of affected residences or businesses. • The primary contractor will prepare and implement a detailed vibration control plan based on the proposed construction methods. This plan shall identify specific measures to ensure compliance with the vibration control measures specified above. The vibration control plan will be submitted to and approved by the Proposed Project proponent(s) before any vibration-generating construction activity begins.						
REC-1.1: Coordinate with East Bay Regional Park District to provide advance notice of construction and maintain safe access to Iron Horse Regional Trail during construction activities The Authority or the contractor will coordinate construction activities near the Dublin/Pleasanton BART Station associated with track alignments within the I-580 crossing over Iron Horse Regional Trail with EBRPD so EBRPD can inform users of the trail regarding any potential disruption to use. A safe detour will be implemented during construction of the track alignments over the trail to ensure that use of the trail will remain available and pedestrian, bicyclist, and equestrian access to the trail will be maintained. If a temporary closure is required, the Authority or the contractor will coordinate with EBRPD on the timing and provide at least a 30-day advance notice.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a recreational safety plan as part of its construction plans for Authority review and approval prior to construction.	Authority review and approval of recreational safety plan prior to submission to East Bay Regional Park District for review.
REC-1.2: Coordinate with San Joaquin County to provide advance notice of construction and maintain a safe open channel in the San Joaquin River during construction activities The Authority or the contractor will coordinate construction activities associated with the railroad bridge across the San Joaquin River with San Joaquin County so the County can inform users of the river regarding any potential disruption to use. An open channel for water-oriented recreational traffic will be maintained under the bridge at all times. Construction equipment and other potential impediments to recreation will be equipped with required safety markings (e.g., upstream/downstream signage, exclusion methods, lights, etc.). If a temporary closure is required, the Authority or the contractor will coordinate with the County on timing and provide at least a 30-day advance notice.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a San Joaquin River recreational safety plan as part of its construction plans for Authority review and approval prior to construction.	Authority review and approval of recreational safety plan prior to submission to San Joaquin County for review.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
TRA-1.1: Transportation management plan for project construction. The Authority will coordinate with Caltrans and with public works and transportation departments of local jurisdictions to develop a TMP that will mitigate construction impacts on transit, roadway, bicycle, and pedestrian facilities, while allowing for expeditious completion of construction. Measures that will be implemented throughout the course of construction of the Proposed Project will include, but will not be limited to, the following: • Limit number of simultaneous street, ramp, and lane closures and consequent detours of transit and automobile traffic within each immediate vicinity, with closure timeframe limited as much as feasible for each closure, unless alternative routes are available. • Implement traffic control measures to minimize traffic conflicts for all roadway users (regardless of mode) where lane closures and restricted travel speeds will be required for longer periods. • Provide advance notice of all construction-related street, ramp, and lane closures, durations, and detours to local jurisdictions, emergency service providers, and motorists. • Coordinate with Caltrans and with public works and transportation departments of local jurisdictions to maintain access for and operations at adjacent properties. • Provide safety measures for motorists, transit vehicles, bicyclists, and pedestrians to ensure safe travel through construction zones. • Limit sidewalk (and pedestrian walkway/path) and bikeway closures to one location within each vicinity at a time, with closure timeframe limited as much as feasible for each closure, unless alternative routes are available. • Provide designated areas for construction worker parking wherever feasible to minimize use of parking in residential or business areas.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a construction traffic control plan for Authority review and approval prior to construction. After Authority approval, the plan shall be provided to local jurisdictions and Caltrans for their review and approval, as appropriate.	Authority review and approval of traffic control plan prior to construction. Local jurisdiction and Caltrans approval of traffic control plan, as required.
TRA-1.2: Mainline railway disruption control plan for project construction. The Authority will make efforts to contain and minimize disruption to freight and tenant passenger (ACE) services during project construction, while allowing for expeditious completion of construction. Measures that will be implemented throughout the course of Project construction will include, but will not be limited to, the following: • Limit number of simultaneous track closures within each immediate vicinity, with closure timeframe limited as much as feasible for each closure, unless bypass tracks or alternative routes are available. • Provide safety measures for freight and passenger rail operation through construction zones. • Require contractors to coordinate with rail dispatch to minimize disruption of rail service in the corridor. • Where feasible, limit closure of any tracks for construction activities to periods when passenger service is not scheduled or is less frequent (e.g., weekends, or midday and late evening periods on weekdays). • Where feasible, maintain acceptable service access for passenger and freight operation.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a railway disruption control for Authority review and approval prior to construction. After Authority approval, the plan shall be provided to UPRR for review and approval.	Authority review and approval of railway disruption control plan prior to construction. UPRR review and approval prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
• Where one open track cannot be maintained for passenger or freight use, limit multi-track closures to one location at a time, as much as feasible. • Where multi-track closures result in temporary suspension of passenger rail service, work with local and regional transit providers to provide alternative transit service around the closure area (e.g., increased bus and shuttle service). • Where multi-track closures result in temporary suspension of freight rail service, work with UPRR and freight users to schedule alternative freight service timing to minimize disruption to freight customers. Where such closures will result in substantial diversion to trucks, the Authority or its construction contractor will coordinate with local jurisdictions and freight carriers to determine preferred truck routes to minimize the effect on the circulation system. • Provide advance notice of construction-related track closures to all affected parties. • Provide advance notice to transit riders of any temporary disruption in passenger rail service. • Coordinate with UPRR in advance and during any potential disruption to freight operation and/or UPRR facilities and maintain emergency access for UPRR for the duration of construction.							
TRA-1.3: BART railway disruption control plan for project construction. The Authority will minimize disruption to BART service and access to the BART Dublin/Pleasanton Station during construction of the Proposed Project, while allowing for expeditious completion of construction. Measures that will be implemented throughout the course of construction of the Proposed Project will include, but will not be limited to, the following: • Full access to the Dublin/Pleasanton BART Station will be maintained through on-site pedestrian detours if needed. Detour plans will be developed with BART and submitted for approval by BART. A detailed construction staging plan will be prepared and will include details to maintain BART station access during the freeway median widening phase. The construction staging plan will also address any disruption to the existing undercrossing for bicyclists, pedestrians, and transit users; if necessary, at least one travel lane / path of travel will be maintained to ensure that two-way circulation can be provided with the use of flaggers. • No disruptions to BART service are expected. Any construction activities that directly impact the BART Station, like cutting through the BART concourse wall for the new access location, shall be done outside BART service hours. • For temporary displacement of parking at the Dublin/Pleasanton Station, the Authority and/or its contractor will identify on-site replacement parking during the final design phase to mitigate for temporary parking impacts. In concept, the three displaced ADA parking spaces can be accommodated through other existing nearby spaces, the displaced employee spaces can be accommodated through existing customer spaces, and the resultant displaced customer spaces could be accommodated either through parking in adjacent areas or through the use of valet parking. The Authority and/or its contractor shall coordinate with BART for their input and approval regarding temporary parking plans. • The existing BART tail tracks shall be protected in place and remain operational throughout construction. • Provide safety measures for BART operation through construction zones. • While not anticipated, where transit access to or through the BART stations is required, work with local and regional transit	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a railway disruption control plan for Authority review and approval prior to construction. After Authority approval, the plan shall be provided to BART for review and approval.	Authority review and approval of railway disruption control plan prior to construction. BART review and approval prior to construction.

Mitigation Measure	Implementing, Reporting and Monitoring Responsibilities	Mitigation Timing: Pre-Construction	Mitigation Timing: Construction	Mitigation Timing: Post-Construction	Mitigation Timing: Operation	Implementation and Reporting Schedule	Implementation Mechanism or Tool
providers to provide alternative transit service around the closure area (e.g., increased bus and shuttle service). • Provide advance notice to transit riders of any temporary changes in parking or access. • Coordinate with BART in advance and during construction, and maintain emergency access for BART for the duration of construction.							
USS-1.1: Implement a utility relocation plan. The Authority will coordinate with all utility providers during final design and construction stages to identify utilities potentially impacted by the Proposed Project, including existing and planned utilities. A utility relocation plan will be developed and implemented to minimize service interruption and safely relocate, repair, or replace affected utilities. The Authority will assist utility owners in developing a communications plan to inform end users of potential planned service interruptions.	Contractor	X	X			Authority shall include as contract requirement. Contractor shall prepare a utility coordination plan and a utility relocation plan for Authority review and then provide this to affected utilities for review.	Authority review and approval of utility coordination plan and utility relocation plan prior to construction; documentation of acceptance by affected utilities.

