

FIRST AMENDMENT

**TO THE PARTICIPATING SPECIAL ENTITY AGREEMENT
OF THE EAST CONTRA COSTA COUNTY HABITAT CONSERVATION PLAN/
NATURAL COMMUNITY CONSERVATION PLAN AND GRANTING TAKE
AUTHORIZATION**

Between

**the EAST CONTRA COSTA COUNTY HABITAT CONSERVANCY, the Implementing
Entity, and CONTRA COSTA TRANSPORTATION AUTHORITY,
a Participating Special Entity**

RECITALS

The Participating Special Entity Agreement between the East Contra Costa County Habitat Conservancy (“Conservancy”) and Contra Costa Transportation Authority (“Participating Special Entity” or “PSE”) was entered into March 5, 2015 (the “PSE Agreement”).

The PSE Agreement provides, in Section 10.4, that it may be amended with the written consent of both parties.

The Conservancy and PSE wish to amend the terms of the PSE Agreement by way of this First Amendment (the “First Amendment”).

AMENDMENT

A. The Conservancy and the PSE agree to amend the PSE Agreement as follows:

1. The attached Addendum 1.0 is added to and incorporated within Exhibit 1.
2. Section 2.7 of the Agreement is amended as follows:

PSE is responsible for the State Route 4 (SR4)/Balfour Road Interchange Improvements Project and seeks extension of the Conservancy’s permit coverage for the widening of SR4 from San Jose Avenue to approximately 3,400 feet south of Balfour Road, and to construct a full interchange at Balfour Road in the City of Brentwood, as further described in Exhibit 1 [and Addendum 1.0](#), the Application, as

described further below. Coverage through the Conservancy's permit will only be extended to PSE for work being conducted within the Conservancy's Permit Area.

3. Section 2.8 of the PSE Agreement is amended as follows:

The Conservancy has concluded, based on the terms of this Agreement and the application submitted by PSE (the "Application"), that PSE has provided adequate assurances that it will comply with all applicable terms and conditions of the IA, the HCP/NCCP, and the Permits. The Application is attached hereto as Exhibit 1 [and Addendum 1.0](#) and is hereby incorporated into this Agreement by reference.

4. Section 3.1 of the Agreement is amended as follows:

"Application" means the application submitted by the PSE in accordance with Chapter 8.4 of the HCP/NCCP, [including Addendum 1.0 which describes minor modifications to the project description at the Project site](#) and which is attached hereto as Exhibit 1. The Application contains a cover sheet, the results of required planning surveys and the avoidance, minimization and mitigation measures that will be a condition of the PSE using Conservancy's Permits.

5. Section 5.2 of the Agreement is amended as follows:

Planning surveys are required prior to carrying out any Covered Activity for which a fee is collected or land in lieu of a fee is provided. PSE has submitted ~~a planning survey report~~ [an Application](#) for approval by the Conservancy in accordance with Chapter 6.2.1 of the HCP/NCCP. This ~~planning survey report is contained within the Application, which~~ [Application](#) describes the results of the planning survey and describes in detail the pre-construction surveys, construction monitoring, avoidance measures and mitigation measures that apply to the Proposed Activities and shall be performed by PSE. Based on the Application, the Conservancy has determined that PSE will implement and comply with all applicable preconstruction surveys and construction monitoring requirements described in Chapters 6.2.2 and 6.2.3 of the HCP/NCCP.

6. Section 5.4 is amended as follows:

As set forth in the Application, PSE agrees to pay the Conservancy a one-time payment of ~~\$423,149.44~~ [\\$437,303.18](#) which amount includes all HCP/NCCP mitigation fees necessary for the Project. The payment also includes an amount sufficient to implement additional actions that will contribute to the recovery of endangered and threatened species ("Contribution to Recovery"). The overall payment amount is the sum of the following:

Development Fee: ~~\$358,945.80~~ [\\$330,056.26](#)

Wetland Mitigation Fees: ~~\$19,854.36~~ [\\$38,974.65](#)

Temporary Impact Wetland Mitigation Fee: ~~\$ 3,008.24~~

Contribution to Recovery: ~~\$61,195.40~~ [\\$68,272.27](#)

To date the Participating Special Entity has submitted payment for \$423,149.44 in accordance with the PSE Agreement. The additional payment for the First Amendment totals \$14,153.74. The additional payment for the First Amendment must be paid in full prior to issuance of a Certificate of Inclusion. ~~The payment must be paid in full before any ground disturbance associated with the Project occurs.~~ Notwithstanding the above, the Parties acknowledge that the Conservancy adjusts its fee schedule annually on March 15 of each year in accordance with the fee adjustment provisions of Chapter 9.3.1 of the HCP/NCCP. If the PSE pays before March 15, ~~2017~~ 2015 and construction of the Project commences before March 15, ~~2017~~ 2015, the amount due will be as stated above. If PSE pays on or after March 15, ~~2017~~ 2015 or construction of the Project does not commence before March 15, ~~2017~~ 2015, the amount due will be subject to annual fee adjustments for all fees, and subject to annual adjustments of the Contribution to Recovery based on the formula set forth in Chapter 9.3.1 for the HCP/NCCP wetland mitigation fee. Based on these adjustments, if PSE pays before March 15 of any year, but construction does not commence before March 15 of that year, PSE will either be required to submit an additional payment for any increases or be entitled to a refund without interest for any decreases.

7. Section 6.1.1 of the PSE Agreement is amended as follows:

The Conservancy's issuance of a Certificate of Inclusion to the PSE is a public agency action that must comply with CEQA. As further described below, the SR4/Balfour Road Interchange Improvements project was analyzed in a certified CEQA document; minor changes to the project have been reviewed and addressed in CEQA Addenda.

For purposes of the Project, the State Route 4 Bypass Authority (SR4 Bypass Authority) PSE is the CEQA lead agency. ~~The predecessor agency~~ The State Route 4 Bypass Authority certified an Environmental Impact Report (FEIR) for the entire SR 4 Bypass Project in 1994 (State Clearinghouse Number 89032824). This FEIR included the acquisition of sufficient right-of-way at the Balfour Road intersection to accommodate an interchange in the future. ~~however the traffic analysis prepared at that time did not show the need for an interchange at this location. In 2011, the Bypass Authority prepared Addendum #10 to the FEIR, which evaluated the detailed design elements of an interchange at the Balfour Road location. Since 2011 and the approval of Addendum #10, several changes to design of the Phase 1 interchange improvements at Balfour Road have occurred. The potential environmental impacts of the above noted significant design changes to the interchange improvements project at Balfour Road are evaluated in Addendum #11. Subsequent to certification of the FEIR, Contra Costa Transportation Authority has adopted the CEQA Addendum #10 and #11, which state that the Phase 1 improvements for the Balfour Road interchange would not result in any new significant environmental effects or substantial increases in the severity of previously identified significant impacts. The SR 4 Bypass Authority has since prepared four CEQA Addenda, Addendum #10 in August 2011, Addendum #11 in November 2014, and Addenda #12 and #13 in April 2016, which evaluated and addressed the detailed design elements and subsequent project modifications of an interchange at the Balfour Road location as reflected in Exhibit 1 and Addendum 1.0.~~

The Conservancy is a CEQA responsible agency for purposes of the Project and, as such, will rely on the FEIR and associated Addenda ~~previous environmental documents cited above~~ prepared by the SR 4 Bypass Authority ~~and the Contra Costa Transportation Authority~~ for purposes of fulfilling its responsibilities under CEQA.

8. Section 7.6 is amended as follows:

PSE shall compensate the Conservancy for its direct costs associated with this Agreement, including but not limited to, staff, consultant and legal costs incurred as a result of the review of the Application, drafting and negotiating this Agreement, monitoring and enforcement of this Agreement, and meetings and communications with PSE (collectively, Conservancy’s “Administrative Costs”). Conservancy’s Administrative Costs shall not exceed \$30,000 ~~\$25,000~~ in the aggregate. Conservancy shall provide PSE with invoices detailing its Administrative Costs monthly. PSE shall remit payment of each invoice within thirty (30) days of receiving it.

This provision is not intended to, and shall not be construed to, limit PSE’s duty to indemnify the Conservancy as provided in Section 7.7 of this Agreement.

- B. This First Amendment may be executed in counterparts.
- C. All other terms and conditions of the PSE Agreement shall remain as originally agreed.
- D. The Conservancy shall issue a Certificate of Inclusion pursuant to Section 6.1 of the PSE Agreement that is revised to incorporate reference to this First Amendment.
- E. This First Amendment shall take effect on the date after both of the following have occurred:
 1. The Conservancy and PSE have executed the First Amendment; and
 2. The Conservancy has delivered written notice to PSE that the Conservancy has received written concurrence from the Wildlife Agencies regarding the First Amendment in accordance with Section 6.1 of the PSE Agreement.

IN WITNESS WHEREOF, the Conservancy and PSE hereto execute this First Amendment.

THE EAST CONTRA COSTA COUNTY HABITAT CONSERVANCY

By: _____ Date: _____
ABIGAIL FATEMAN
Executive Director

CONTRA COSTA TRANSPORATION AUTHORITY

By: _____ Date: _____
RANDELL H. IWASAKI
Executive Director

DRAFT

East Contra Costa County

Habitat Conservation Plan/Natural Community Conservation Plan

Participating Special Entity-Planning Survey Report

First Amendment: Addendum 1.0

For the

State Route 4 (SR4)/Balfour Road Interchange Improvements

(04-4H1604)

April 15, 2016



CONTRA COSTA
transportation
authority

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- Exhibit 1 HCP/NCCP Fee Calculator Worksheet Permanent Impacts (PSE)

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- Figure 2b Proposed Deer Creek Extension Rev 1
- Figure 2d Permanent Impacts to Riparian Tree Canopy
- Figure 3a-3 Landcover Impacts - Rev 1
- Figure 3 Kinder Morgan Pump Station System Relocation Component
(From Addendum #12 to the EIR for the state route 4 bypass project)

Attachments

- Table 5 LAND COVER IMPACT ANALYSIS
- Attachment G CEQA Addendum #12
- Attachment H CEQA Addendum #13

Summary

The purpose of this filing is to request the East Contra Costa County Habitat Conservancy’s (Conservancy) approval to amend the approved March 2015 Planning Survey Report (PSR) to address modifications to the SR4/Balfour Road Interchange Improvement Project. The proposed changes required removal of 24 trees, as shown in Figure 2d, within the existing open channel of Deer Creek to facilitate bridge construction, channel conform work to transition the proposed daylighted section back to the existing channel, placement of rock slope protection and eliminating the previously proposed Off-Site Improvements associated with the Kinder Morgan utility relocation work.

The modification in the project area results in an additional 0.20-acres of permanent riparian impact for a total permanent riparian impact area of 0.42-acres and a reduction of 1.04 acres of ruderal grassland for a total of newly disturbed area of 29.58-acres. Table A presents the summary of the changes in impacted areas, with Table 5 providing the comprehensive updated table for the total project.

The resulting mitigation requirement would increase the mitigation fees by **\$14,153.74**. Table B provides a cumulative summary of the original mitigation fees paid and the additional mitigation fees associated with Addendum 1.0.

Table A
Summary of Changes to Acreages

Project Element	Land Cover/Habitat	Permanent Impacts (Acres)
Tree removal, RSP placement, channel conform work and shading from proposed bridge construction.	Riparian Woodland/Scrub	+0.20
Elimination of Off-Site improvements for Kinder Morgan	Grassland - Ruderal	-1.04

Table B

Summary of East Contra Costa County HCP/NCCP Fees

<u>Overview of Fees</u>	Development Fees	Wetland Mitigation Fees	Temporary Wetland Mitigation Fees	Contribution to Recovery	TOTAL
Original PSR Fees	\$339,091.44	\$19,854.36	\$3,008.24	\$61,195.40	\$423,149.44
Addendum 1.0: Additional Impacts	\$2,557.69	\$19,120.29	-	\$7,076.87	\$28,754.85
Credit Breakdown	-\$11,592.87	-	-\$3,008.24	-	-\$14,601.11
PSE Agreement First Amendment Fees	\$330,056.26	\$38,974.65	-	\$68,272.27	\$437,303.18
				Difference to be Paid	\$14,153.74

SECTION 1

1 Proposed Modifications (PSR Section I)

1.1 Overview

The below table has been updated for acreages.