7.0 Referenced Tables

Table 3.4-11. Summary of Required Mitigation Measures for Biological Resources

Mitigation Measure	Tri-Valley Alignment	Dublin/Pleasanton Station	Isabel Station	Southfront Road Station	Altamont Alignment	Owens-Illinois Industrial Lead variant 1, single track	Owens-Illinois Industrial Lead variant 2, double track	Stone Cut Alignment	Mountain House Station Alternative	Tracy OMF	Interim OMF	Tracy to Lathrop Alignment Variant 1, Single Track	Tracy to Lathrop Alignment Variant 2, Double Track	River Islands Station	North Lathrop Station
BIO-1.1: Conduct preconstruction surveys for special-status plant species	x	—	x	—	x	x	x	x	x	x	x	x	x	x	—
BIO-1.2: Prepare a salvage, relocation, or propagation and monitoring plan for special-status plant species	x	—	x	—	x	x	x	x	x	x	x	x	x	x	—
BIO-1.3: Document affected special-status plant species	x	—	x	—	x	x	x	x	x	x	x	x	x	x	—
BIO-1.4: Prevent introduction or spread of invasive plant species	x	—	x	—	x	x	x	x	x	x	x	x	x	x	—
BIO-2.1: Obtain coverage from, be consistent with, and tier from existing conservation strategies as feasible	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
BIO-2.2: Conduct a worker environmental training program for construction personnel	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
BIO-2.3: Implement noise reduction measures for pile driving in or adjacent to streams and wetlands as feasible	—	—	—	—	x	x	x	—	—	—	—	x	x	—	—
BIO-2.4: Implement seasonal restrictions for in-water work as feasible	—	—	—	—	x	x	x	—	—	—	—	x	x	—	—
BIO-2.5: Protect wetlands during construction	x	—	x	—	x	x	x	x	x	x	x	x	x	x	—
BIO-2.6: Protect sensitive natural communities, including riparian habitat and salt grass flats, during construction	x	—	x	—	x	x	x	x	—	—	x	x	x	x	—
BIO-2.7: Protect vernal pool–endemic species	x	—	—	—	x	x	x	x	—	—	—	—	—	—	—
BIO-2.8: Protect valley elderberry longhorn beetle	—	—	—	—	—	—	—	—	—	—	—	x	x	x	—
BIO-2.9: Protect California tiger salamander, western spadefoot toad, and California red-legged frog	x	—	x	—	x	x	x	x	x	—	x	x	x	—	—
BIO-2.10- Protect foothill yellow-legged frog	x	—	x	—	x	x	x	x	—	—	—	x	x	—	—
BIO-2.11: Protect western pond turtle and giant garter snake	x[a]	—	x[a]	—	x[a]	x[a]	x[a]	—	—	—	—	x	x	—	—

Mitigation Measure	Tri-Valley Alignment	Dublin/Pleasanton Station	Isabel Station	Southfront Road Station	Altamont Alignment	Owens-Illinois Industrial Lead variant 1, single track	Owens-Illinois Industrial Lead variant 2, double track	Stone Cut Alignment	Mountain House Station Alternative	Tracy OMF	Interim OMF	Tracy to Lathrop Alignment Variant 1, Single Track	Tracy to Lathrop Alignment Variant 2, Double Track	River Islands Station	North Lathrop Station
BIO-2.12: Protect California legless lizard, California glossy snake, coast horned lizard, and San Joaquin coachwhip	x	—	—	—	x	x	x	x	x	—	—	x	x	—	—
BIO-2.13: Protect special-status and non-special-status nesting birds	—	x	x	x	x	x	x	x	x	x	x	x	x	x	x
BIO-2.14: Protect golden eagles	x	—	—	—	x	x	x	x	x	—	—	x	x	—	—
BIO-2.15: Protect Swainson's hawk nests	x	—	—	—	x	x	x	x	x	x	—	x	x	x	x
BIO-2.16: Compensate for Swainson's hawk foraging habitat loss	—	—	—	—	x	x	x	x	x	—	—	x	x	x	—
BIO-2.17: Protect burrowing owls and burrowing owl habitat	x	—	x	x	x	x	x	x	x	—	—	—	—	x	x
BIO-2.18: Compensate for burrowing owl habitat loss	x	—	x	x	x	x	x	x	x	x	—	x	x	x	x
BIO-2.19: Protect special-status and non-special-status roosting bats	x	x	x	x	x	x	x	x	x	x	—	x	x	x	x
BIO-2.20: Protect riparian brush rabbit	—	—	—	—	—	—	—	—	—	—	—	—	—	x	—
BIO-2.21: Compensate for riparian brush rabbit habitat loss	—	—	—	—	—	—	—	—	—	—	—	—	—	x	—
BIO-2.22: Protect American badger, San Joaquin kit fox, mountain lion, and their habitat	x	—	—	—	x	x	x	x	x[b]	x[b]	—	x[b]	x[b]	x[b]	x[b]
BIO-2.23: Compensate for American badger, San Joaquin kit fox, and mountain lion habitat loss	x	—	—	—	x	x	x	x	x	x	—	x	x	x	x
BIO-2.24: Protect Crotch bumble bee and western bumble bee nesting habitat and floral resources	x	—	—	—	x	x	x	x	x	x	—	x	x	x	x
BIO-2.25: Compensate for Crotch bumble bee and western bumble bee habitat loss	x	—	—	—	x	x	x	x	x	x	—	x	x	x	x
BIO-3.1: Develop and implement a hydroacoustic monitoring plan to minimize noise effects on fish	—	—	—	—	—	—	—	—	—	—	—	—	x	—	—
BIO-4.1: Protect nesting birds during maintenance activities	—	x	x	x	x	x	x	x	x	x	x	x	x	x	x
BIO-4.2: Protect roosting bats during maintenance activities	—	—	x	x	x	x	x	x	x	x	x	x	x	x	x
BIO-4.3: Minimize permanent intermittent impacts on avian and bat wildlife species due to the Altamont OCS and aerial structures	—	—	—	—	x	x	x	x	—	—	—	—	—	—	—

Mitigation Measure	Tri-Valley Alignment	Dublin/Pleasanton Station	Isabel Station	Southfront Road Station	Altamont Alignment	Owens-Illinois Industrial Lead variant 1, single track	Owens-Illinois Industrial Lead variant 2, double track	Stone Cut Alignment	Mountain House Station Alternative	Tracy OMF	Interim OMF	Tracy to Lathrop Alignment Variant 1, Single Track	Tracy to Lathrop Alignment Variant 2, Double Track	River Islands Station	North Lathrop Station
BIO-4.4: Implement removal of carrion that may attract raptors and carnivores	—	—	—	—	x	x	x	x	—	—	—	—	—	—	—
BIO-4.5: Avoid use of second-generation anticoagulant rodenticides	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
BIO-6.1: Compensate for impacts on jurisdictional wetlands and non-wetland waters of the United States (aquatic resources) prior to impacts during construction	x	—	—	—	x	x	x	x	x	—	x	x	x	x	—
BIO-7.1: Compensate for loss of riparian habitat	x	—	x	—	x	x	x	—	—	—	—	x	x	x	—
BIO-7.2: Compensate for loss of sensitive natural communities (excluding riparian and wetland habitat)	x	—	—	—	x	x	x	—	—	—	—	—	—	—	—
BIO-8.1: Design curbs to permit California tiger salamander and California red-legged frog movement	—	—	x	—	—	—	—	x	—	—	x	—	—	—	—
BIO-8.2: Install station lighting controls and fencing limitations	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
BIO-8.4: Improve existing wildlife crossings and/or implement new wildlife crossing options along the Altamont Alignment and the Stone Cut Alignment Alternative	—	—	—	—	x	x	x	x	x	—	—	—	—	—	—
BIO-8.5: Improve existing wildlife crossings and/or implement new wildlife crossing options along certain portions of the Tracy to Lathrop Alignment	—	—	—	—	—	—	—	—	—	—	—	x	x	—	—
BIO-10.1 Compensate for tree removal during construction	x	—	x	x	x	x	x	x	x	x	x	x	x	x	x

[a] Only the portion of this mitigation measure that relates to western pond turtle applies at these proposed or alternative facilities.

[b] Only the portion of this mitigation measure that relates to American badger and San Joaquin kit fox applies at these proposed or alternative facilities.