Project proponent:	Contra Costa Transportation Authority (CCTA)	
Project Name:	SR4/Balfour Road Interchange	
Application Submittal Date:	December 2014	
Jurisdiction:	<input type="checkbox"/> Contra Costa County	<input checked="" type="checkbox"/> Participating Special Entity ¹
	<input type="checkbox"/> City of Oakley	
	<input type="checkbox"/> City of Pittsburg	
	<input type="checkbox"/> City of Clayton	
	<input type="checkbox"/> City of Brentwood	
Check appropriate Development Fee Zone(s):	<input checked="" type="checkbox"/> Zone I	<input type="checkbox"/> Zone IV
	<input type="checkbox"/> Zone II	
	Zone III	
	See Figure 9-1 of the Final HCP/NCCP for a generalized development fee zone map. Detailed development fee zone maps by jurisdiction are available from the jurisdiction or at: www.cocohcp.org	
Total Parcel Acreage:	82.04 (including 23.01 acres covered by previous permits and mitigation)	
Acreage of land to be permanently disturbed	29.58	
Acreage of land to be temporarily disturbed	0.0	

1.2 Background – CEQA Clearance

The SR4/Balfour Interchange is a planned improvement within the overall 3-segment, 12.4-mile combination freeway/expressway/conventional highway previously known as the SR4 Bypass that was adopted into the State Highway System (SHS) on January 25, 2012. The Project Environmental Impact Report (EIR) for the entire 3-segment SR4 Bypass Project was approved in December 1994 (Clearinghouse Number 89032824). As the engineering design of the SR4 Bypass Project progressed, subsequent analysis has been completed to determine if design modifications would result in any potential impacts that were not analyzed in the original 1994 EIR. The Bypass Authority prepared Addendum #10 to the FEIR, approved in 2011, which evaluated the detailed design elements of the Balfour Road interchange. The analysis included two phases of construction, Phase 1 and Ultimate Phase. The Ultimate Phase improvements will not be needed until 4-lanes are constructed between Balfour Road and Marsh Creek Road, which is anticipated to occur beyond the 20-year design period of Phase 1. Since the approval of Addendum #10, several changes to the SR4/Balfour Road interchange design have occurred. In October, 2014 the Bypass Authority prepared Addendum #11, which constitutes an updated assessment for the SR4/Balfour Road interchange, given the design changes that have occurred since 2011, and supersedes the Phase 1 analysis included in Addendum #10. Since November 2014 and the approval of Addendum No. 11, project changes have occurred related to the relocation components required for removal of the

Kinder Morgan Brentwood Pump Station in the vicinity of the Project area. Off-site improvements to the existing Kinder Morgan oil pipeline drag reducing agent (DRA) station access point between Brentwood Boulevard and Sellers Avenue, along an East Contra Costa Irrigation District (ECCID) canal have been deemed infeasible and are no longer part of the project. Instead, a new DRA station, including a pipeline loop and access road, will be installed on a new parcel approximately 400 feet to the west of the existing Kinder Morgan oil pipeline pump station at Balfour Road. Minor changes have also occurred to the utility relocation plan along Balfour Road for the joint trench. In order to accomplish the joint trench utility relocation work, utilities will temporarily be placed above ground on poles to allow for the construction of the joint utility trench. The temporary aerial placement of utilities will be on poles along the south side of Balfour Road (all within the project impact area) and requires a TCE on land adjacent and parallel to the existing public right of way (John Muir Hospital), which is currently used for urban landscaping. Addendum No. 12 (Attachment G), completed in June 2015, evaluated these changes and concluded that the Kinder Morgan improvements, including the DRA Station, pipeline loop and access road and the placement of the temporary aerial poles along the south side of Balfour Road would not result in any new significant environmental effects or substantial increases in the severity of the previously identified significant effects of the 1994 FEIR.

While right of way needs were being discussed with Caltrans, concerns were raised associated with the access to the new Kinder Morgan DRA Station. To address these concerns Addendum #13 was prepared. Addendum #13 addresses two additional elements associated with the relocation of the Kinder Morgan Brentwood Pump Station in the vicinity of the Project area as follows:

- The first element is related to access to the New Parcel. As stated in Addendum #12, the Drag Reducing Station, pipeline loop and appurtenances, will be relocated to a New Parcel located approximately 400 feet to the west of the existing Kinder Morgan Brentwood Pump Station. Also, as stated in Addendum #12, the New Parcel will have two points of access (ingress from Balfour Road and egress to Cortona Way), but the access from Balfour Road would be right-in only due to the proximity of the New Parcel to the future Balfour Road Interchange off-ramp. The access from Balfour Road is required to facilitate large trucks delivering the drag reducing agent for the pipeline operation, but is not required for small trucks and other vehicles. Caltrans has determined that due to the proximity of the New Parcel to the future Balfour Road interchange off-ramp, the access from Balfour Road will only be allowed for so long as SFPP maintains its DRA station on the New Parcel, and thereby constitutes temporary ingress access to the New Parcel. Therefore, an alternate, concurrent, and permanent means of ingress needs to be established from Cortona Way, which will also constitute a portion of the substitute property. This alternate, concurrent, permanent means of ingress will provide access for small trucks and other vehicles, which will reduce traffic exiting from Balfour Road to the New Parcel and thereby improve operations at the future Balfour Road off-ramp. That alternate, concurrent, permanent means of ingress will be established by acquiring nonexclusive permanent access easements for ingress over portions of Assessor's Parcel Nos. 019-150-094 (McDonald's) and 019-150-095 (Balfour Properties), as shown on Figure 2.
- The second element is related to replacement parking for Meridian Balfour. As stated in Addendum #12, the access road would travel north through the New Parcel, parallel to the existing state right-of-way, then continue west on the New Parcel and the northern portion of

the Balfour Properties LLC parcel (2371 Balfour Road, APN 019-150-095) and the southern portion of the Meridian Balfour, et al parcel (100 Cortona Way, APN 019-900-016), until it reaches the Common Area Driveway for the various properties [McDonalds, Balfour Properties LLC (Chevron), and Meridian Balfour, et al (Meridian Professional Center)]. The access road across the Meridian Balfour property would eliminate 16 parking spaces. This Addendum #13 provides a means to provide replacement parking for Meridian Balfour directly to the east and adjacent to the existing parking lot, as shown in Figure 2. Physical improvements to the land designated for replacement parking are evaluated as part of the project changes in this Addendum #13.

Physical improvements to the land designated for replacement parking were evaluated as part of the project changes in Addendum #13. Figure 2 of Addendum #13 (Attachment H) depicts the project changes evaluated. These areas have been accounted for within the Land Cover impacts of this Addendum No. 1 of this PSR.

Addendum #13 concluded that the ingress access from Cortona Way to the New Parcel and the replacement parking at the Meridian Professional Center parking lot would not result in any new significant environmental effects or substantial increases in the severity of the previously identified significant effects of the 1994 FEIR.

1.3 Project Description

The SR4 Bypass Authority and the Contra Costa Transportation Authority (CCTA) jointly propose to widen SR4 from San Jose Avenue (PM 34.9) to approximately 3,400 feet south of Balfour Road (PM 36.6), and to construct an interchange at Balfour Road in the City of Brentwood in Contra Costa County. The Phase 1 of the SR4/Balfour Road interchange will specifically include the construction of the following (see Figure 2a, Project Site Plans):

- A divided two-lane SR4 freeway with auxiliary lanes in each direction from San Jose Avenue undercrossing to 2,000 feet north of Balfour Road.
- A four-lane undercrossing bridge structure to serve bidirectional two-lane SR4 freeway traffic and two entrance loop ramps.
- A four-lane bridge structure clear spanning Deer Creek for SR4 freeway lanes. This structure will serve bidirectional SR4 traffic
- A two-lane bridge structure clear spanning Deer Creek for eastbound (EB) SR4 loop on-ramp.
- An EB SR4 diagonal off-ramp.
- An EB SR4 loop on-ramp.
- A westbound (WB) SR4 diagonal on-ramp.
- A WB SR4 diagonal off-ramp.
- A WB SR4 loop on-ramp.
- Widening of Balfour Road to up to six lanes within the interchange area.

Other improvements include two new traffic signals for the ramp intersections, ramp metering, lighting, drainage improvements, utility relocations and a minor offsite road improvement. Drainage improvements would include drainage inlets, drainage pipes, bioswales, pipe underdrain, and rock slope protection.

Deer Creek Extension

Deer Creek is an intermittent stream in its upper reaches but becomes perennial where it is detained in the Contra Costa County Flood Control Basin, approximately ¾-mile west of the SR4/Balfour Road intersection. From this point it is piped to an approximately 306-foot long daylighted channel through an 84-inch non-reinforced concrete pipe. It then exits through a concrete box culvert that passes beneath SR4, where it then becomes an open channelized reach draining to Marsh Creek and on to the San Joaquin River.

As part of Phase 1 the daylighted reach of the Creek would be extended. This would be accomplished by removing the existing headwall and a portion of the 84-inch pipe to create 245 feet of new channel that would be vegetated to maintain consistency with the surrounding natural environment. The remaining portion of the 84-inch pipeline that is not converted into an open channel would be replaced with reinforced concrete pipe, traveling in a southeast direction and reconnecting with the existing pipeline beneath Balfour Road. A new headwall would be constructed at the connection of the new daylighted portion of Deer Creek and the limits of the pipeline replacement. Figure 2b, Proposed Deer Creek Extension, illustrates the proposed improvements to Deer Creek. Figure 2d, Permanent Impacts to Riparian Tree Canopy, shows tree removal within the existing open channel reach to facilitate bridge construction, channel conform work to transition the daylighted section back to the existing channel and placement of rock slope protection.

Relocation of PG&E Towers

A Pacific Gas & Electric (PG&E) overhead line runs along the eastern side of the Bypass. Construction of the interchange will require relocation of two of the towers, from their current locations adjacent to Balfour Road to new locations approximately 250 feet and 120 feet to the north respectively. However, the new locations will still be within the project right-of-way (see Figure 2c, PG&E Relocations). The 1994 FEIR contemplated the potential relocation of utilities as part of construction of the Bypass and required coordination with public utilities and/or private operators during construction to allow for relocation as needed without disruption to existing service. Impacts associated with the utility relocation were addressed in the 1994 FEIR and are addressed in this Addendum pursuant to California Public Utilities Commission General Order 131-D filing requirements. This work was completed in June of 2015.

OFF-SITE IMPROVEMENTS

Removal of the Kinder Morgan Brentwood Pump Station

As part of Phase 1 of the SR4/Balfour Road interchange, a new eastbound SR4 off-ramp would be constructed in the northwest quadrant of the SR4/Balfour Road intersection. Construction of this new off-ramp makes it necessary for Kinder Morgan Energy Partners (Kinder Morgan) to remove the existing oil pipeline pump station (the Brentwood Booster Station) at this location. The 1994 FEIR contemplated the potential relocation of utilities as part of construction of the Project and required coordination with public utilities and/or private operators during construction to allow for relocation, as needed, without disruption to existing service. Addendum #10 evaluated the relocation of the Brentwood Booster Station approximately 400 feet to the west to accommodate the proposed on- and off-ramps associated with the interchange.

Addendum #11 evaluated two Kinder Morgan relocation components. The first relocation component is still proposed and would occur at an existing Concord Pump Station, located at Arnold Industrial Way and Solano Way in Concord, California (approximately 20 miles northwest from the Project area). This area is outside of the HCP inventory area and therefore was not included in the original PSR project foot print or impact area. Terminal and substation transformers at the Concord Pump Station would be replaced to

allow for increased pumping capacity. No physical expansion of the Concord Pump Station would be needed. The second relocation component included the installation of a Drag Reducing Additive (DRA) Station at an existing oil pipeline access point between Brentwood Boulevard and Sellers Avenue (approximately 2.8 miles southeast from the Project area), along an East Contra Costa Irrigation District (ECCID) canal easement. This area along the ECCID canal was the “off-site improvement” area that was included in the original PSR project footprint and impact area. Since Addendum #11 was completed, additional evaluation and coordination with the ECCID has occurred, which determined that use of the ECCID access point to install the DRA Station was not feasible.

Instead, the DRA Station, including a pipeline loop and access road, will be installed on a New Parcel approximately 400 feet to the west of the existing Kinder Morgan oil pipeline pump station. Addendum # 12 evaluated this change in location of the installation of the DRA Station. To provide access to the DRA Station, pipeline loop and ancillary appurtenances, an asphalt concrete access road, varying from 20 to 40 feet in width, would be constructed through the New Parcel. The access road would begin from westbound Balfour Road, just west of the proposed eastbound SR4/Balfour Road interchange diagonal off-ramp. The access road would travel north through the New Parcel, parallel to the existing state right-of-way. To connect with Cortona Way, the access road would then continue west on the New Parcel, then across the northern portion of the Balfour Properties LLC parcel (2371 Balfour Road, APN 019-150-095) and the southern portion of the Meridian Balfour, et al parcel (100 Cortona Way, APN 019-900-016), until it reaches the Common Area Driveway for the various properties (McDonalds, Balfour Properties LLC (Chevron), and Meridian Balfour, et al (Meridian Professional Center)).

SECTION 2

2 Land Cover Types (PSR Section II)

As a result of the modification to the areas, the acreage of land cover types in Table 1 (of the March 2015 PSR) will be revised (Table 1, Revision 1) to include additional areas of permanent Riparian Woodland/Scrub impact. The modifications will increase the acreage of Riparian Woodland/Scrub permanent impact from 0.22 acres to 0.42 acres (this area covers the entire existing open channel reach), and decrease acreage of ruderal impact Ruderal from 30.20 acres to 29.16 acres. Please note project footprint increase for DRA station access.

The proposed modifications increase the impact area to jurisdictional wetland and waters; however remain below 0.50 acres, this change would not change the species specific planning survey requirements contained in the original PSR.