Table 3.4-13. Regulated Trees, Relevant Activities, Replacement Requirements, and Recommended Tree Replacement Ratios

Jurisdiction	Definition of Protected Trees	Removal Permit Needed?	Pruning Permit Needed?	Replacement Requirement	Recommended Replacement Ratios
Alameda County (no date)	• Any woody perennial plant with a single or multi-trunk structure at least 10 feet high and a major trunk 2 inches in diameter or larger at 54 inches above grade in county rights-of-way	Yes, for protected trees	Yes, for protected trees; tree topping is not permitted	Replacement ratio determined by the county arborist	Inside UPRR ROW: 1:1 for all trees Outside UPRR ROW: 2:1 for protected trees 1:1 for unprotected trees
City of Dublin *Heritage Tree Ordinance (1999)*	• Any oak, bay, cypress, maple, redwood, buck-eye and sycamore tree having a trunk or main stem of 24 inches or more in diameter measured at 4.5 feet above natural grade	Yes, for protected trees	No, but must follow International Society of Arboriculture guidelines for pruning	Replacement ratio determined by the city arborist	Inside UPRR ROW: 1:1 for all trees Outside UPRR ROW: 2:1 for protected trees 1:1 for unprotected trees
City of Livermore Street Trees and Tree Preservation Ordinance, Chapter 12.20 (2016)	• Trees in Livermore with single trunks and a circumference at breast height (CBH) of 60 inches or more, multi-trunk trees, or trees in a stand that depend on each other for survival located on private property occupied by single-family residential development • California native trees having a circumference of 24 inches or more (California native trees include white alder, bay, buckeye, madrone, big-leaf maps, oaks, gray pine, sycamore, California black walnut) • Trees located on private property occupied by commercial, industrial, institutional, mixed-	Yes, for protected trees	Yes, for street trees and, during project development (construction), protected trees	Replacement ratio determined by the public works department	Inside UPRR ROW: 1:1 for all trees Outside UPRR ROW: Two 15-gallon trees for each protected tree on single-family property Three 15-gallon or two 24-inch box trees for each protected tree on multi-family residential,

Jurisdiction	Definition of Protected Trees	Removal Permit Needed?	Pruning Permit Needed?	Replacement Requirement	Recommended Replacement Ratios
	use, or multi-family residential uses with a CBH of 24 inches or more • Trees on undeveloped property with a CBH of 18 inches or more • Trees located in open space or a riparian habitat area with a CBH of 18 inches or more • Trees approved as part of site plant approval or a condition of approval for a development project or trees required to be planted as mitigation • Street trees and trees designated as "ancestral trees" by the Livermore Beautification Committee				commercial, industrial, institutional, mixed-use, open space, riparian, or habitat property 1:1 for unprotected trees
City of Pleasanton Tree Preservation Ordinance (2015)	• Single-trunk trees with a 55-inch or larger CBH or multi-trunk trees with a 55-inch or larger CBH for the largest trunks • Trees 35 feet or more tall • Any tree of particular historical significance specifically designated by official action • A stand of trees, the nature of which makes each dependent upon the other for survival or the area's natural beauty	Yes, for protected trees	Yes. Pruning by contractor familiar with International Society of Arboriculture guidelines for protected trees	Replacement ratio determined by the community development director	<u>Inside UPRR ROW:</u> 1:1 for all trees <u>Outside UPRR ROW:</u> 2:1 for protected trees 1:1 for unprotected trees
San Joaquin County Tree Ordinance (1995)	• Native oaks are defined as valley oaks with stem diameters of 15.2–81.3 centimeters (6–32 inches) for single-trunk trees and a minimum combined trunk diameter of 20.3 centimeters (8 inches) for multi-trunk trees. Interior live oaks or blue oaks have stem diameters of 10.2–81.3 centimeters (4–32 inches) for single-trunk trees and a minimum combined diameter of 15.2 centimeters (6	Yes, for protected trees	Not stated	Native oak (3:1) or heritage oak trees (5:1) will be replaced in kind with nursery stock or acorns between October 1 and December 31 and monitored for 3 years to ensure survival	<u>Inside UPRR ROW:</u> 1:1 for all trees <u>Outside UPRR ROW:</u> 5:1 for heritage oak and historical trees 3:1 for native oak

Jurisdiction	Definition of Protected Trees	Removal Permit Needed?	Pruning Permit Needed?	Replacement Requirement	Recommended Replacement Ratios
	inches) for multi-trunk trees • Heritage oaks are defined as native oaks with a single-trunk diameter of 81.3 centimeters (32 inches) or more. (All stem diameters are measured 1.4 meters [4.5 feet] above the average ground elevation of the tree) • Historical trees are defined as any trees or groups of trees given special recognition by the county planning commission because of size, age, location, or history				2:1 for protected trees 1:1 for unprotected trees
City of Tracy Code of Ordinances, Chapter 7.08 (2016)	• Street tree: Any tree with the center of its trunk in the right-of-way or planting easement • Private tree: Any tree with the center of its trunk on private property	Yes for protected trees	Yes for street trees	Replacement trees, replaced at a 1:1 ratio, must be maintained in good condition for 2 years	<u>Inside UPRR ROW:</u> 1:1 for all trees <u>Outside UPRR ROW:</u> 1:1 for protected trees 1:1 for unprotected trees
City of Lathrop Municipal Code, Chapter 12 (2016)	• Any tree upon the public streets of the city or right-of-way	Yes for protected (street) trees	Yes for protected (street) trees	Replacement trees at a 1:1 ratio	<u>Inside UPRR ROW:</u> 1:1 for all trees <u>Outside UPRR ROW:</u> 1:1 for protected trees 1:1 for unprotected trees

AGENDA

ITEM 7

Tri-Valley San Joaquin Valley
REGIONAL RAIL AUTHORITY

STAFF REPORT

SUBJECT: Consideration to Approve and Adopt a Disadvantaged Business Enterprise Program

FROM: Michael Tree, Executive Director, and Michael Conneran, General Counsel

DATE: May 12, 2021

Action Requested
Staff requests that the Board of Directors (Board) approve Resolution R05-2021 to approve and adopt a Disadvantaged Business Enterprise (DBE) Program.

Background/Discussion
In order to receive federal funding from the Federal Transit Administration (FTA), the Tri-Valley – San Joaquin Valley Regional Rail Authority (Valley Link) is responsible for meeting all applicable requirements outlined in the Department of Transportation's (DOT) federal regulations for DBE participation in DOT's financial assistance programs (49 CFR Part 26). The DOT regulations provide that an agency is not eligible to receive DOT financial assistance unless the DOT has approved the agency's DBE Program. Consistent with this directive, Valley Link staff prepared a DBE Program (attached hereto as **Exhibit A**) that satisfies the DOT requirements.

The DBE Program will apply only to contracts funded in whole or in part by FTA assistance. The purpose of the DBE Program is to ensure nondiscrimination in the award and administration of FTA assisted contracts and to create a level playing field on which DBEs can compete fairly for FTA assisted contracts. The DBE Program is designed to achieve these goals by:

- Establishing policies and procedures for removing barriers to DBE participation in Valley Link's contracting opportunities;
- Encouraging DBEs to participate in Valley Link's procurements by setting an overall DBE goal applicable to FTA assisted projects, engaging in DBE outreach activities, and providing resources to prime contractors to assist them in locating DBE firms capable of performing necessary subcontracted work; and
- Engaging in other race-neutral methods of obtaining DBE participation in FTA assisted projects, such as implementing a program to foster small business enterprise (SBE) participation in Valley Link's contracting opportunities.

Valley Link plans to identify an individual to serve as the DBE Liaison Officer (DBELO) who will be responsible for administering the DBE Program. Once Valley Link receives FTA funding and has identified FTA assisted contracting opportunities, the DBELO will develop an overall DBE goal in accordance with the DOT regulations and Valley Link's DBE Program, implement race-neutral measures to meet the overall DBE goal, conduct outreach to DBE and SBE firms, and oversee compliance with DBE Program requirements applicable to Valley Link's federally assisted procurements and contracts. The DBELO will have direct, independent access to Valley Link's Executive Director and ensure the DBE Program is accorded the same priority as all other federal legal obligations.

Once Valley Link is eligible to receive FTA assistance and it establishes its operational and procurement needs, Valley Link may further develop and revise its DBE Program, as necessary. Any significant changes to Valley Link's DBE Program must be approved by FTA.

Fiscal Impact
There are no financial considerations at this time.

Recommended Action
Valley Link Staff recommends that the Board of Directors approve the DBE Program and adopt the Resolution related to the same.