See updated Figures 2b, 2d, 3A-3 and 3; Table 5

Table 1, Rev 1

Revised Land Cover Types Acreages

Land Cover Type (acres, except where noted)	Acreage of Land to be "Permanently Disturbed" by Project ^b	Acreage of Land to be "Temporarily Disturbed" by Project ^b	Acreage of Land Proposed for HCP/NCCP Dedication on the Parcel ^c	
			Stream Setback	Preserve System Dedication
Grassland^a				
<input type="checkbox"/> Annual grassland	N/A	N/A	N/A	N/A
<input type="checkbox"/> Alkali grassland	N/A	N/A	N/A	N/A
<input checked="" type="checkbox"/> Ruderal	29.16	N/A	N/A	N/A
<input type="checkbox"/> Chaparral and scrub	N/A	N/A	N/A	N/A
<input type="checkbox"/> Oak savanna	N/A	N/A	N/A	N/A
<input type="checkbox"/> Oak woodland	N/A	N/A	N/A	N/A
Jurisdictional wetlands and waters				
<input checked="" type="checkbox"/> Riparian woodland/scrub	0.42 (shading, rsp placement and tree removal)		N/A	N/A
<input type="checkbox"/> Permanent wetland	N/A	N/A	N/A	N/A
<input type="checkbox"/> Seasonal wetland	N/A	N/A	N/A	N/A
<input type="checkbox"/> Alkali wetland	N/A	N/A	N/A	N/A
<input type="checkbox"/> Aquatic (Reservoir/Open Water)	N/A	N/A	N/A	N/A
<input type="checkbox"/> Slough/Channel	N/A	N/A	N/A	N/A
<input type="checkbox"/> Pond	N/A	N/A	N/A	N/A

Land Cover Type (acres, except where noted)	Acreage of Land to be "Permanently Disturbed" by Project ^b	Acreage of Land to be "Temporarily Disturbed" by Project ^b	Acreage of Land Proposed for HCP/NCCP Dedication on the Parcel ^c	
			Stream Setback	Preserve System Dedication
<input type="checkbox"/> Stream (acres)	N/A	N/A	N/A	N/A
<input type="checkbox"/> Total stream length (feet)	N/A	N/A	N/A	N/A
Stream length by width category				
<input type="checkbox"/> ≤ 25 feet wide	N/A	N/A	N/A	N/A
<input type="checkbox"/> > 25 feet wide	N/A	N/A	N/A	N/A
Stream length by type and order ^e			N/A	N/A
<input type="checkbox"/> Perennial	N/A	N/A	N/A	N/A
<input type="checkbox"/> Intermittent	N/A	N/A	N/A	N/A
<input type="checkbox"/> Ephemeral, 3 rd or higher order	N/A	N/A	N/A	N/A
<input type="checkbox"/> Ephemeral, 1 st or 2 nd order	N/A	N/A	N/A	N/A
Irrigated agriculture				
<input type="checkbox"/> Cropland	N/A	N/A	N/A	N/A
<input type="checkbox"/> Pasture	N/A	N/A	N/A	N/A
<input type="checkbox"/> Orchard	N/A	N/A	N/A	N/A
<input type="checkbox"/> Vineyard	N/A	N/A	N/A	N/A
Other				
<input type="checkbox"/> Nonnative woodland	N/A	N/A	N/A	N/A
<input type="checkbox"/> Wind turbines	N/A	N/A	N/A	N/A
Developed				
<input checked="" type="checkbox"/> Urban	23.87	N/A	N/A	N/A
<input type="checkbox"/> Aqueduct	N/A	N/A	N/A	N/A
<input checked="" type="checkbox"/> Turf	5.33	N/A	N/A	N/A
<input type="checkbox"/> Landfill	N/A	N/A	N/A	N/A
Uncommon Vegetation Types (subtypes of above land cover types)				
<input type="checkbox"/> Purple needlegrass grassland	N/A	N/A	N/A	N/A
<input type="checkbox"/> Wildrye grassland	N/A	N/A	N/A	N/A
<input type="checkbox"/> Wildflower fields	N/A	N/A	N/A	N/A
<input type="checkbox"/> Squirreltail grassland	N/A	N/A	N/A	N/A
<input type="checkbox"/> One-sided bluegrass grassland	N/A	N/A	N/A	N/A
<input type="checkbox"/> Serpentine grassland	N/A	N/A	N/A	N/A
<input type="checkbox"/> Saltgrass grassland (= alkali grassland)	N/A	N/A	N/A	N/A

Land Cover Type (acres, except where noted)	Acreage of Land to be "Permanently Disturbed" by Project ^b	Acreage of Land to be "Temporarily Disturbed" by Project ^b	Acreage of Land Proposed for HCP/NCCP Dedication on the Parcel ^c	
			Stream Setback	Preserve System Dedication
<input type="checkbox"/> Alkali sacaton bunchgrass grassland	N/A	N/A	N/A	N/A
<input type="checkbox"/> Other uncommon vegetation types (please describe)	N/A			
Uncommon Landscape Features or Habitat Elements				
<input type="checkbox"/> Rock outcrop	N/A	N/A	N/A	N/A
<input type="checkbox"/> Cave	N/A	N/A	N/A	N/A
<input type="checkbox"/> Springs/seeps	N/A	N/A	N/A	N/A
<input type="checkbox"/> Scalds	N/A	N/A	N/A	N/A
<input type="checkbox"/> Sand deposits	N/A	N/A	N/A	N/A
<input type="checkbox"/> Mines	N/A	N/A	N/A	N/A
<input type="checkbox"/> Buildings (bat roosts)	N/A	N/A	N/A	N/A
<input type="checkbox"/> Potential nest sites (trees or cliffs)	N/A	N/A	N/A	N/A
Total Newly Disturbed Acres = 29.58 (permanent and temporary)	29.58 (does not include urban land cover)	0	N/A	N/A

2.1 Jurisdictional Wetlands and Waters

The existing channel description has been updated as follows:

EXISTING CHANNEL

The road improvements call for two clear span bridge crossings of the approximate 0.38-acre daylighted portion of Deer Creek: one bridge for widening of the existing SR4 and the other for construction of the EB on-ramp. While this design avoids the wetted area, the bridges will result in permanent shading out of approximately 0.30-acre of riparian woodland/scrub vegetation. The permanent impacts of approximately 0.42-acre are composed of a shading effect from the bridge crossings, rsp placement below OHW and removal of 24 trees. Approximately 90 feet of the Creek will be graded from the existing southerly headwall to the north in order to conform the Creek to the proposed daylighted section.

2.2 Results of Species-Specific Planning Surveys Required in Table 2a

The Off-site Improvements section has been deleted.

SECTION 3

3 Species-Specific Monitoring and Avoidance Requirements: Preconstruction Surveys for Selected Covered Wildlife and Construction Monitoring and Avoidance for Selected Covered Species (PSR Section III)

The proposed modifications would not alter the preconstruction surveys nor the construction monitoring and avoidance and minimization measure requirements for selected covered wildlife. Preconstruction surveys and construction monitoring for selected covered species will be conducted as described in the Planning Survey Report.

SECTION 4

4 Landscape and Natural Community-Level Avoidance and Minimization Measures (PSR Section IV)

The proposed modifications would not alter the preconstruction surveys nor the construction monitoring and avoidance and minimization measure requirements. Preconstruction surveys and construction monitoring will be conducted as described in the Planning Survey Report.

SECTION 5

5 Mitigation Measures (PSR Section V)

5.1 Fee Analysis:

The applicant will pay an HCP/NCCP Participating Special Entity (PSE) Development Fee and Wetland Mitigation Fee to mitigate for non-avoidable impacts. The project lies primarily within HCP/NCCP Fee Zone 1 (See Exhibit 1).

To calculate fees a review was made of the previous phases of construction within Segments 2 and 3 (Phase 1 and Phase 2 of 'Bypass Road' Segment 2; as well as Phase 3A of 'Bypass Road' Segment 3 and BOs for Segment 2 and 3) to determine which areas had been previously mitigated versus those that would be newly disturbed by the current project. The previously mitigated areas and "Newly Disturbed" areas are shown in **Figure 3a, sheets 1-4**, and summarized in Table 5 below.

Project boundary at the soundwall and transmission tower relocations

While **Figure 3a, sheet 3** shows the ROW boundary in the northeast quadrant at the edge of the golf course, the actual limit of project work is at the soundwall at the edge of the existing SR4 lanes. Therefore, except for two minor utility needs (relocation of the PG&E transmission tower and replacement of a cap on the Los Vaqueros aqueduct), no additional work will occur in that area. The remainder of the area beyond the soundwall was not included in the fee analysis. The transmission tower in this location will be relocated to the east on turf at the edge of the adjusted project limit line and will be therefore contained within the project limits. The transmission tower in the southeast quadrant will be relocated onto grassland just east of the project limit to avoid other easements in the area.

Wetland fee analysis

The analysis concluded that Wetland Mitigation Fees were required for permanent project effects on the riparian woodland scrub vegetation in the existing channel. The permanent impacts of approximately 0.42-acre are composed of a shading effect from the bridge crossings, rmp placement below OHW and the removal of 24 trees. Approximately 90 feet of the Creek will be graded from the existing southerly headwall to the north in order to conform the Creek to the proposed daylighted section (**Figure 2b**). The analysis concluded that no additional wetland fee was required for the construction of the Creek extension as it was considered to be a reversion from piped to open channel.

EXHIBITS

ECCC HCP/NCCP 2016 Fee Calculator Worksheet

Permanent Impacts

PROJECT APPLICANT: Contra Costa Transportation Authority

PROJECT NAME: SR4/Balfour Road Interchange Improvements Project & Addendum 1.0

APN(s): ROW

JURISDICTION: Participating Special Entity

DATE: April 14, 2016

	ACREAGE PERMANENTLY IMPACTED (TABLE 1) ¹		2016 FEE PER ACRE (SUBJECT TO CHANGE) ²		
DEVELOPMENT FEE					
See appropriate ordinance or HCP/NCCP Figure 9-1 to determine Fee Zone	Fee Zone 1	0.20	x	\$12,788.47	= \$2,557.69
	Fee Zone 2		x	\$25,576.95	= \$0.00
	Fee Zone 3		x	\$6,394.24	= \$0.00
	Fee Zone 4 ³		x	\$19,182.71	= \$0.00
				Development Fee Total	= \$2,557.69

	ACREAGE PERMANENTLY IMPACTED (TABLE 1) ¹		2016 FEE PER ACRE (SUBJECT TO CHANGE) ²		
WETLAND MITIGATION FEE					
	Riparian woodland / scrub	0.200	x	\$95,601.46	= \$19,120.29
	Perennial Wetland		x	\$140,461.72	= \$0.00
	Seasonal Wetland		x	\$325,600.04	= \$0.00
	Alkali Wetland		x	\$328,894.77	= \$0.00
	Ponds		x	\$178,180.49	= \$0.00
	Aquatic (open water)		x	\$89,090.25	= \$0.00
	Slough / Channel		x	\$129,841.87	= \$0.00
				Wetland Mitigation Fee Total	= \$19,120.29
	STREAMS				
	Streams 25 feet wide or less		x	\$362.94	= \$0.00
	Streams greater than 25 feet wide		x	\$544.41	= \$0.00
				Wetland Mitigation Fee Total	= \$19,120.29

FINAL FEE CALCULATION			
	Addendum 1.0 Development Fee Total		\$2,557.69
	Addendum 1.0 Wetland Mitigation Fee Total	+	\$19,120.29
	Fee Subtotal	=	\$21,677.98
	Fee Credit		
	Development Fee Credit from Original Project 2015		\$11,592.87
	Wetland Mitigation Fee Credit from Original Project 2015	+	\$3,008.24
	Reduction Total	=	\$14,601.11
	First Amendment Mtigation Fee Total	=	\$7,076.87
	Contribution to Recovery⁵	+	\$7,076.87
	TOTAL AMOUNT TO BE PAID	=	\$14,153.74

¹ Conservancy staff will consult the land cover map in the Final HCP/NCCP and will reduce the acreage subject to the Development Fee by the acreage of the subject property that was identified in the Final HCP/NCCP as urban, turf, landfill or aqueduct land cover.

² The Conservancy Governing Board adopted a periodic fee audit, as required by the HCP/NCCP, on June 27, 2013. The fee schedule above is based on the periodic fee audit, as adopted on June 27, 2013 and subject to the annual automatic fee adjustment. Development fees are adjusted annually according to a formula that includes both a Home Price Index (HPI) and a Consumer Price Index (CPI). The Wetland Mitigation Fees are adjusted according to a CPI.

³ "Fee Zone 4" is not shown on Figure 9-1 of the HCP/NCCP but refers to the fee applicable to those few covered activities located in northeastern Antioch (p. 9-21).

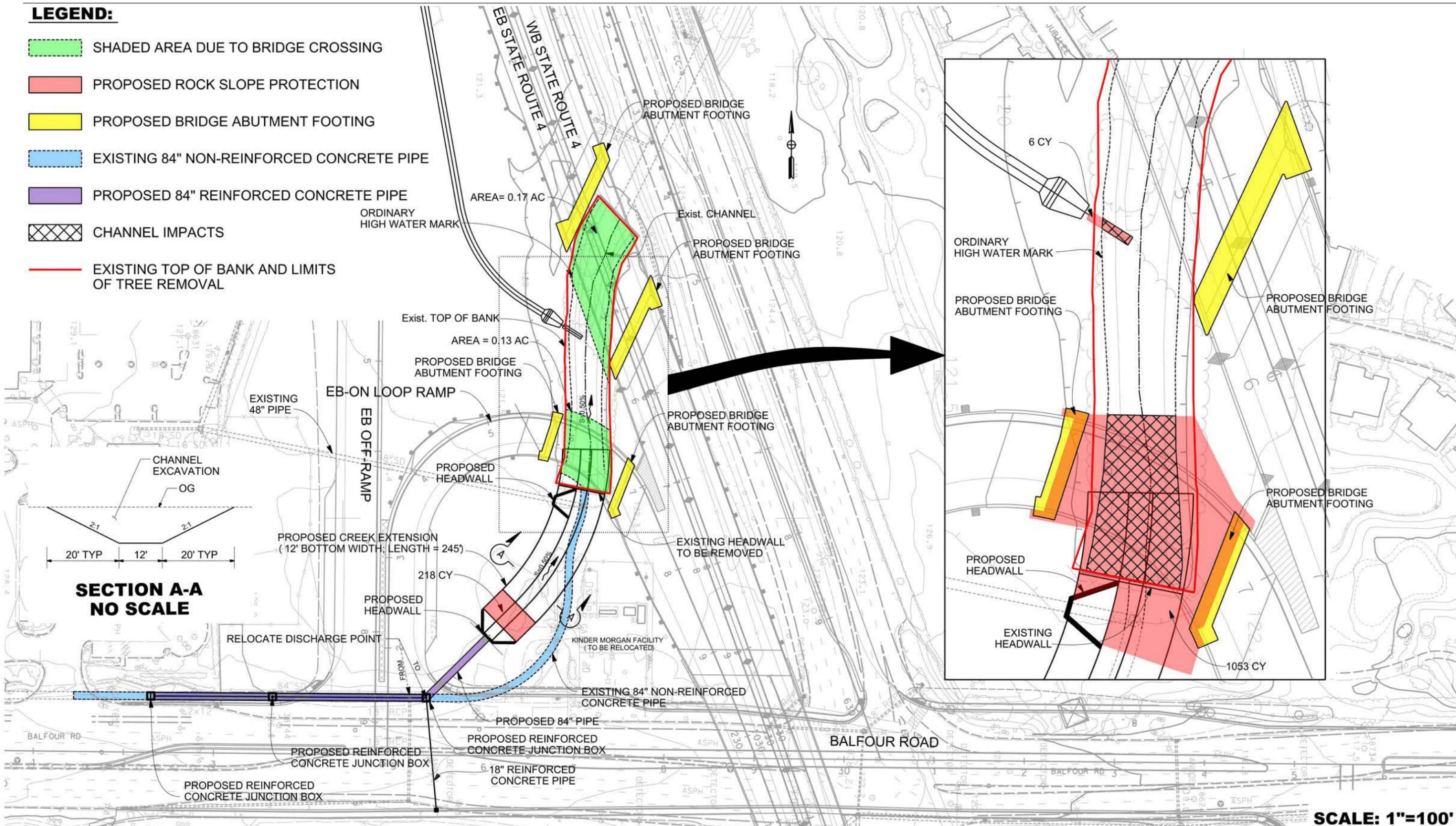
⁴ Fee reductions must be reviewed and approved by the Conservancy.

⁵ Conservancy requires PSEs to pay fees over and above permanent and temporary impact mitigation fees to cover indirect costs of extending permit coverage, including a portion of the costs of the initial preparation of the Plan, and a portion of the costs of conservation actions designed to contribute to species recovery. This amount will be determined by the Conservancy, in accordance with the implementation policy adopted by the Conservancy Governing Board.

FIGURES

LEGEND:

- SHADED AREA DUE TO BRIDGE CROSSING
- PROPOSED ROCK SLOPE PROTECTION
- PROPOSED BRIDGE ABUTMENT FOOTING
- EXISTING 84" NON-REINFORCED CONCRETE PIPE
- PROPOSED 84" REINFORCED CONCRETE PIPE
- CHANNEL IMPACTS
- EXISTING TOP OF BANK AND LIMITS OF TREE REMOVAL



**SECTION A-A
NO SCALE**

SCALE: 1"=100'

Proposed Deer Creek Extension

Figure

2b



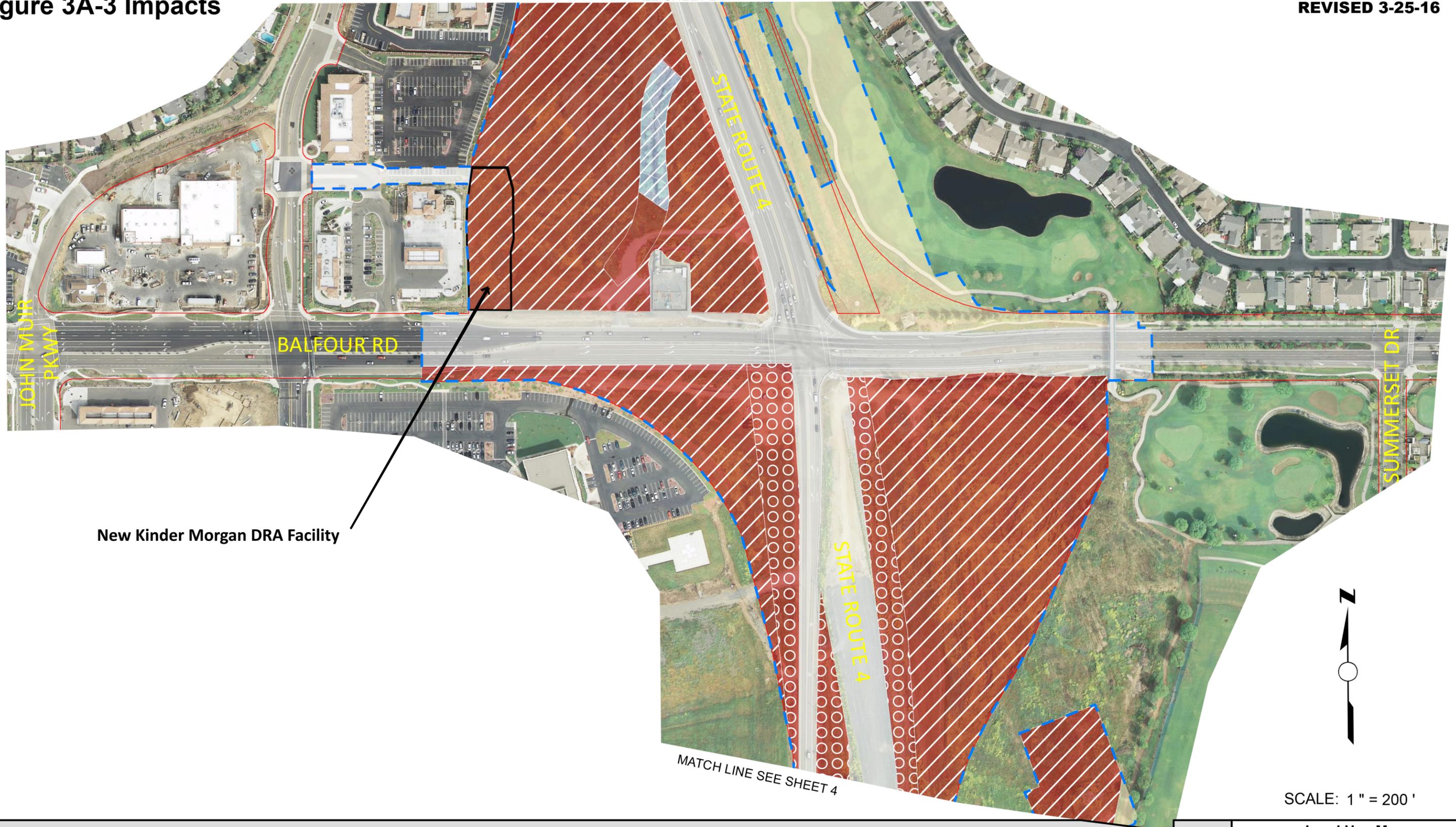
Tree Canopy Area Impacted = 0.42 Acres

Permanent Impacts to Riparian Tree Canopy

Figure **2d**

Figure 3A-3 Impacts

MATCH LINE SEE SHEET 2



New Kinder Morgan DRA Facility

MATCH LINE SEE SHEET 4



SCALE: 1" = 200'

Legend:

	Project Area		Impacts Mitigated under SR4 Bypass Segment 3, Phase 1	2.68 ac
	Right of Way		New Permanent Impacts	17.18 ac

	turf	Impact Acreage:	Urban	9.17 ac
	urban		Turf	3.89 ac
	riparian		Previously Covered Ruderal	2.68 ac
	ruderal		New Impacts Ruderal	16.86 ac
			New Impacts Riparian	0.42 ac

Land Use Map
Balfour Road / Route 4 Bypass Interchange Improvements

Map Created 11/17/2014 by
Contra Costa County Department
of Conservation and Development
GIS Group





Kinder Morgan Pump Station System Relocation Component

Figure 3

Source: Quincy Engineering, 2015

ATTACHMENTS

Table 5 - LAND COVER IMPACT ANALYSIS

CCTA SR4/Balfour Project	
Covered Seg 2	11.64
Covered Seg 3	11.37
Total Previously Covered Ruderal	23.01
Impacted riparian	0.42
Impacted ruderal	29.16
Total New Impact	29.58
Existing urban	23.87
Existing turf	5.33
Total Previously Existing Urban Types	29.2
New Riparian to be restored from Ruderal	0.25
Total Project Area	82.04

Landcover	Impact	Total	Figures			
			3A-1	3A-2	3A-3	3A-4
riparian	Impacted Wetland	0.42			0.42	
ruderal	Daylight	0.25			0.25	
ruderal	New	29.16		10.63	16.86	1.67
ruderal	Covered Seg 2	11.64	10.55	1.09		
ruderal	Covered Seg 3	11.37			2.68	8.69
turf	Urban	5.33		1.43	3.89	0.01
urban	Urban	23.87	2.75	4.23	9.17	7.72
		82.04				

REVISED 4-15-16

ADDENDUM TO THE ENVIRONMENTAL IMPACT REPORT FOR THE STATE ROUTE 4 BYPASS PROJECT

ADDENDUM #12: SPECIFIC TO KINDER MORGAN PUMP STATION RELOCATION – BALFOUR ROAD INTERCHANGE, PHASE 1

Prepared By:

**Circlepoint
1814 Franklin Street
Oakland, CA 94612**

Prepared For:

**State Route 4 Bypass Authority
255 Glacier Drive
Martinez, CA 94553**

June 2015

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 - 3.2 Air Quality and Climate Change..... 6*
 - 3.3 biological Resources..... 8*
 - 3.4 Cultural Resources 12*
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 - 3.6 Noise 15*
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 - 3.8 Visual Resources 16*
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Figures

Figure 1: Project Site and Vicinity

Figure 2: Overview of Proposed Project Improvements (Addendum #12)

Figure 3: Kinder Morgan Pump Station System Relocation Component

Appendices

Appendix A: Mitigation Monitoring and Reporting Program

Appendix B: Agency Permits

1 Introduction

1.1 REASONS FOR THIS ADDENDUM

This document is an Addendum to the Final Environmental Impact Report (FEIR) certified in December 1994 for the State Route 4 (SR-4) Bypass Project (Project) located in the cities of Antioch and Brentwood and unincorporated areas of eastern Contra Costa County. The SR-4 Bypass Project is a three-segment, 12.4-mile combination freeway/expressway/conventional highway which is being constructed in phases.

In 2014, the State Route 4 Bypass Authority (Bypass Authority) prepared Addendum #11 to the FEIR, which evaluated the detailed design elements of an interchange at the Balfour Road location. **Figure 1** shows the general location of the SR-4/Balfour Road Interchange Improvements Project. Addendum #11 provided the analysis necessary under the California Environmental Quality Act (CEQA) to determine if the proposed design of the Balfour Road interchange would result in any potential impacts that were not analyzed in the original 1994 FEIR. Design changes were limited to Phase 1 of the Project and included revised ramp alignments, revised alignment of the existing SR-4 travel lanes approaching the Balfour Road interchange, two clear-spanning bridge structures to avoid work within Deer Creek, two additional retaining walls to avoid right-of-way acquisition from the adjacent properties in the vicinity of the Project area, and relocation components necessary to remove a Kinder Morgan Energy Partners (Kinder Morgan) oil pipeline pump station from within the interchange area. The Bypass Authority approved Addendum #11 to the FEIR in November 2014. **Figure 2** illustrates the SR-4/Balfour Road interchange configuration evaluated in Addendum #11.

Since November 2014 and the approval of Addendum #11, project changes have occurred related to the relocation components required for removal of the Kinder Morgan Brentwood Pump Station in the vicinity of the Project area. To maintain the functional operations of the Brentwood Pump Station, two Kinder Morgan system relocation components were evaluated in Addendum #11.

The first system relocation component would occur at an existing Concord Pump Station, located at Arnold Industrial Way and Solano Way in Concord, California (approximately 20 miles northwest from the Project area). Terminal and substation transformers at the Concord Pump Station would be replaced to allow for increased pumping capacity. No physical expansion of the Concord Pump Station would be needed. There is no change to this relocation component.