Attachments
1. Resolution R05-2021
2. Exhibit A: Tri-Valley – San Joaquin Valley Regional Rail Authority DBE Program

ATTACHMENT 1

Tri-Valley San Joaquin Valley
REGIONAL RAIL AUTHORITY

RESOLUTION NO. R05-2021

* * *

RESOLUTION OF THE BOARD OF DIRECTORS OF THE TRI-VALLEY — SAN JOAQUIN VALLEY REGIONAL RAIL AUTHORITY APPROVING AND ADOPTING A DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

WHEREAS, the United States Department of Transportation (DOT) describes in 49 CFR Part 26 the required procedures for the participation by disadvantaged business enterprises (DBEs) in the DOT's financial assistance programs; and

WHEREAS, the Federal Transit Administration (FTA), an agency within the DOT, requires recipients who receive planning, capital, and/or operating assistance from FTA and who will award prime contracts that cumulatively exceed $250,000 in FTA funds in a federal fiscal year, to establish a DBE Program; and

WHEREAS, in order for the Tri-Valley – San Joaquin Valley Regional Rail Authority (Valley Link) to be eligible to receive FTA funds, the DOT must approve its DBE Program, and Valley Link must satisfy all applicable requirements and procedures outlined in the DOT's federal regulations under 49 CFR Part 26; and

WHEREAS, Valley Link Staff has prepared a DBE Program in accordance with the DOT's federal regulations and recommends that the Board of Directors approve the DBE Program.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Tri-Valley – San Joaquin Valley Regional Rail Authority hereby approves the Tri-Valley – San Joaquin Valley Regional Rail Authority Disadvantaged Business Enterprise Program and authorizes the Executive Director, or designee, to take such actions as may be necessary to give effect to this Resolution; and

BE IT FURTHER RESOLVED that the Board of Directors authorizes the Executive Director to submit the Disadvantaged Business Enterprise Program to the Department of Transportation; and

BE IT FURTHER RESOLVED that the Board of Directors authorizes the Executive Director to designate a Disadvantaged Business Enterprise Liaison Officer; and

BE IT FURTHER RESOLVED that the Board of Directors authorizes the Executive Director to implement the Disadvantaged Business Enterprise Program and make minor modifications to the Disadvantaged Business Enterprise Program, as necessary to conform to the applicable federal regulations and the Tri-Valley – San Joaquin Valley Regional Rail Authority's operational needs.

APPROVED AND PASSED, this 12th day of May, 2021.

Veronica Vargas, Chair

ATTEST:

Michael Tree, Executive Director

ATTACHMENT 2

TRI-VALLEY – SAN JOAQUIN VALLEY REGIONAL RAIL AUTHORITY

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

(Adopted _____)

Objectives and Policy Statement (Section 26.1, 26.23[1])

The Tri-Valley – San Joaquin Valley Regional Rail Authority (Authority) has established a Disadvantaged Business Enterprise (DBE) Program in accordance with regulations of the U.S. Department of Transportation (DOT), 49 CFR Part 26. The Authority anticipates receiving federal financial assistance from the DOT, and as a condition of receiving this assistance, the Authority has signed an assurance that it will comply with 49 CFR Part 26.

It is the policy of the Authority to ensure that DBEs, as defined in 49 CFR Part 26, have an equal opportunity to receive and participate in DOT-assisted contracts. It is also our policy:

1. To ensure nondiscrimination in the award and administration of DOT-assisted contracts;

2. To create a level playing field on which DBEs can compete fairly for DOT-assisted contracts;

3. To ensure that the DBE program is narrowly tailored in accordance with applicable law to overcome the effects of discrimination;

4. To ensure that only firms that fully meet 49 CFR Part 26 eligibility standards are permitted to participate as DBEs;

5. To help remove barriers to the participation of DBEs in DOT-assisted contracts;

6. To promote the use of DBEs in all types of federally assisted contracts and procurement activities conducted by the Authority;

7. To assist the development of DBE firms that can compete successfully in the marketplace outside the DBE program;

8. To adhere to the adopted Authority purchasing policy principles throughout all aspects of the DBE Program; and

9. To provide appropriate flexibility to recipients of federal financial assistance in establishing and providing opportunities for DBEs.

The Executive Director will assign the role of DBE Liaison Officer (DBELO) to an Authority staff member with direct, independent access to the Executive Director concerning DBE

[1] Unless otherwise indicated, all references herein are to 49 CFR Part 26.

Program matters. The DBELO will be responsible for implementing all aspects of the DBE Program. Implementation of the DBE Program is accorded the same priority as compliance with all other legal obligations incurred by the Authority in its financial assistance agreements with the DOT.

The Authority will disseminate this Policy Statement to its Board of Directors, all the components of its organization, and to DBE and non-DBE business communities in accordance with the DBE Program.

_____ _____

Michael Tree, Executive Director Date

1. Objectives (Section 26.1)

The objectives are found in the Policy Statement on the first page of this DBE Program (Program).

2. Applicability (Section 26.3)

The Authority will be the recipient of federal transit funds authorized by Congress and administered through the Federal Transit Administration (FTA). The Program outlined herein applies to all Authority contracts that are funded, in whole or in part, by the DOT. In the event of any conflicts or inconsistencies between the 49 CFR Part 26 and this DBE Program, 49 CFR Part 26 prevails.

3. Definitions (Section 26.5)

Any terms used in this Program that are defined in 49 CFR section 26.5, or elsewhere in 49 CFR Part 26, have the meaning set forth in 49 CFR Part 26.

4. Nondiscrimination Requirements (Section 26.7)

The Authority will never exclude any person from participation in, deny any person the benefits of, or otherwise discriminate against anyone in connection with the award and performance of any contract covered by 49 CFR Part 26 on the basis of race, color, sex, or national origin. In administering its DBE Program, the Authority will not, directly or through contractual or other arrangements, use criteria or methods of administration that have the effect of defeating or substantially impairing the accomplishment of the objectives of the DBE Program with respect to individuals of a particular race, color, sex, or national origin.

5. Record Keeping Requirements (Section 26.11)

Upon receiving federal financial assistance, the Authority will comply with all of the following record keeping and reporting requirements:

Reporting to DOT (Section 26.11(a)-(b))

The Authority will transmit the Uniform Report of DBE Awards or Commitments and Payments (49 CFR Part 26, Appendix B) at the required intervals and as required by DOT. The Authority will provide data about its DBE Program to DOT as directed by the DOT operating administration.

Bidders List (Section 26.11(c))

The Authority will create a bidders list, consisting of information about all DBE and non-DBE firms that bid or quote on DOT-assisted contracts. The purpose of this requirement is to provide the Authority with as accurate data as possible about the universe of DBE and non-DBE contractors and subcontractors who seek to work on our federally assisted contracts for use in

setting our overall goals. The bidders list will include the following information from DBE and non-DBE contractors and subcontractors who seek to work on the Authority's federally assisted contracts: name, address, DBE/non-DBE status, age of the firm, and annual gross receipts of the firm. This information must be received by the Authority before a recommendation is made to the Board of Directors for award of contract. If the information is not received within the time specified, the bid/proposal will be deemed non-responsive.

The Authority will collect this information in the following ways:

i. A contract clause requiring prime bidders to report the names, addresses and other information (as needed) of all firms who submitted quotes to them on subcontracts; and/or
ii. A notice in solicitations requesting firms quoting on subcontracts to report information directly to the Authority.

Compliance Records (Section 26.11(d))

The Authority will maintain records documenting a firm's compliance with the requirements of 49 CFR Part 26. At a minimum, the Authority will keep a complete application package for each certified firm and all affidavits of no-change, change notices, and on-site reviews. These records will be retained in accordance with the applicable record retention requirements of the Authority's federal financial assistance agreement(s). Other certification or compliance related records will be retained for a minimum of three (3) years unless otherwise provided by applicable record retention requirements of the Authority's financial assistance agreement, whichever is longer.

6. Required Assurances (Section 26.13)

Assurance (Section 26.13(a))

Each financial assistance agreement the Authority enters with the DOT operating administration (or a primary recipient of federal financial assistance) will include the following assurance:

> The Authority shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE Program or the requirements of 49 CFR Part 26. The Authority shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The Authority's DBE Program, as required by 49 CFR Part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this Program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the Authority of its failure to carry out its approved program, the Department may impose sanctions as provided for under 49 CFR Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 et seq.).