The second system relocation component proposed was the installation of a Drag Reducing Additive (DRA) Station at an existing Kinder Morgan oil pipeline access point between Brentwood Boulevard and Sellers Avenue, along an East Contra Costa Irrigation District (ECCID) canal. This previously proposed system relocation component is no longer included in the Project. Instead, the DRA Station, including a pipeline loop and access road, will be installed on a New Parcel approximately 400 feet to the west of the existing Kinder Morgan oil pipeline pump station. This Addendum # 12 evaluates this change in location of the installation of the DRA Station. To provide access to the DRA Station, pipeline loop and ancillary appurtenances, an asphalt concrete access road, varying from 20 to 40 feet in width, would be constructed through the New Parcel. The access road would begin from westbound Balfour Road, just west of the proposed eastbound SR4/Balfour Road interchange diagonal off-ramp. The access road would travel north through the

New Parcel, parallel to the existing state right-of-way. To connect with Cortona Way, the access road would then continue west on the New Parcel, then across the northern portion of the Balfour Properties LLC parcel (2371 Balfour Road, APN 019-150-095) and the southern portion of the Meridian Balfour, et al parcel (100 Cortona Way, APN 019-900-016), until it reaches the Common Area Driveway for the various properties (McDonalds, Balfour Properties LLC (Chevron), and Meridian Balfour, et al (Meridian Professional Center)). **Figure 3** depicts the project changes evaluated in this report. A portion of the Balfour Properties LLC parcel (fee title) and a portion of the Meridian Balfour, et al parcel (fee title and access easement) will be acquired for the portion of the access road west of the New Parcel. In addition, Temporary Construction Easements (TCE) will need to be obtained from both Balfour Properties LLC and Meridian Balfour parcels. The New Parcel will have two points of access, but the access from Balfour Road will be right-in only, due to the proximity of the New Parcel to the future Balfour Road interchange off-ramp.

Since November 2014 and the approval of Addendum #11, minor changes have also occurred to the utility relocation plan along Balfour Road for the joint trench. In order to accomplish the joint trench utility relocation work, utilities will temporarily be placed above ground on poles to allow for the construction of the joint utility trench. The temporary aerial placement of utilities will be on poles along the south side of Balfour Road. A majority of the temporary aerial pole line can be placed within the existing public right of way. However, to place the aerial pole line along the frontage of the John Muir Hospital requires a TCE on land adjacent and parallel to the existing public right of way, which is currently used for urban landscaping. This temporary aerial pole line and associated TCE was not previously considered in Addendum #11.

The analysis completed in Addendum #11 related to the SR-4/Balfour Road interchange improvements and the removal of the Brentwood Pump Station have not been modified, and are not discussed further in this report.

1.2 CEQA BASIC FOR THIS ADDENDUM

This Addendum was prepared in conformance with CEQA and CEQA Guidelines §15164. State CEQA Guidelines §15164(a) requires that the lead agency or responsible agency prepare an Addendum to a previously certified EIR “if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred”. An Addendum need not be circulated for public review per CEQA Guidelines §15164(c) but can be included or attached to the FEIR or adopted negative declaration.

As analyzed in Section 3 of this document, the new Kinder Morgan improvements and aerial utility pole line, with 4 poles placed within the TCE, would not result in any new significant environmental effects or substantial increases in the severity of previously identified significant impacts. Consequently, major revisions to the previous FEIR are not required, and none of the conditions listed in §15162(a) have occurred. Therefore, the appropriate level of analysis for the proposed Project revision is an Addendum to the FEIR. This conclusion is based on the analysis provided in this document and information in the FEIR.

1.3 INTENDED USES OF THIS ADDENDUM

An Addendum to an FEIR is an informational document used in the planning and decision-making process. The intent of this Addendum to the FEIR is to provide the Bypass Authority with

additional information regarding the Project's potential environmental impacts that was not available at the time of the certification of the FEIR.

2 Project Description

This section provides a description of the Project evaluated in the FEIR and the modifications proposed by the Bypass Authority.

2.1 PURPOSE AND NEED

The primary purpose of the SR-4 Bypass Project, as described in the FEIR, is to "improve regional circulation through eastern Contra Costa County and provide a more balanced distribution of current and future traffic over the local road network in this area".

2.2 PREVIOUS ENVIRONMENTAL ANALYSIS PROCESS

The Bypass Authority has served as the CEQA lead agency for the SR-4 Bypass Project. In October 1993, the Bypass Authority released for public review the SR-4 Bypass Project draft EIR. A 60-day public review period began on November 2, 1993, and closed on January 3, 1994. A Final EIR was prepared in November 1994 and included responses to comments received on the draft EIR. On November 21 and December 8, 1994, the Bypass Authority held public hearings on the Bypass Project and supporting environmental documents. The Bypass Authority approved the Bypass Project and certified the FEIR on December 13, 1994. Since that time ten Addenda and one supplemental EIR have been prepared and adopted by the Bypass Authority, as discussed below.

- December 13, 1994 - An Addendum was prepared to address a proposed modification to the connection from Marsh Creek Road to existing SR-4.
- November, 1997 - A second Addendum was prepared to consider the effects of a variety of long-range area planning projects on the preferred alternative alignment for Segment 3. This Addendum was certified by the Authority in November 1997.
- December, 1998 - A third Addendum was prepared to address the modified construction phasing plan which involved construction of Segment 2 as a first phase.
- January, 2003 - A fourth Addendum was prepared to address modifications to the Lone Tree Way Interchange.
- November, 2003 - A fifth Addendum was prepared to address modifications to Segment 1 of the Bypass.
- October 2004 - A Supplemental EIR was prepared to evaluate proposed refinements to the alignment of Segment 3.
- May 2006 - A sixth Addendum was prepared to evaluate proposed relocations of an existing Chevron pipeline.
- November 2007 - A seventh Addendum was prepared to evaluate the Sand Creek Road Interchange.

- April 2009 – An eighth Addendum was prepared to evaluate the Mokelumne Trail Bicycle/Pedestrian Overcrossing.
- June 2011 – A ninth Addendum was prepared to evaluate the SR-4/SR-160 Freeway Connector
- August 2011 – A tenth Addendum was prepared to evaluate construction of an interchange at Balfour Road consisting of two phases (Phase 1 and Phase 2).
- November 2014 – An 11th Addendum was prepared to evaluate design modifications to Phase 1 of the Project.

The four-volume 1993 draft EIR for the SR-4 Bypass Project, together with the 1994 FEIR volume, the eleven Addenda, and the Supplemental EIR now comprise the approved EIR and environmental record for the SR-4 Bypass Project. Once completed, this Addendum will be added to the environmental record.

2.3 PROJECT DESCRIPTION MODIFICATIONS

As previously described in Addendum #11, as part of Phase 1 of the SR-4/Balfour Road interchange, a new eastbound SR-4 off-ramp and on-ramp would be constructed in the northwest quadrant of the SR-4/Balfour Road intersection. Construction of these ramps makes it necessary for Kinder Morgan to remove an existing oil pipeline pump station (the Brentwood Booster Station) at this location. The 1994 FEIR contemplated the potential relocation of utilities as part of construction of the SR-4 Bypass Project and required coordination with public utilities and/or private operators during construction to allow for relocation, as needed, without disruption to existing service.

Addendum #11 evaluated two Kinder Morgan relocation components. The first relocation component is still proposed and would occur at an existing Concord Pump Station, located at Arnold Industrial Way and Solano Way in Concord, California (approximately 20 miles northwest from the Project area). Terminal and substation transformers at the Concord Pump Station would be replaced to allow for increased pumping capacity. No physical expansion of the Concord Pump Station would be needed. The second relocation component included the installation of a Drag Reducing Additive (DRA) Station at an existing oil pipeline access point between Brentwood Boulevard and Sellers Avenue (approximately 2.8 miles southeast from the Project area), along an East Contra Costa Irrigation District (ECCID) canal easement. Since Addendum #11 was completed, additional evaluation and coordination with the ECCID has occurred, which determined that use of the ECCID access point to install the DRA Station was not feasible.

Construction of new Kinder Morgan improvements, including the DRA Station, a pipeline loop and access road, is now proposed in the northwest quadrant of the interchange (see **Figure 3**). A DRA would be injected approximately once per week into the new oil pipeline access point replacing similar DRA injections at the current Brentwood Booster Station that would be demolished. An asphalt concrete access road, varying between 20 and 40 feet in width, would be constructed through the New Parcel to support delivery of the DRA. The access road would begin from westbound Balfour Road, just west of the proposed eastbound SR4/Balfour Road interchange diagonal off-ramp. The access road would travel north through the New Parcel, parallel to the existing state right-of-way. To connect with Cortona Way, the access road would then continue west on the New Parcel, then across the northern portion of the Balfour Properties LLC parcel

(2371 Balfour Road, APN 019-150-095) and the southern portion of the Meridian Balfour, et al parcel (100 Cortona Way, APN 019-900-016), until it reaches the Common Area Driveway for the various properties (McDonalds, Balfour Properties LLC (Chevron), and Meridian Balfour, et al (Meridian Professional Center)). A portion of the Balfour Properties LLC parcel (fee title) and a portion of the Meridian Balfour, et al parcel (fee title and access easement) will be acquired for the portion of the access road west of the New Parcel. In addition, TCEs will need to be obtained from both Balfour Properties LLC and Meridian Balfour parcels. The New Parcel will have two points of access, but the access from Balfour Road will be right-in only, due to the proximity of the New Parcel to the future Balfour Road interchange off-ramp. Construction of the access road would require up to two feet of excavation throughout the area, including conforms to paved roadways at each end. Existing ornamental vegetation and trees in the landscaped area would be removed to accommodate the new access routes.

The New Parcel and the property acquired from the Balfour Properties LLC parcel and the Meridian Balfour, et al parcels will serve as substitute property in order to facilitate the relocation of the Kinder Morgan DRA Station and removal of the existing Kinder Morgan Brentwood Pump Station in the vicinity of the Project area. The substitute property will be acquired and exchanged for the Kinder Morgan property located within the project area, on which the existing Kinder Morgan Brentwood Pump Station is situated.

In addition, utilities to be relocated within an underground joint trench along the south side of Balfour Road will temporarily be placed above ground to allow for construction of the joint utility trench. The temporary aerial placement of utilities will be on poles along the south side of Balfour Road. A majority of the temporary aerial pole line can be placed within the existing public right of way. However, to place the temporary aerial pole line along the frontage of the John Muir Medical Center requires a TCE of land adjacent and parallel to the existing public right of way. The TCE area will be limited to the existing landscape easement area owned and maintained by the City of Brentwood; however, the underlying fee title is owned by John Muir Hospital (2400 Balfour Road, APN 010-840-019). The temporary aerial pole line will be in place until the joint trench becomes operational, at which time the temporary aerial pole line will be removed.

3 Impact Analysis

3.1 SUMMARY OF PROJECT IMPACTS ADDRESSED IN THE FEIR

The environmental impacts associated with the removal of the Kinder Morgan Brentwood Pump Station were evaluated in Addendum #11 and found to be comparable, if not the same, as the impacts of the SR-4 Bypass Project evaluated in the 1994 FEIR. The only design change from Addendum #11 is the location of the Kinder Morgan improvements, including the DRA Station, a pipeline loop and access road, as well as the new temporary aerial pole line along the south side of Balfour Road, including a TCE on the John Muir Medical Center to facilitate construction of the Balfour Road joint utility trench. The level of significance of impacts resulting from these modifications would not result in any new impacts that were not previously disclosed, nor has the environmental baseline in the Project area changed since the 1994 FEIR, such that new impacts would be created. This addendum evaluates potential environmental impacts resulting only from the new Kinder Morgan improvements and the temporary aerial pole line along the south side of Balfour Road, in comparison to what was evaluated in the 1994 FEIR.

The following environmental categories were specifically examined in the context of the modifications to the design discussed above:

- Air Quality and Climate Change
- Biological Resources
- Cultural Resources
- Hazardous Materials
- Noise
- Traffic
- Visual Resources

For these categories, additional analysis has been conducted and the results are discussed below. All other environmental categories examined in the FEIR have been assessed and found not to have any material change from what has already been presented in the FEIR. All mitigation measures adopted in the 1994 FEIR and 2014 Addendum #11 continue to remain in effect and are incorporated by reference in this Addendum.

3.2 AIR QUALITY AND CLIMATE CHANGE

3.2.1 PRIOR FEIR ANALYSIS

As discussed in Section G of the 1994 FEIR, federal air quality regulations classified the Bay Area as a non-attainment zone for ozone and carbon monoxide, while state regulations classified the Bay Area as non-attainment for ozone, carbon monoxide, and particulate matter (PM) smaller than 10 microns in size.

The FEIR identified significant unavoidable adverse effects resulting from the SR-4 Bypass Project. Construction of the SR-4 Bypass Project would result in increased emissions that would exceed Bay Area Air Quality Management District (BAAQMD) criteria. Construction activities would

temporarily generate substantial amounts of criteria air pollutants including nitrous oxide and PM smaller than 10 microns in size. Over the long term, the SR-4 Bypass Project would hinder regional efforts to attain transportation performance standards set forth in the California Clean Air Act (CCCA), such as decreasing vehicles miles traveled, increasing ridership per vehicle, and achieving no net increase in vehicle emissions.

Mitigation measures to reduce construction period and long term effects of the SR-4 Bypass Project are discussed in the FEIR. Such measures include dust abatement programs during the construction phase, developing high occupancy vehicle (HOV) lanes, and encouraging mixed-use development. However, the FEIR concluded that impacts related to the formation of ozone in the wider region, and attaining the transportation standards described above would remain significant.

3.2.2 UPDATED ANALYSIS

The proposed new Kinder Morgan DRA Station improvements, including a pipeline loop and access road, would require minor excavation (up to two feet) along the length of the proposed roadway in order to construct an asphalt concrete access road. Approximately once per week, a truck would enter from westbound Balfour Road, and continue the length of the new roadway to inject DRA into the Kinder Morgan pipeline. None of these activities would result in significant contributions to construction or operational emissions associated with the Project. As such, these minor Project changes would not create any impacts more severe than those described in the 1994 FEIR, and no additional mitigation measures would be required.

The placement of the temporary aerial pole line along the south side of Balfour Road to facilitate the construction of the Balfour Road joint utility trench would have no effect on air quality.

3.2.3 POTENTIAL IMPACTS NOT PREVIOUSLY ADDRESSED

The effects of the SR-4 Bypass Project on greenhouse gases (GHG) emissions and climate change were not discussed in the 1994 FEIR. Since that time GHG emissions and climate change have been added as a CEQA topic that needs to be analyzed as part of the Project's environmental clearance. Addendum #11 evaluated Existing (2013), design year (2020), and horizon year (2040) CO₂ emissions were estimated under Project and no-project conditions using the latest CT-EMFAC version 5 model based on EMFAC2011 for vehicles in Contra Costa County.¹ The analysis conducted in 2014 found that the Project impacts related to GHG emissions would be less than significant.

Construction and operation of the new Kinder Morgan DRA Station improvements, including a pipeline loop and access road, would not generate vehicle traffic that would affect the previous GHG impact conclusions. Therefore, impacts related to GHG emissions would continue to be less than significant.

The placement of the temporary aerial pole line along the south side to facilitate the construction of the Balfour Road joint utility trench would have no effect on GHG emissions.

¹ The CT-EMFAC version 5 model only projects the emission rates up to the 2035 year. These 2035 emission rates were used to calculate the 2040 emissions.

3.3 BIOLOGICAL RESOURCES

3.3.1 PRIOR FEIR ANALYSIS

The 1994 FEIR identified possible effects of the SR-4 Bypass Project on habitats, wetlands, and species of concern, and the potential for direct effects on these species relative to harm or harassment resulting from construction activities. The FEIR included 14 significant, unavoidable effects to biological resources that would potentially occur despite implementation of the proposed mitigation measures.

Construction of the SR-4 Bypass Project was found to adversely impact riparian corridors, such as Deer Creek, which runs through the SR-4/Balfour Road interchange area. The potential loss or degradation of the riparian habitats would be significant because of their local and regional scarcity, possible classification as Waters of the U.S., continuing depletion, and increased threats to dependent species of concern. Following the certification of the FEIR in 1994, a Biological Opinion (BO) was issued by the USFWS for construction of a 2-lane expressway through the Segment 2 limits.

A Wetland Delineation was prepared in 1998 for the entire SR-4 Bypass Project area, and was verified by the U.S. Army Corps of Engineers (USACE) in 1999. The wetland delineation verification was valid for a period of five years, and expired on April 27, 2004. Re-verification of the wetland delineation is currently underway for the areas encompassing the SR-4/Balfour Road interchange. Deer Creek is the only waterway within the Project area.

No new plants or wildlife have been recorded in the Project area since the 1999 study. However, one species, the California tiger salamander, was upgraded to a federal listing of threatened in 2004.

The HCP/NCCP for East Contra Costa County was developed in consultation with the USFWS and adopted in July 2007. The HCP/NCCP establishes a coordinated process for permitting and mitigating the incidental take of endangered species identified in the plan. This process creates an alternative to the current project-by-project approach. Rather than individually surveying, negotiating, and securing mitigation and permit coverage, project proponents typically receive an endangered species permit by paying a fee/dedicating land and performing limited surveys and avoidance measures. A Supplemental EIR prepared in 2004 for Segment 3 of the SR-4 Bypass Project included revisions to the MMRP to reflect the HCP/NCCP's new mitigation language for biological resources. Further refinements to the MMRP were made as part of this addendum in order to accurately reflect the HCP/NCCP process, which does not require individual consultation with federal agencies and the issuance of a BO. The refined MMRP is included as **Appendix A**.

A biological assessment was conducted by RCL Ecology in 2011 as a part of the Addendum #10 efforts of the SR-4/Balfour Road Interchange Project. Since that time, additional botanical and general biological surveys were conducted in April and September 2013, and June 2014 to evaluate existing biological conditions in the interchange area. The assessment conducted in 2011 for Addendum #10, in combination with the updated surveys in 2013 and 2014, are being used to support an application for participation in the HCP/NCCP in order to receive an "Incidental Take" permit for federal and state listed species.

Permit coverage under the East Contra Costa County Habitat Conservancy HCP/NCCP was granted for the SR-4/Balfour Road interchange improvements in February 2015. The assessment and

surveys also address biological resources as required by the California Environmental Quality Act (CEQA), and assisted in obtaining permits from other agencies such as the U.S. Army Corps of Engineers (USACE), California Department of Fish Game (CDFG), and the Regional Water Quality Control Board (RWQCB). The final, approved permits from the agencies (HCP/NCCP, USACE, CDFG, and RWQCB) are included as **Appendix B**.

3.3.2 UPDATED ANALYSIS

The proposed Kinder Morgan improvements, including the DRA Station, a pipeline loop and access road, is located approximately 400 feet west of the existing Kinder Morgan pump station, in the northwest quadrant of the SR-4/Balfour Road intersection. The Kinder Morgan DRA Station improvements are proposed to be constructed within the area previously evaluated and permitted in Addendum #11, with the exception of the small connection to Cortona Way that travels through the landscaped area and parking lot at the property line between the Chevron property and the Meridian Professional Center. This project area extension (i.e., landscaped land cover and parking lot) is considered “urban”. The placement of the temporary aerial pole line along the south side of Balfour Road to facilitate the construction of the Balfour Road joint utility trench would also occur in an “urban” landscaped area associated with the John Muir Medical Center. These new construction areas do not present any new biological impacts or compensatory fees not previously included in the current HCP/NCCP.

The previously conducted biological surveys confirmed that potential breeding habitat exists within the Project area for the western burrowing owl (*Athene cunicularia hypugaea*), San Joaquin kit fox (*Vulpes macrotis mutica*), California red-legged frog (*Rana Draytonii*), California tiger salamander (*Ambystoma californiense*), and the white-tailed kite (*Elanus leucurus*). Potential habitat also occurs for other protected species such as the pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus blossevillii*) and state protected birds like the Swainson’s hawk (*Buteo swainsoni*) and golden eagle (*Aquila chrysaetos*).

To address potential biological impacts related to the Kinder Morgan improvements and the new temporary aerial pole line along the south side of Balfour Road, standard conservation measures included in the HCP/NCCP and the 1994 FEIR will be required. The required mitigation for any incidental take of endangered species is formalized in the HCP/NCCP, included within **Appendix B**.

Wetlands and Water Features

The new Kinder Morgan DRA Station improvements, including a pipeline loop and access road, would be located approximately 400 feet west of the daylighted portion of Deer Creek. The new joint trench TCE on Balfour Road would be located approximately 450 feet from the creek. No new direct impacts to Deer Creek would occur as a result of these design changes.

Construction would involve limited earth moving activities and the loading, unloading, and transport of excavated and fill material. Rainfall could carry loose soils into adjacent waterways, resulting in increased sedimentation and adverse effects to water quality. Concentrated flow due to grading in some areas will increase the potential for erosion and for sediment transport into the adjacent areas. Construction equipment debris and fuel could also further degrade the quality of storm water runoff if fueling activity and maintenance products are not handled properly. This contamination could impact nearby waterways, including Deer Creek.

Operation of the new Kinder Morgan DRA Station access road would result in a small net increase the amount of impervious paved surfaces in the immediate area. This additional impervious area could prevent runoff from naturally dispersing and infiltrating into the ground, resulting in increased concentrated flow. The additional flow has the potential to transport an increased amount of sediment and pollutants to waterways and water resources, adversely impacting the water quality of Deer Creek. However, the minor increase in stormwater would be accommodated within the existing storm drain system in the area. Temporary and permanent Best Management Practices (BMPs) would be implemented in accordance with the state RWQCB 401 – (Water Quality Certification), Caltrans’ National Pollutant Discharge Elimination System (NPDES) permit, and the Storm Water Management Plan (SWMP) to prevent adverse effects to water quality during construction and operation. No additional BMPs would be required as a result of this design change.

The placement of the temporary aerial pole line along the south side of Balfour Road to facilitate construction of the Balfour Road joint utility trench would have no effect on water quality.

San Joaquin Kit Fox

The San Joaquin kit fox is a federally endangered and state listed threatened species. The San Joaquin kit fox is endemic to California and has known range in Alameda and Contra Costa counties. It is extremely rare and sparsely distributed due to habitat loss and the constriction of dispersal corridors. Dens are generally located in open areas with grass or grass and scattered brush. San Joaquin kit foxes maintain multiple dens and den use varies for breeding dispersal and temporary shelter.

Although ground squirrel burrows occur within the Project area for the Balfour Road interchange, none appear to be of suitable size (e.g. 5-inches in diameter or greater) to serve as kit fox dens. However, to ensure that the Project will not affect the species, a kit fox preconstruction survey will be required prior to any ground disturbance related to the construction of the new Kinder Morgan pipeline access road, in accordance with the HCP/NCCP permit issued for the project (see **Appendix B**).

California Red-legged Frog (CRLF) and California Tiger Salamander (CTS)

The California red-legged frog (CRLF) is a federally threatened species and a California species of special concern. The California tiger salamander (CTS) is a federally and State listed threatened species. The existing daylighted section of Deer Creek within the interchange area may serve as a breeding site for both CRLF and CTS and adjacent areas are potential aestivation habitats. The Kinder Morgan improvements and the placement of the temporary aerial pole along the south side of Balfour Road would be located more than 400 feet from the daylighted portion of Deer Creek. No new direct impacts to the creek and CRLF or CTS habitat would occur as a result of these design changes.

Western Burrowing Owl

Western Burrowing owl is designated as California Species of Special Concern. The Western Burrowing owl prefers open, flat, or sloped grasslands and requires burrows for nesting and wintering habitat, but will also nest in artificial structures such as open pipes, concrete rubble piles, and small, dry culverts.

While only one burrowing owl was seen during the planning surveys, they have been routinely observed in the northwest quadrant of the Project area near the Kinder Morgan facility during previous studies of the area (RCL Ecology, 2011). In March 2015, a pre-construction survey for PG&E joint trench and tower relocation was conducted in this area and found two burrowing owls near the Kinder Morgan facility. Therefore, passive eviction techniques will be used to clear the area of owls before the start of the nesting season (February 1) so that the Project will have no effect on the western burrowing owl. All preconstruction survey requirements and avoidance measures identified for the burrowing owl in the HCP/NCCP would apply to the construction of the new Kinder Morgan improvements, including the DRA Station, a pipeline loop and access road; as well as the placement of the temporary aerial pole line along the south side of Balfour Road to facilitate the construction of the Balfour Road joint utility trench. No additional avoidance or minimization measures would be required as a result of this design change.

White-Tailed Kite

The white-tailed kite is classified as Fully Protected by the state. White-tailed kites breed in lowland grasslands, agriculture, wetlands, oak-woodland and savannah habitats, and riparian areas associated with open areas. Fremont cottonwoods within the daylighted portion of Deer Creek are large enough to furnish nesting habitat for the white-tailed kite. Therefore, preconstruction nest surveys will be conducted for the white-tailed kite if construction is planned to occur within the nesting season (February 1-August 31). All preconstruction survey requirements and avoidance measures identified in the HCP/NCCP for the white-tailed kite would apply to the construction of the new Kinder Morgan pipeline access road and the placement of the temporary aerial pole line along the south side of Balfour Road, specifically within the areas that would be removing landscaped trees. No additional avoidance or minimization measures would be required as a result of this design change.

Pallid and Western Red Bat

The pallid and western red bats are listed as CDFW Special Concern species. The pallid bat prefers to roost in buildings, caves and other structures not present in the Project area but may forage in the habitat adjacent to the SR-4/Balfour Road intersection. The red bat is a riparian obligate and may roost and forage along the daylighted section of Deer Creek. The new Kinder Morgan improvements, including the DRA Station, a pipeline loop and access road and the placement of the temporary aerial pole along the south side of Balfour Road, would be located more than 400 feet from the daylighted portion of Deer Creek. No new direct impacts to the creek and bat roosting habitat would occur as a result of these design changes.

State Protected Birds

Several birds with potential to occur in the Project area are listed on the state watch list, or are of state special concern. These include birds of prey, the merlin, Cooper's hawk, Swainson's hawk, golden eagle, and loggerhead shrike; as well as a songbird – the California horned lark. All preconstruction survey requirements and avoidance measures identified in the HCP/NCCP for the state protected birds would apply to the construction of the new Kinder Morgan improvements and the placement of the temporary aerial pole along the south side of Balfour Road, specifically within the areas that would be removing landscaped trees. No additional avoidance or minimization measures would be required as a result of this design change.

General Avoidance and Minimization Measures

In addition to the standard HCP/NCCP conservation measures outlined above, the following general measures identified in the 2014 Addendum #11 would also apply to the construction of the new Kinder Morgan improvements and the placement of the temporary aerial pole along the south side of Balfour Road. No additional avoidance or minimization measures would be required as a result of this design change.

- Prior to the start of construction, ESA fence will be installed by the contractor as shown on the plans to protect portions of Deer Creek during construction activity. A biological monitor will inspect the fence to ensure correct depth and placement and monitor the fencing to ensure that it remains during construction activity.
- The biological monitor will conduct Worker Environmental Awareness Training for all construction crews and contractors. The education training should be conducted prior to starting work on the Project and upon the arrival of any new workers. The training should include a review of sensitive areas and avoidance and minimization measures to be employed to protect the covered and no take species. A record of all personnel trained during the Project should be maintained for compliance verification.
- Staging areas and access routes through the Project will be reviewed by the biological monitor to ensure that they do not impact any sensitive areas.