Contract Assurance (Section 26.13(b))

The following assurance will be included in federally assisted contracts signed (and each subcontract a prime contractor signs with a subcontractor) by the Authority:

> The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:
>
> (1) Withholding monthly progress payments;
>
> (2) Assessing sanctions;
>
> (3) Liquidated damages; and/or
>
> (4) Disqualifying the contractor from future bidding as non-responsible.

7. DBE Program Updates (Section 26.21)

When the Authority has received a grant of $250,000 or more in FTA planning, capital and/or operating assistance in a federal fiscal year, the Authority will continue to carry out this Program until all funds from DOT financial assistance have been expended. The Authority will provide to DOT updates representing significant changes in the Program.

8. Distribution of Policy Statement (Section 26.23)

The Policy Statement is included on the first page of this Program. The Authority will circulate the Policy Statement throughout the organization and will distribute the Policy Statement to the DBE and non-DBE business communities that perform work on the Authority's federally assisted contracts. The Policy Statement will be disseminated as follows:

a. Through electronic mail to Authority staff;
b. Through electronic mail to DBE and non-DBE firms that perform work on the Authority's DOT-assisted contracts;
c. Through electronic mail to firms on the Authority's Bidder's List;
d. Posted on the Authority's website; and
e. Upon request by the interested public.

9. DBE Liaison Officer (DBELO) (Section 26.25)

The Executive Director will designate an Authority staff member with direct, independent access to the Executive Director concerning DBE Program matters to serve as the DBELO for the Authority.

The DBELO is responsible for implementing all aspects of the DBE Program and ensuring that the Authority complies with all provisions of 49 CFR Part 26. The DBELO has direct, independent access to the Authority's Executive Director concerning DBE Program matters. The Executive Director and the DBELO will regularly evaluate the staffing needs of the DBE Program to ensure that the Authority has adequate staff to administer the DBE Program in compliance with 49 CFR Part 26.

The DBELO is responsible for developing, implementing and monitoring the DBE Program, in coordination with other appropriate officers and employees. The DBELO's duties and responsibilities include the following:

1. Gather and report statistical data and other information as required by DOT.
2. Review third party contracts and purchase requisitions for compliance with this Program.
3. Work with all departments to set overall annual goals.
4. Ensure that bid notices and requests for proposals are available to DBEs in a timely manner.
5. Identify contracts and procurements so that DBE goals are included in solicitations (both race-neutral methods and contract specific goals attainment) and identify ways to improve progress.
6. Analyze the Authority's progress toward goal attainment and identify ways to improve progress.
7. Participate in pre-bid meetings.
8. Advise the Executive Director and Board of Directors on DBE matters and DBE goal achievement.
9. Provide DBEs with information and assistance in preparing bids, obtaining bonding and insurance.
10. Participate in DBE training seminars.
11. Act as liaison to the California Uniform Certification Program.
12. Provide outreach to DBEs and community organizations to advise them of Authority procurements.

10. DBE Financial Institutions (Section 26.27)

The Authority will thoroughly investigate the full extent of services offered by financial institutions owned and controlled by socially and economically disadvantaged individuals in the community, make reasonable efforts to use these institutions, and encourage prime contractors on DOT-assisted contracts to make use of these institutions. The Authority has made efforts to identify DBE financial institutions and will make a listing of DBE financial institutions available to prime contractors. The Authority will re-evaluate the availability of DBE financial institutions on a biannual basis. Information on the availability of such institutions can be obtained from the DBELO.

11. Prompt Payment (Section 26.29)

The Authority will include a clause in its contracts that requires prime contractors to pay subcontractors for satisfactory performance of their contracts no later than 30 days from receipt of each payment the Authority makes to the prime contractor.

To ensure prompt and full payment of retainage from the prime contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed, the Authority intends to hold retainage from prime contractors and provide for prompt and regular incremental acceptances of portions of the contract, pay retainage to prime contractors based on the acceptances, and include a contract clause obligating the prime contractor and subcontractors to pay all retainage owed to the subcontractor for satisfactory completion of the accepted work within 30 days after the Authority's payment to the prime contractor.

Notwithstanding the foregoing, the DBELO may, in consultation with legal counsel, determine to instead take one of the following two approaches to ensure prompt payment in accordance with Section 26.29:

a. Decline to hold retainage from prime contractors and prohibit prime contractors and subcontractors from holding retainage from subcontractors.
b. Decline to hold retainage from prime contractors and include a contract clause obligating the prime contractor and subcontractors to make prompt and full payment of any retainage kept by the prime contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed.

The prime contractor must give the DBELO advance written notice of any delay or postponement in payment to subcontractors. Such notice must include the justification for such delay or postponement.

The Authority may enforce the prompt payment requirements of this section by using some or all of the following mechanisms, as determined by the Authority:

a. Imposition of penalties for failure to comply, the terms and conditions of which will be determined by the Authority on a contract-by-contract basis;
b. A contract clause that requires prime contractors to include in their subcontracts language providing that prime contractors and subcontractors will use appropriate alternative dispute resolution mechanisms to resolve payment disputes; and
c. A contract clause providing that the prime contractor will not be reimbursed for work performed by subcontractors unless and until the prime contractor ensures that the subcontractors are promptly paid for the work they have performed.

12. California Unified Certification Program (CUCP); DBE Database (Section 26.31, 26.81)

To be certified as a DBE, a firm must meet all certification eligibility standards in 49 CFR Part 26, Subpart D. The Authority plants to become a signatory to the CUCP Memorandum of Agreement and to use the CUCP to identify all firms eligible to participate as DBEs. The

Authority will rely on the CUCP regarding certification standards and determinations, and will not make certification or recertification decisions. The Authority will use the California Department of Transportation's online DBE Database (DBE Database) to identify CUCP-certified DBEs. The DBE Database lists the firm's name, address, phone number, date of the most recent certification, and the type of work the firm has been certified to perform as a DBE using the most specific NAICS code available to describe each type of work. The DBE Database may be accessed directly at: https://dot.ca.gov/programs/civil-rights/dbe-search.

13. Overconcentration (Section 26.33)

The Authority will conduct an analysis in accordance with 49 CFR Part 26 to determine if there is an overconcentration of DBE firms in any type of work. If the Authority determines that DBE participation is so over-concentrated in certain types of work or contracting opportunities that it unduly burdens the participation of non-DBEs in that type of work, the DBE Officer will develop appropriate measures to address the over-concentration. The DBE Officer will seek approval of such measures from the FTA and, at that time, the measures will become a part of this Program.

14. Business Development Programs and Mentor-Protégé Programs (Section 26.35)

The Authority has not established a business development program or mentor-protégé program.

15. Monitoring and Enforcement Mechanisms (Section 26.37)

The Authority will implement the following monitoring and enforcement mechanisms to ensure compliance with 49 CFR Part 26 and this Program:

a. Include in federally assisted contracts a clause requiring all prime contractors to submit monthly progress reports on DBE utilization to the Authority, in the form required by the Authority. Specifically, this report must provide a running tally of actual payments made to DBE firms. DBE participation is credited toward overall or contract goals only when payments are actually made to DBE firms. The Authority will bring to the attention of the DOT any false, fraudulent, or dishonest conduct in connection with the program, so that DOT can take the steps (e.g., referral to the Department of Justice for criminal prosecution, referral to the DOT Inspector General, action under suspension and debarment or Program Fraud and Civil Penalties rules) provided in 49 CFR section 26.109. The Authority will consider similar action under its own legal authorities, including responsibility determinations in future contracts.
b. In the event of non-compliance with this DBE Program by a participant in the Authority's procurement activities, any of the following administrative remedies may be used, in the Authority's sole discretion:
    i. Liquidated damages;
    ii. Suspension of payment to the contractor of any monies held by the Authority as retained on the contract;
    iii. The denial to the contractor of right to participate in future Authority contracts for a specified time; and

iv. Contract termination.

c. The Authority will also provide a monitoring and enforcement mechanism to verify that work committed to DBEs at contract award will actually be performed by the DBEs. This will be accomplished by review of invoices submitted by contractors that stipulate the DBE portion of the contract actually paid out during the invoice cycle. If DBE subcontractors are used, a specific citation on the invoice detailing the amount and date of payment to the subcontractor will be required from the prime contractor. The Authority will keep a running tally of actual payments to DBE firms for work committed to them at the time of contract award.
d. The Authority will require prime contractors to maintain records and documentation of payments to DBEs for four years following the performance of the contract. These records must be made available for inspection upon request of any authorized representative of the Authority or DOT. This reporting requirement also extends to any certified DBE subcontractor.
e. The Authority will perform interim audits of contract payments to DBEs. The audit will review payments to DBE subcontractors to ensure that the actual amount paid to DBE subcontractors equals or exceeds the dollar amounts stated in the schedule of DBE participation.

16. Fostering Small Business Participation (Section 26.39)

The small business element is intended to assist the Authority in meeting the maximum feasible portion of its overall goal by using race-neutral means of obtaining DBE participation.

Definition of Small Business Enterprise (SBE)

Any firm that wishes to participate as an SBE in an Authority contracting opportunity must meet all of the following requirements at the time of bid/proposal submittal:

a. A firm (including its affiliates) must be an existing small business, as defined by Small Business Administration (SBA) regulations, 13 CFR part 121, for the appropriate type(s) of work the firm seeks to perform in DOT–assisted contracts;
b. Hold an SBE certification that is acceptable to the Authority; and
c. The firm's (including its affiliates') average annual gross receipts, as defined by SBA regulations (see 13 CFR 121.104), over the previous three fiscal years cannot exceed $26.29 million, or as adjusted for inflation by DOT.

The DBELO will maintain a list of SBE certifications that are acceptable to the Authority and provide this information to prospective bidders. The Authority will verify that an SBE meets the above requirements for each contracting opportunity. The Authority may require SBEs to submit supporting documentation, as necessary, to verify their eligibility.

Race-Neutral SBE Measures

The Authority will engage in the follow race-neutral measures to facilitate participation by certified SBEs, as appropriate:

a. Soliciting bids/proposals from DBEs and SBEs;
b. Responding to requests for information from DBEs and SBEs;
c. Inviting DBEs and SBEs to participate in prebid and preproposal meetings;
d. Participating in outreach and training events for DBEs and SBEs;
e. As time and resources allow, participate in outreach and informational events for DBEs and SBEs that may be in coordination with other DOT recipients, federal agencies, or local organizations; and
f. Provide information to DBEs and SBEs on how to do business with the Authority, how to become certified as a DBE or SBE, the Authority's DBE Program requirements, and other topics related to encouraging DBE and SBE participation in the Authority's contracting opportunities.

The Authority will also consider, on a case-by-case basis and when subcontracting opportunities are available, unbundling contracts or setting an SBE contract-specific goal, if it is permissible under state and federal law and appropriate based on the type of contracting opportunity.

Overall and Contract-Specific SBE Goals

The Authority may establish an overall SBE goal on a triennial basis, in the same manner that it sets its overall DBE goal, for participation by SBEs in all federally funded contracts the Authority expects to award during the FTA triennial goal period. The Authority may choose to establish contract-specific SBE goals. The procedures applicable to SBE contract-specific goals will be set forth in the each solicitation subject to a contract-specific goal.

17. Set-asides or Quotas (Section 26.43)

The Authority will not use quotas in any way in the administration of the DBE Program.

18. Overall Goals (Section 26.45)

In accordance with Section 26.45(f), the Authority will prepare fiscal year DBE goals, which it will submit to DOT by August 1st every three fiscal years, except in cases where the Authority submits a project goal. The Authority will prepare its overall goal using the following methodology:

Determining a Base Figure

The Authority will determine a base figure for the relative availability of DBEs on any federally assisted project by using one of the following methods (method may vary by project):

a. DBE Directories and Census Bureau Data. Determine the number of ready, willing and able DBEs in the market from the DBE Database. Using the Census Bureau's County Business Pattern data base, determine the number of all ready, willing and able businesses in the market that perform work in the same NAICS codes. Divide the number of DBEs by the number of all businesses to derive a base figure for the relative availability of DBEs in the market.

b. A bidders list. Determine the number of DBEs that have bid or quoted on (successful or unsuccessful) on the Authority's DOT-assisted prime contracts or subcontracts in the past three years. Divide the number of DBE bidders and quoters by the number of all businesses to derive a base figure for the relative availability of DBEs in the market. If this approach is used, the Authority will establish a mechanism (documented in the Authority's goal submission) to directly capture data on DBE and non–DBE prime and subcontractors that submitted bids or quotes on the Authority's DOT–assisted contracts.
c. Use data from a disparity study. Use a percentage figure derived from data in a valid, applicable disparity study.
d. Use of a goal of another DOT recipient. If another DOT recipient in the same or substantially similar market has set an overall goal in compliance with Section 26.45, the Authority may use that goal as a base figure for its goal.
e. Alternative methods. A methodology not stated in Section 26.45 that is based on demonstrable evidence of local market conditions and provides a base figure for the overall goal that is rationally related to the relative availability of DBEs in the Authority's market.

Adjusting a Base Figure

In accordance with Section 26.45, the Authority will adjust the base figure so that it reflects as accurately as possible the DBE participation the Authority can expect in the absence of discrimination. Possible information used to adjust the base figure include:

a. Demonstrated evidence of DBEs current capacity to perform work on the Authority's DOT-assisted projects, as measured by the volume of work DBEs have performed in recent years;
b. If the Authority's base figure is the goal of another recipient, the Authority must adjust it for differences in the Authority's market and Program;
c. Disparity studies conducted within the Authority's jurisdiction, to the extent this evidence is not already accounted for in the Authority's base figure; and
d. Other relevant factors.

If available, the Authority will consider evidence from related fields that affect the opportunities of DBEs to form, grow and compete, including but not limited to:

a. Statistical disparities in the ability of DBEs to get the financing, bonding and insurance required to participate in the Authority's Program; and
b. Data on employment, self-employment, education, training and union apprenticeship programs, to the extent the Authority can relate it to the opportunities for DBEs to perform in the Authority's Program.

Consultation and Publication

Before establishing the overall goal each year, the Authority will consult with appropriate constituent groups representing minority, women and general contractors groups, community

organizations and other officials or organizations to obtain information concerning the availability of disadvantaged and non-disadvantaged businesses, the effects of discrimination on opportunities for DBEs, and the Authority's efforts to establish a level playing field for the participation of DBEs.

The consultation will include a scheduled, direct, interactive exchange (e.g., a face-to-face meeting, video conference, teleconference) with as many interested stakeholders as possible focused on obtaining information relevant to the goal setting process, and it must occur before the Authority is required to submit its methodology to the operating administration for review pursuant to Section 26.45(f).

Following this consultation and before submitting the overall goal to the operating administration, the Authority will publish a notice of the proposed overall goal, informing the public that the proposed goal and its rational are available for inspection during normal business hours at the Authority's administrative office for 30 days following the date of the notice, and informing the public that the Authority and DOT will accept comments on the goal for 30 days from the date of the notice. At a minimum, this notice will be posted on the Authority's official website and may be posted in other sources, such as local newspapers and trade publications. The notice will include addresses to which comments may be sent and addresses (including offices and websites) where the proposal may be reviewed. The Authority's overall goal submission to DOT will include a summary of information and comments received during this public participation process and the Authority's responses.

Expressing and Submitting the Overall Goal

The overall goal should be expressed as a percentage of all FTA funds (exclusive of FTA funds to be used for the purchase of transit vehicles) that the Authority will expend in FTA-assisted contracts in the three forthcoming fiscal years, unless FTA permits or requires the overall goal to be expressed in a different manner.

The Authority will submit its overall goal in accordance with the requirements of Section 26.54(f).

19. Failing to Meet Overall Goals (Section 26.47)

If the Authority's awards and commitments of contract dollars to DBEs at the end of any federal fiscal year are less than the overall goal applicable to that federal fiscal year, the DBELO will analyze in detail the reasons for the difference between the overall goal and awards and commitments. Specific steps and milestones to correct the problems identified and to meet overall goals for future fiscal years will be established. Analysis and corrective actions will be retained for three years and made available to FTA on request for their review.

20. Transit Vehicle Manufacturers Goals (Section 26.49)

The Authority will require each transit vehicle manufacturer, as a condition of being authorized to bid or propose on FTA-assisted transit vehicle procurements, to certify that it has complied

with the requirements of Section 26.49. Alternatively, the Authority may, at its discretion and with FTA approval, establish project-specific goals for DBE participation in the procurement of transit vehicles in lieu of the transit vehicle manufacturer complying with this element of this Program.