3.4 CULTURAL RESOURCES

3.4.1 PRIOR FEIR ANALYSIS

The 1994 FEIR analyzed the potential of the SR-4 Bypass Project to disrupt or adversely affect a prehistoric or historic archaeological site or property of historic or cultural significance. Cultural resources study for the SR-4 Bypass Project consisted of a detailed review of the previously completed archival literature review of the SR-4 Bypass Project right-of-way and an onsite surface archaeological reconnaissance. The supporting cultural reports for the 1994 FEIR did not identify cultural resources in the vicinity of the SR-4 Bypass Project area; however, only the 1992 SR-4 alignment north of Balfour Road was surveyed. South of Balfour Road, the proposed SR-4 alignment was inaccessible at the time of the survey. Because of differences between the 1992 SR-4 and the current SR-4 alignment, the majority of the SR-4 Bypass Project area was not surveyed in 1992.

Although no archaeological or subsurface cultural resources of significance or potential significance were observed along the segments of the SR-4 Bypass Project accessible to field surveys conducted for the 1994 FEIR, the document determined that impacts to undiscovered prehistoric resources could occur through implementation of the SR-4 Bypass Project. Mitigation measures to reduce construction period and long term effects of the SR-4 Bypass Project are discussed in the FEIR. Such measures include archaeological monitoring, suspending work in the event archaeological resources are discovered, development of an excavation plan, and the preparation of an historic property and architectural survey reports should any of the adjacent structures qualify for protection under the National Register of Historic Places and be altered, relocated, or demolished by construction of the SR-4 Bypass Project. However, the FEIR concluded that any impacts related to potential historic resources adjacent to the SR-4 Bypass Project would remain significant.

An Archaeological Survey and Cultural Resources Assessment were conducted for the SR4/Balfour Road interchange area by William Self Associates in 2014. A field survey of the area was conducted, which covered those areas not previously covered as a part of the 1994 FEIR. Pedestrian surveys of the area were conducted on September 4 and 5, 2014. During the course of the surveys, no cultural materials were observed. A search of the California Historic Resources Information System (CHRIS) records for the area was conducted, and indicates that no prehistoric cultural resources have been recorded within 1-mile of the SR-4/Balfour Road interchange area.² Thus the likelihood of encountering sensitive cultural resources in the SR-4/Balfour Road interchange area is low.

One historic cultural resource is reported by the Northwest Information Center (NWIC) within the study area, a mine adit (entrance) associated with the Brentwood Coal Company. However, detailed mapping of the location of this resource revealed that it is actually outside of the study area. No NRHP-listed or other local, state, or federally listed or recognized properties are known to exist in the study area. Coordination with the Native American Heritage Commission (NAHC) indicated that no Native American cultural resources are present in the study area.

3.4.2 UPDATED ANALYSIS

The new Kinder Morgan improvements, including the DRA Station, a pipeline loop and access road is proposed to be constructed within the area previously evaluated for cultural sensitivity in Addendum# 11, with the exception of the landscaped area and parking lot between the Chevron property and the Meridian Professional Center. The new temporary aerial pole along the south side of Balfour Road would also be outside the previously surveyed project limits.

The area previously evaluated was determined not to have any known cultural resources, and the likelihood of encountering potentially significant cultural resources within the area is low. It is unlikely that potentially significant cultural resources exist within the landscaped areas at John Muir Medical Center and the landscaped area/parking lot between the Chevron property and the Meridian Professional Center. According to Contra Costa County Assessor Maps, these properties were constructed between 2004 and 2005. Excavation work in the landscaped area and parking lot would be shallow (up to two feet) and within an area previously disturbed during the construction of the existing properties and associated ornamental vegetation. The placement of the temporary aerial pole along the south side of Balfour Road would require drilling a hole (excavating) to place them in the ground.

Given the minimal excavation work and developed nature of the adjacent properties, the likelihood of encountering potentially significant cultural resources within the area is low. However, should any previously undiscovered historic or prehistoric resources be found during construction, work would stop, in accordance with CEQA regulations, until such time that the resource can be evaluated by a qualified archaeologist and appropriate mitigative action take as determined necessary by the lead agency. In the event that Native American human remains or funerary objects are discovered, the provisions of California Health and Safety Code Section 7050.5(b) would be followed. Section 5097.98 and 5097.99 of the Public Resources Code also call

² The records search covered a one-mile radius surrounding the Project area.

for “protection to Native American human burials and skeletal remains from vandalism and inadvertent destruction.”

The Project changes would not affect the determinations made in the 1994 FEIR, and the impacts would not be more severe than those described in the 1994 FEIR. No further discussion or mitigation is required as part of this Addendum.

3.5 HAZARDOUS MATERIALS

3.5.1 PRIOR FEIR ANALYSIS

The 1994 FEIR identified potential locations in the SR-4 Bypass Project area that could contain hazardous wastes left by former property users. At the time, the zoning along the SR-4 Bypass Project right-of-way allowed agricultural uses and well-head activities associated with a small oil field in the Sand Creek Area. The FEIR concluded that there were six locations where hazardous wastes could be present. These included a shooting range, two debris yards, a series of oil wells, a crude oil storage facility, and an electrical transformer site. The FEIR included mitigation measures requiring a comprehensive investigation of soil quality at the sites to be conducted by the County Department of Public Works. The mitigation measures reduced the potential impacts to less-than-significant levels.

The 1994 FEIR also contemplated the potential relocation of utilities as part of construction of the Bypass and required coordination with public utilities and/or private operators during construction to allow for relocation as needed without disruption to existing service.

None of the six sites listed in the 1994 FEIR are located within the SR-4/Balfour Road interchange area evaluated in Addendum #11. A Preliminary Site Investigation (PSI) Report was prepared by Geocon, Inc. in June, 2014. The PSI found that excavated soils would be classified as non-hazardous based on lead and chromium levels. Pesticides, arsenic, and petroleum hydrocarbons were found at concentrations less than the construction exposure Environmental Screening Levels (ESLs), but near or at residential and industrial/commercial ESLs.

The Kinder Morgan Brentwood Booster Station is located within the interchange area on the northwest corner of the SR-4/Balfour Road Bypass intersection. Kinder Morgan owns and operates a 10-inch-diameter petroleum pipeline and booster pump facility that transports refined petroleum products (i.e., gasoline, diesel, and jet fuels) from the Kinder Morgan Concord Station in Concord, California, to the Kinder Morgan Bradshaw Terminal in Stockton, California.

As previously discussed, the Phase 1 interchange improvements would remove the Brentwood Booster Station. Independent of the interchange improvements, Kinder Morgan is working with the Regional Water Quality Control Board (RWQCB) to address groundwater contamination at the Brentwood Booster Station. During 2010/2011, Kinder Morgan conducted sampling activities to characterize and address groundwater impacts. Kinder Morgan has accepted responsibility for the petroleum hydrocarbon impacts at this site and is working under RWQCB oversight to investigate, and remediate if necessary, impacts to the satisfaction of RWQCB. The sampling, characterization, and remediation activities, including the removal of contaminated soils from the site, are already occurring and will continue under the oversight of the RWQCB (the lead agency), independent of Project construction.

Following removal of the facility, the remediation work will continue until the contamination is addressed to the satisfaction of the RWQCB. The contamination therefore does not present a potential future hazard to the Bypass Authority or to Caltrans (the eventual owner of the interchange facility), as the RWQCB is already directing the remediation pursuant to state laws governing the characterization and remediation of contaminants.

3.5.2 UPDATED ANALYSIS

The Kinder Morgan improvements, including the DRA Station, a pipeline loop and access road, would require minor excavation work (up to two feet), as well as one weekly truck trip to deliver the DRA. No construction period impacts are anticipated since the depth to groundwater is beyond the limits of work for the new Kinder Morgan improvements, including the DRA Station, a pipeline loop and access road, where any construction workers would be potentially affected. Furthermore, pollutant levels in the soils are below the construction exposure ESLs.

The placement of the temporary aerial pole along the south side of Balfour Road would require drilling a hole (excavating) to place them in the ground.; no risks associated with hazardous materials are anticipated.

The Kinder Morgan improvements, including the DRA Station, a pipeline loop and access road; and the temporary aerial pole along the south side of Balfour Road; would not affect the determinations made in the 1994 FEIR, and the impacts would not be more severe than those described in the 1994 FEIR. No further discussion or mitigation is required as part of this Addendum.

3.6 NOISE

3.6.1 PRIOR FEIR ANALYSIS

The 1994 FEIR concluded that development of the SR-4 Bypass Project would result in significant impacts related to noise. Specifically, the FEIR concluded that construction activities would temporarily increase ambient noise levels in the area, and that development of the SR-4 Bypass Project would create operational noise levels exceeding compatibility guidelines for residential uses. Following the certification of the FEIR, residential development projects were required to construct their own sound barriers sufficient to mitigate potential future noise impacts to a less-than-significant level. The cities of Antioch and Brentwood have diligently implemented this requirement for all of the residential subdivisions that have been built and are being proposed along the SR-4 right-of-way.

Mitigation measures outlined in the FEIR included open space buffers, sound barriers, and installation of noise insulation for existing residences. The FEIR did not provide any guidance as to the proposed location or height of the recommended noise barriers.

3.6.2 UPDATED ANALYSIS

The Kinder Morgan improvements, including the DRA Station, a pipeline loop and access road, would require minor excavation work (up to two feet), as well as one weekly truck trip to deliver the DRA. Given the minimal excavation work and infrequency of additional truck trips, the noise generated from these activities would be minimal, infrequent, and not result in any substantial change in noise levels in this area. The access road improvements would not affect the determinations made in the 1994 FEIR, and the impacts would not be more severe than those

described in the 1994 FEIR. No further discussion or mitigation is required as part of this Addendum.

The placement of the temporary aerial pole along the south side of Balfour Road would require drilling a hole (excavating) to place them in the ground; this design change would not affect noise levels.

3.7 TRAFFIC

3.7.1 PRIOR FEIR ANALYSIS

The 1994 FEIR analyzed potential impacts of the SR-4 Bypass Project on traffic and transportation in the area. The FEIR concluded that the general impact of the SR-4 Bypass Project was beneficial to traffic levels of service on roadways in the Project area. However, there were several locations where levels of service would worsen as a result of the SR-4 Bypass Project. The FEIR included three significant, unavoidable effects that would potentially occur despite implementation of the proposed mitigation measures.

3.7.2 UPDATED ANALYSIS

The Kinder Morgan improvements, including the DRA Station, a pipeline loop and access road, would require some minor excavation work (up to two feet), as well as one weekly truck trip to deliver the DRA. Given the minimal construction work required, and infrequency of additional traffic, traffic related impacts would be minimal and not significant. The access road improvements would not affect the determinations made in the 1994 FEIR, and the impacts would not be more severe than those described in the 1994 FEIR. No further discussion or mitigation is required as part of this Addendum.

The placement of the temporary aerial pole along the south side of Balfour Road would not have an added effect on traffic.

3.8 VISUAL RESOURCES

3.8.1 PRIOR FEIR ANALYSIS

At the time the 1994 FEIR was prepared, the area adjacent to Balfour Road was primarily undeveloped agricultural land. Views of Mt. Diablo and intervening hills could be seen to the west from Balfour Road. The FEIR identified significant and unavoidable visual impacts as a result of SR-4 Bypass Project construction, as it would be visible from adjacent residential areas either already developed or under consideration for development and could affect views from outlying areas by introducing a roadway into the previously undeveloped landscape.

Mitigation measures addressing the impacts to the existing visual character of the area included various landscaping techniques, as seen in Mitigation Measure III.D.1 and III.D.2.

3.8.2 UPDATED ANALYSIS

The Kinder Morgan improvements, including the DRA Station, a pipeline loop and access road, would require some minor excavation work (up to two feet), as well as one weekly truck trip to deliver the DRA. Given the minimal construction work required and no change in topography, this work would not result in any substantial visual impact. Some ornamental vegetation and tree removal would occur along the north end of the Chevron property; however, this ornamental

vegetation is limited and does not significantly contribute to the existing visual quality of the surroundings. Therefore, the Kinder Morgan improvements, including the DRA Station, a pipeline loop and access road, would not affect the determinations made in the 1994 FEIR, and the impacts would not be more severe than those described in the 1994 FEIR. No further discussion or mitigation is required as part of this Addendum.

The placement of the temporary aerial pole along the south side of new joint trench TCE area south of Balfour Road would not affect the visual quality of the area, since it will be removed after the Balfour Road joint utility trench is constructed.

4 Conclusion

The Kinder Morgan improvements, including the DRA Station, a pipeline loop and access road and the placement of the temporary aerial pole along the south side of Balfour Road would not result in any new significant environmental effects or substantial increases in the severity of the previously identified significant effects of the 1994 FEIR.

None of the conditions described in §15162 of the CEQA Guidelines requiring for the preparation of a subsequent FEIR have occurred. Therefore, this Addendum to the 1994 FEIR is an appropriate level of environmental review for the construction of the Kinder Morgan improvements, including the DRA Station, a pipeline loop and access road, and the placement of the temporary aerial pole along the south side of Balfour Road as identified in §15164 of the CEQA Guidelines.