21. Race-Neutral Means of Meeting Overall Goals (Section 26.51)

The Authority will meet the maximum feasible portion of its overall goal by using race-neutral means of facilitating race-neutral DBE participation. Race-neutral means may include:

a. Arranging solicitations, times for the presentation of bids, quantities, specifications, and delivery schedules in ways that facilitate participation by DBEs and other small businesses and by making contracts more accessible to small businesses, by means such as those provided under Section 26.39;
b. Providing assistance in overcoming limitations such as inability to obtain bonding or financing (e.g., by such means as simplifying the bonding process, reducing bonding requirements, eliminating the impact of surety costs from bids, and providing services to help DBEs, and other small businesses, obtain bonding and financing);
c. Providing technical assistance and other services;
d. Carrying out information and communications programs on contracting procedures and specific contract opportunities (e.g., ensuring the inclusion of DBEs, and other small businesses, on recipient mailing lists for bidders; ensuring the dissemination to bidders on prime contracts of lists of potential subcontractors; provision of information in languages other than English, where appropriate);
e. Implementing a supportive services program to develop and improve immediate and long-term business management, record keeping, and financial and accounting capability for DBEs and other small businesses;
f. Providing services to help DBEs, and other small businesses, improve long-term development, increase opportunities to participate in a variety of kinds of work, handle increasingly significant projects, and achieve eventual self-sufficiency;
g. Establishing a program to assist new, start-up firms, particularly in fields in which DBE participation has historically been low;
h. Ensuring distribution of the DBE Database, through print and electronic means, to the widest feasible universe of potential prime contractors; and
i. Assisting DBEs, and other small businesses, to develop their capability to utilize emerging technology and conduct business through electronic media.

Race-neutral DBE participation includes any time a DBE wins a prime contract through customary competitive procurement procedures or is awarded a subcontract on a prime contract that does not carry a DBE contract goal.

22. Contract Goals (Section 26.51)

The Authority may use contract goals to meet any portion of the overall goal the Authority does not project being able to meet using race-neutral means.

The Authority will establish contract goals only on those DOT-assisted contracts that have subcontracting possibilities. The Authority need not establish a contract goal on every such contract, and the size of contract goals will be adapted to the circumstances of each such contract (e.g., type and location of work, availability of DBEs to perform the particular type of work.)

To ensure that the Program continues to be narrowly tailored to overcome the effects of discrimination, the Authority will adjust its use of contract goals in accordance with Section 26.51(f).

In any year in which the Authority projects it will meet part of its overall goal through race-neutral means and the remainder through contract goals, the Authority will maintain data separately on DBE achievements in those contracts with and without contract goals, respectively, and report such information to the operating administration as provided in Section 26.11.

23. Good Faith Efforts Requirements and Procedures (Section 26.53)

Demonstration of Good Faith Efforts (Section 26.53(a) & (c))

When the Authority has established a DBE contract goal, it will award the contract only to a bidder/offeror who makes good faith efforts to meet the contract goal, as required by Section 26.53, this Program, and the applicable solicitation. The bidder/offeror demonstrates that it made good faith efforts to meet the contract goal by either:

a. Documenting that it has obtained enough DBE participation to meet the contract goal; or
b. Documenting that it made adequate good faith efforts to meet the goal, even though it did not succeed in obtaining enough DBE participation to do so. The DBELO will determine the adequacy of a bidder/offeror's good faith efforts based on the guidance set forth in 49 CFR Part 26, Appendix A.

The DBELO will determine whether a bidder/offeror has met the contract goal or demonstrated adequate good faith efforts to meet the contract goal. Bidders/offerors who fail to meet the contract goal or demonstrate adequate good faith efforts to do so will be deemed not responsible.

The DBELO will ensure that all good faith efforts information is complete and accurate and adequately documents the bidder/offeror's good faith efforts before the Authority commits to the performance of the contract by the bidder/offeror.

Information to be Submitted (Section 26.53(b))

Bidders/offerors must submit all of the following information to the Authority within five (5) calendar days after the bid/proposal due date, unless otherwise specified in the solicitation:

1. The names and addresses of DBE firms that will participate in the contract;
2. A description of the work that each DBE will perform*;
3. The dollar amount of the participation of each DBE firm participating;

4. Written and documentation of the bidder/offeror's commitment to use a DBE subcontractor whose participation it submits to meet a contract goal;
5. Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractors commitment; and
6. If the contract goal is not met, evidence of good faith efforts. The documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.

*To count toward meeting a contract goal, each DBE firm must be certified in a NAICS code applicable to the kind of work the firm would perform on the contract.

Award of a contract with a contract goal will be conditioned on the bidder/offeror meeting the requirements of this section.

Pursuant to Section 26.53(b)(3)(ii), for negotiated procurements, including design-build procurements, the Authority may permit bidders/offerors to make a contractually binding commitment to meet the goal at the time of bid/proposal submission or the presentation of initial bids/proposals but provide the required information listed above before the final selection for the contract is made by the Authority. If the Authority determines to permit bidders/offerors to make contractually binding commitments, the Authority will expressly state so in the solicitation. Otherwise, bidders/offerors must submit the required information listed above within 5 calendar days after bids/proposals are due.

Administrative Reconsideration (Section 26.53(d))

In the event that the DBELO determines the successful bidder/proposer is not responsible because it has not met the contract-specific goal or demonstrated good faith efforts to meet the contract-specific goal, the DBELO will notify the successful bidder/proposer in writing. The notification shall include the reasons for the determination and inform the successful bidder/proposer of its right to request administrative reconsideration of the determination. The request for administrative reconsideration must be in writing and sent to the Authority's designated staff person within the time period specified in the notice of determination.

The Executive Director, or the Executive Director's designee, will serve as the “Reconsideration Official.” The Reconsideration Official will not have played any role in the original good faith efforts or eligibility determination. The DBELO may attend all Reconsideration Official meetings and furnish background information to the Reconsideration Official. The Reconsideration Official will preside over hearings that may be held pursuant to this Program, including administrative reconsideration of the DBELO’s determination of a bidder’s compliance with good faith efforts requirements or other DBE Program requirements in accordance with Section 26.53(d) and Section 26.87(e) respectively.

As part of the administrative reconsideration, the successful bidder/proposer may submit written documentation for the Reconsideration Official's consideration and may appear before the Reconsideration Official. The Reconsideration Official will only consider documentation of

good faith efforts made within five (5) calendar days after the bid/proposal due date. Any written documentation the successful bidder/proposer wishes the Reconsideration Official to consider must be submitted to the designated staff person within the timeframe specified in the notice of administrative reconsideration.

The Reconsideration Official will convene an administrative reconsideration proceeding prior to the time that a recommendation for award of contract is presented to the Board of Directors or the Executive Director, depending on the size of the contract. The Reconsideration Official will consider the good faith efforts documentation submitted with the successful bid/proposal within five (5) calendar days after the bid/proposal due date, the DBELO's original good faith efforts determination, and any other written materials the bidder/proposer has submitted to the Reconsideration Official, in accordance with this section, to determine whether the successful bidder/proposer has performed the quality, quantity and intensity of efforts that demonstrates a reasonably active and aggressive attempt to meet the contract-specific goal in accordance with 49 CFR Part 26, Appendix A.

The Reconsideration Official shall provide the successful bidder/proposer with a written decision on reconsideration, explaining the basis for its determination. In the event that the Reconsideration Official finds that the successful bidder/proposer has not met the contract-specific goal or demonstrated good faith efforts to meet the contract-specific goal, the DBELO will deem said bidder/proposer not responsible and evaluate the bidder submitting the next lowest bid, or the next highest ranking proposer.

Good Faith Efforts When a DBE is Replaced on a Contract (Section 26.53(f))

The Authority will require a contractor to make good faith efforts to replace a DBE that is terminated or has otherwise failed to complete its work on a contract with another certified DBE, to the extent needed to meet the contract goal. The Authority will require the prime contractor to notify the DBELO immediately of the DBE's inability or unwillingness to perform and provide documentation requested by the Authority.

In this situation, the Authority will require the prime contractor to obtain the Authority's prior approval of the substitute DBE and to provide copies of new or amended subcontracts, or documentation of good faith efforts. If the contractor fails or refuses to comply in the time specified, the Authority will issue an order stopping all or part of payment/work until satisfactory action has been taken. If the contractor still fails to comply, the Authority may issue a termination for default proceeding.

24. Required Clauses and Information (Sections 26.13, 26.23, 26.27, 26.29, 26.31, 26.37, 26.53, 26.55)

The following contract provisions will be included in all DOT-assisted contracts, subject to modification by the DBELO, in consultation with the Authority's legal counsel:

a. The nondiscrimination assurance required by Section 26.13(b);

b. A copy of or a link to access the Authority's DBE Program Policy Statement and DBE Program (Section 26.23);
c. A clause explaining the DBE certification standards;
d. A clause explaining how DBE participation is counted toward contract goals and the overall goal;
e. A clause explaining the reporting requirements, including a statement that DBE participation is credited toward overall or contract goals only when payments are actually made to DBE firms;
f. Information regarding DBE financial institutions and a statement encouraging prime contractors to use such institutions (Section 26.27);
g. A clause requiring prime contractors to pay subcontractors for satisfactory performance of their contracts no later than 30 days from receipt of each payment you make to the prime contractor (Section 26.29(a));
h. A clause specifying the method by which the Authority will ensure prompt and full retainage from the prime contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed (Section 26.29(b));
i. The website address for the DBE Database identifying all firms eligible to participate as DBEs in the Authority's DBE Program (Section 26.31);
j. A clause specifying the mechanisms the Authority will use to ensure compliance with 49 CFR Part 26 and this Program, including contractual and administrative remedies (Section 26.27); and
k. If applicable, information regarding the contract goal required by Section 26.53.

25. Counting DBE Participation (Section 26.55)

The Authority will count DBE participation toward overall and contract goals as provided in Section 26.55.

26. Confidentiality, Cooperation, Intimidation and Retaliation (Section 26.109)

Confidential Business Information; Personal Financial Information

If requested to do so by a participant in this Program, the Authority will safeguard from disclosure to third parties information that may reasonably be regarded as confidential business information, consistent with federal, state and local law. Notwithstanding any contrary provisions of federal, state or local law, the Authority will not release personal financial information submitted in response to the personal net worth requirement to a third party (other than DOT) without the written consent of the submitter.

Confidentiality of Information on Complainants

To the extent permitted by law, the identity of an individual who submits a complaint related to the administration of this Program ("complainant") will be kept confidential, at the complainant's election. If such confidentiality will hinder an investigation, proceeding or hearing conducted by the Authority or DOT, or result in a denial of appropriate administrative due process to other parties, the Authority will advise the complainant for the purpose of waiving the privilege.

Complainants are advised that, in some circumstances, failure to waive the privilege may result in the closure of the investigation or dismissal of the proceeding or hearing.

Cooperation

The Authority agrees to cooperate fully and promptly with compliance reviews, certification reviews, investigations, and other requests for information by DOT. All participants in the Authority's DBE Program (including, but not limited to, all proposers or bidders subject to this Program, DBE firms, complainants and appellants, and contractors and subcontractors using DBE firms to meet an overall, project or contract goal) are required to cooperate fully and promptly with compliance reviews, certification reviews, investigations, and other requests for information by DOT or the Authority. Failure to do so will be grounds for appropriate action against the party involved, as determined by the Authority and/or DOT (e.g., with respect to DBE firms, denial of certification or removal of eligibility and/or suspension and debarment; with respect to a complainant or appellant, dismissal of the complaint or appeal; with respect to a contractor which uses DBE firms to meet goals, findings of non-responsibility for future contracts and/or suspension and debarment).

Intimidation and Retaliation

The Authority will not intimidate, threaten, coerce, or discriminate against any individual or firm for the purpose of interfering with any right or privilege secured by 49 CFR Part 26 or because the individual or firm has made a complaint, testified, assisted, or participated in any manner in an investigation, proceeding, or hearing under 49 CFR Part 26.

All participants in the Authority's DBE Program (including, but not limited to, all proposers or bidders subject to this Program, DBE firms, complainants and appellants, and contractors and subcontractors using DBE firms to meet an overall, project or contract goal) must not intimidate, threaten, coerce, or discriminate against any individual or firm for the purpose of interfering with any right or privilege secured by 49 CFR Part 26 or because the individual or firm has made a complaint, testified, assisted, or participated in any manner in an investigation, proceeding, or hearing under 49 CFR Part 26. A violation of this provision constitutes noncompliance with Section 26.109 and will be grounds for appropriate enforcement action against the party involved, as determined by the Authority and/or DOT.

AGENDA

ITEM 8

Tri-Valley San Joaquin Valley
REGIONAL RAIL AUTHORITY

STAFF REPORT

SUBJECT: Resolution R06-2021 Authorizing The Executive Director To Execute a Contract Amendment with Rattray Program Management, LLC for Rail Program Management Consulting Services

FROM: Michael Tree, Executive Director

DATE: May 12, 2021

Action Requested
Staff requests that the Board of Directors (Board) authorize the Executive Director to execute a contract amendment to the Independent Contractor Agreement for Professional Rail Program Management Consulting Services with Rattray Program Management, LLC, in a form approved by legal counsel, for a not-to-exceed amount of $100,000 for a six-month period.

Background/Discussion
Rail program management services are required as the Valley Link Project (Project) moves through the environmental and preliminary engineering phases. These services will support the Project as it begins the Caltrans Project Approval and Environmental Document (PA/ED) process and the pursuit of federal approvals under the National Environmental Quality Act (NEPA).

Initially, the Authority was able to utilize the services of Mr. Ric Rattray, an employee of BART, to provide such services. However, following reductions on force by BART, Mr. Rattray retired and formed his own consulting firm, Rattray Program Management, LLC (RPM). While the Authority seeks a Program Manager that will be a full-time employee, it has utilized the services of Mr. Rattray's consulting firm through a contract that is within the Executive Director's contracting authority of $100,000. As the search for a Program Manager will take at least another month, it is necessary to engage RPM for an additional period. Therefore, staff is requesting the Board's authorization to allow the Executive Director to execute an amendment to the contract with RPM for an additional six-month period, for a sum not to exceed $100,000, to provide program management consulting services until a Program Manager is hired and for a reasonable transition period.

Fiscal Impact
The cost of this contract amendment is within the Authority's existing budget.

Recommended Action
Authorize the Executive Director to execute a contract amendment to the Independent Contractor Agreement for Professional Rail Program Management Consulting Services with Rattray Program Management, LLC, in a form approved by legal counsel, for a not-to-exceed amount of $100,000 for a six-month period.

Attachments
1. Resolution R06-2021

ATTACHMENT 1

Tri-Valley San Joaquin Valley
REGIONAL RAIL AUTHORITY

RESOLUTION NO. R06-2021

*** * ***

RESOLUTION OF THE BOARD OF DIRECTORS OF THE TRI-VALLEY-SAN JOAQUIN VALLEY REGIONAL RAIL AUTHORITY AUTHORIZING THE EXECUTIVE DIRECTOR TO EXECUTE A CONTRACT AMENDMENT TO THE INDEPENDENT CONTRACTOR AGREEMENT FOR PROFESSIONAL RAIL PROGRAM MANAGEMENT CONSULTING SERVICES WITH RATTRAY PROGRAM MANAGEMENT, LLC

WHEREAS, the Legislature adopted AB 758, establishing the Tri-Valley-San Joaquin Valley Regional Rail Authority (Authority) under California Public Utilities Code Section 132651 *et seq*., to plan, develop and deliver cost-effective and responsive transit connectivity between the Bay Area Rapid Transit District's rapid transit system in the Tri-Valley and the Altamont Corridor Express commuter rail service;

WHEREAS, as required by AB 758, the Authority prepared and delivered an initial Project Feasibility Report to the Legislature on June 30, 2019 to explore the improvement of transit connectivity between the Tri-Valley and San Joaquin Valley; and

WHEREAS, pursuant to the final Project Feasibility Report, the Authority has been engaged in the design and environmental activities to advance the Valley Link Rail Project (Project) towards construction and eventual operation; and

WHEREAS, on June 24, 2020 secured $46.8 million from the Metropolitan Transportation Commission (MTC) for the Project including the preparation of 30% design plans, a federal environmental document, and various operational and technical reports that will allow the Project to advance expeditiously to meet the overall project schedule; and

WHEREAS, staff recommends that the Board authorize the Executive Director to execute an amendment to the Independent Contractor Agreement for Professional Rail Program Management Consulting Services with Rattray Program Management, LLC for a six-month period for a sum not to exceed $100,000.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Tri-Valley-San Joaquin Valley Regional Rail Authority hereby authorizes the Executive Director to execute an amendment to the Independent Contractor Agreement for Professional Rail Program Management Consulting Services with Rattray Program Management, LLC for a six-month period for a sum not to exceed $100,000.

APPROVED AND PASSED, this 12th day of May 2021.

Veronica Vargas, Chair

ATTEST:

Michael Tree, Executive Director