SR4/Balfour Road Interchange Project

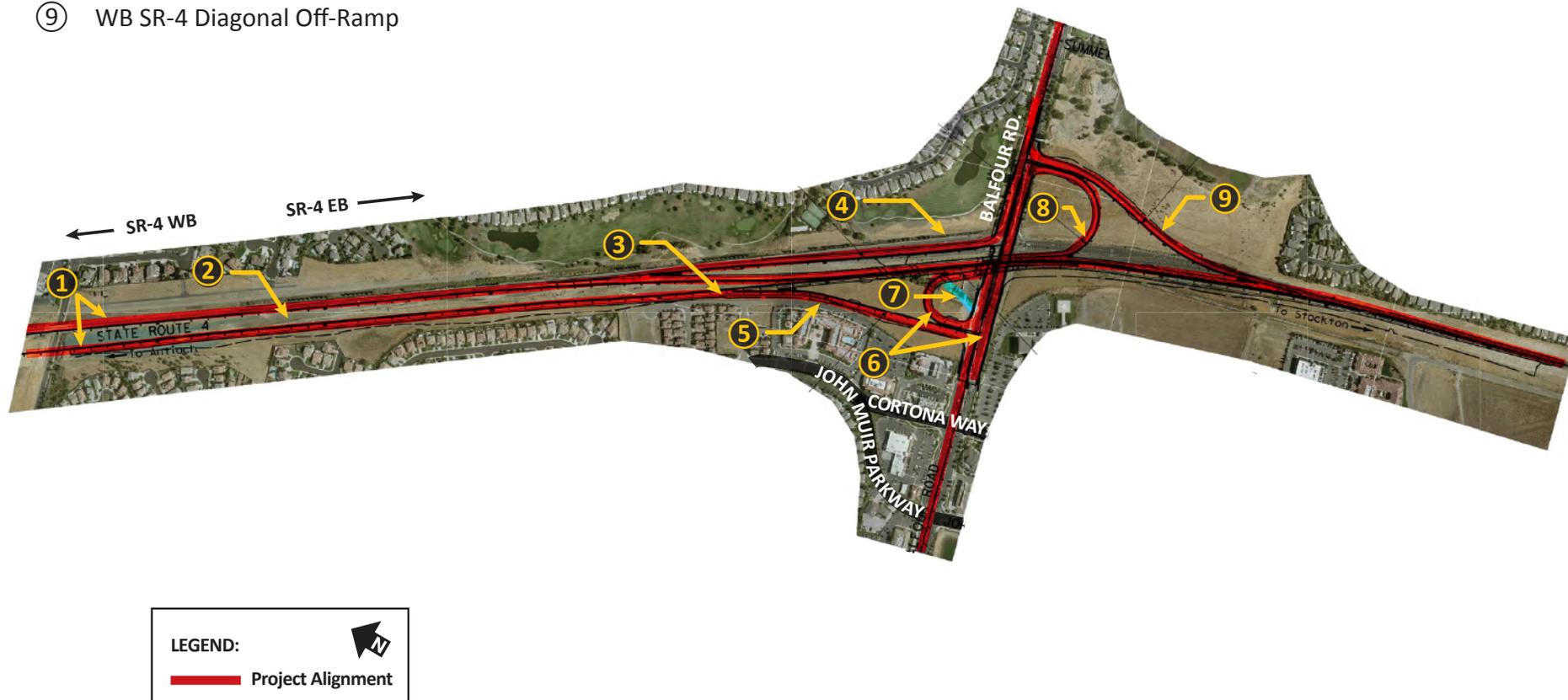


Project Site & Vicinity

Figure

Source: Quincy Engineering, 2014

- ① Separate EB/WB Travel Lanes
- ② Remove Existing SR-4 Crossover
- ③ EB SR-4 Crossover
- ④ WB SR-4 On-Ramp
- ⑤ EB SR-4 Diagonal Off-Ramp
- ⑥ EB SR-4 Loop On-Ramp
- ⑦ Proposed Daylighted Portion of Deer Creek
- ⑧ WB SR-4 Loop On-Ramp
- ⑨ WB SR-4 Diagonal Off-Ramp



Proposed Project Improvements

Figure 2



Kinder Morgan Pump Station System Relocation Component

Figure

Source: Quincy Engineering, 2015

ADDENDUM TO THE ENVIRONMENTAL IMPACT REPORT FOR THE STATE ROUTE 4 BYPASS PROJECT

**ADDENDUM #13: SPECIFIC TO KINDER MORGAN PUMP STATION RELOCATION AND THE MERIDIAN
PROFESSIONAL CENTER PARKING REPLACEMENT – BALFOUR ROAD INTERCHANGE, PHASE 1**

Prepared By:

**Circlepoint
1814 Franklin Street
Oakland, CA 94612**

Prepared For:

**State Route 4 Bypass Authority
255 Glacier Drive
Martinez, CA 94553**

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Appendices

Appendix A: Mitigation Monitoring and Reporting Program

1 Introduction

1.1 REASONS FOR THIS ADDENDUM

This document is an Addendum to the Final Environmental Impact Report (FEIR) certified in December 1994 for the State Route 4 (SR-4) Bypass Project (Project) located in the cities of Antioch and Brentwood and unincorporated areas of eastern Contra Costa County. The SR-4 Bypass Project is a three-segment, 12.4-mile combination freeway/expressway/conventional highway which is being constructed in phases.

In 2014, the State Route 4 Bypass Authority (Bypass Authority) prepared Addendum #11 to the FEIR, which evaluated the detailed design elements of an interchange at the Balfour Road location. **Figure 1** shows the general location of the SR-4/Balfour Road Interchange Improvements Project. Addendum #11 provided the analysis necessary under the California Environmental Quality Act (CEQA) to determine if the proposed design of the Balfour Road interchange would require substantive changes or major revisions to the original 1994 FEIR such as new significant environmental effects or substantial increase in the severity of previously identified adverse effects. Design changes were limited to Phase 1 of the Project and included revised ramp alignments, revised alignment of the existing SR-4 travel lanes approaching the Balfour Road interchange, two clear-spanning bridge structures to avoid work within Deer Creek, two additional retaining walls to avoid right-of-way acquisition from the adjacent properties in the vicinity of the Project area, and relocation components necessary to remove a Kinder Morgan Energy Partners (Kinder Morgan) oil pipeline pump station from within the interchange area. Addendum #11 determined that the proposed changes in the project design would not result in any new significant environmental effects or increase the severity of a previously identified adverse effect and thus substantive changes or major revisions to the previously prepared EIR were not warranted. The Bypass Authority approved Addendum #11 to the FEIR in November 2014.

Subsequent to the approval of Addendum #11, Project changes occurred related to the utility relocation plan and relocation components required for removal of the Kinder Morgan Brentwood Pump Station. These changes were addressed in Addendum #12, which found the changes would not result in any new significant environmental effect or increase the severity of a previously identified adverse effect, thus substantive changes or major revisions to the previously prepared EIR were not warranted.

One of the Kinder Morgan relocation components proposed for this Project, and evaluated in Addendum #12, is the installation of a Drag Reducing Additive (DRA) Station, including a pipeline loop and access road, on a New Parcel approximately 400 feet to the west of the existing Kinder Morgan oil pipeline pump station. To provide access to the DRA Station, pipeline loop, and ancillary appurtenances, an asphalt concrete access road, varying from 20 to 40 feet in width, would be constructed through the New Parcel. The access road would begin at westbound Balfour Road, just west of the proposed eastbound SR4/Balfour Road interchange diagonal off-ramp. The access road would travel north through the New Parcel, parallel to the existing State right-of-way. To connect with Cortona Way, the access road would continue west on the New Parcel, then across the northern portion of the Balfour Properties LLC parcel (2371 Balfour Road, APN 019-150-095) and the southern portion of the Meridian Balfour, et al parcel (100 Cortona Way, APN 019-900-016), until it reaches the Common Area Driveway for the various properties (McDonalds, Balfour Properties LLC (Chevron), and Meridian Balfour, et al (Meridian Professional Center)).

This Addendum #13 addresses two additional elements associated with the relocation of the Kinder Morgan Brentwood Pump Station in the vicinity of the Project area as follows:

- The first element is related to access to the New Parcel. As stated in Addendum #12, the Drag Reducing Station, pipeline loop and appurtenances, will be relocated to a New Parcel located approximately 400 feet to the west of the existing Kinder Morgan Brentwood Pump Station. Also, as stated in Addendum #12, the New Parcel will have two points of access (ingress from Balfour Road and egress to Cortona Way), but the access from Balfour Road would be right-in only due to the proximity of the New Parcel to the future Balfour Road Interchange off-ramp. The access from Balfour Road is required to facilitate large trucks delivering the drag reducing agent for the pipeline operation, but is not required for small trucks and other vehicles. Caltrans has determined that due to the proximity of the New Parcel to the future Balfour Road interchange off-ramp, the access from Balfour Road will only be allowed for so long as SFPP maintains its DRA station on the New Parcel, and thereby constitutes temporary ingress access to the New Parcel. Therefore, an alternate, concurrent, and permanent means of ingress needs to be established from Cortona Way, which will also constitute a portion of the substitute property. This alternate, concurrent, permanent means of ingress will provide access for small trucks and other vehicles, which will reduce traffic exiting from Balfour Road to the New Parcel and thereby improve operations at the future Balfour Road off-ramp. That alternate, concurrent, permanent means of ingress will be established by acquiring nonexclusive permanent access easements for ingress over portions of Assessor's Parcel Nos. 019-150-094 (McDonald's) and 019-150-095 (Balfour Properties), as shown on Figure 2.
- The second element is related to replacement parking for Meridian Balfour. As stated in Addendum #12, the access road would travel north through the New Parcel, parallel to the existing state right-of-way, then continue west on the New Parcel and the northern portion of the Balfour Properties LLC parcel (2371 Balfour Road, APN 019-150-095) and the southern portion of the Meridian Balfour, et al parcel (100 Cortona Way, APN 019-900-016), until it reaches the Common Area Driveway for the various properties [McDonalds, Balfour Properties LLC (Chevron), and Meridian Balfour, et al (Meridian Professional Center)]. The access road across the Meridian Balfour property would eliminate 16 parking spaces. This Addendum #13 provides a means to provide replacement parking for Meridian Balfour directly to the east and adjacent to the existing parking lot, as shown in Figure 2. Physical improvements to the land designated for replacement parking are evaluated as part of the project changes in this Addendum #13.

The analysis completed in Addendum #11 and Addendum #12 related to the SR-4/Balfour Road interchange improvements, removal of the Brentwood Pump Station, and the two system relocation component have not been modified, and are not analyzed further in this report.

1.2 CEQA BASIS FOR THIS ADDENDUM

This Addendum was prepared in conformance with CEQA and CEQA Guidelines §15164. State CEQA Guidelines §15164(a) requires that the lead agency or responsible agency prepare an Addendum to a previously certified EIR "if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have

occurred". An Addendum need not be circulated for public review per CEQA Guidelines §15164(c) but can be included or attached to the FEIR or adopted negative declaration.

As analyzed in Section 3 of this document, property transfer between the Bypass Authority and the property owners (Meridian Balfour) affected by the construction of the access road to the DRA Station, including the proposed parking lot reconfiguration for the Meridian Professional Center, would not result in any new significant environmental effects or substantial increases in the severity of previously identified significant impacts. Consequently, major revisions to the previous FEIR are not required, and none of the conditions listed in §15162(a) have occurred. Therefore, the appropriate level of analysis for the proposed Project revision is an Addendum to the FEIR. This conclusion is based on the analysis provided in this document and information in the FEIR.

1.3 INTENDED USES OF THIS ADDENDUM

An Addendum to an FEIR is an informational document used in the planning and decision-making process. The intent of this Addendum to the FEIR is to provide the Bypass Authority with additional information regarding the Project's potential environmental impacts that was not available at the time of the certification of the FEIR.

2 Project Description

This section provides a description of the Project evaluated in the FEIR and the modifications proposed by the Bypass Authority.

2.1 PURPOSE AND NEED

The primary purpose of the SR-4 Bypass Project, as described in the FEIR, is to "improve regional circulation through eastern Contra Costa County and provide a more balanced distribution of current and future traffic over the local road network in this area".

2.2 PREVIOUS ENVIRONMENTAL ANALYSIS PROCESS

The Bypass Authority has served as the CEQA lead agency for the SR-4 Bypass Project. In October 1993, the Bypass Authority released for public review the SR-4 Bypass Project draft EIR. A 60-day public review period began on November 2, 1993, and closed on January 3, 1994. A Final EIR was prepared in November 1994 and included responses to comments received on the draft EIR. On November 21 and December 8, 1994, the Bypass Authority held public hearings on the Bypass Project and supporting environmental documents. The Bypass Authority approved the Bypass Project and certified the FEIR on December 13, 1994. Since that time ten Addenda and one supplemental EIR have been prepared and adopted by the Bypass Authority, as discussed below.

- December 13, 1994 - An Addendum was prepared to address a proposed modification to the connection from Marsh Creek Road to existing SR-4.
- November, 1997 - A second Addendum was prepared to consider the effects of a variety of long-range area planning projects on the preferred alternative alignment for Segment 3. This Addendum was certified by the Authority in November 1997.
- December, 1998 - A third Addendum was prepared to address the modified construction phasing plan which involved construction of Segment 2 as a first phase.

- January, 2003 - A fourth Addendum was prepared to address modifications to the Lone Tree Way Interchange.
- November, 2003 - A fifth Addendum was prepared to address modifications to Segment 1 of the Bypass.
- October 2004 - A Supplemental EIR was prepared to evaluate proposed refinements to the alignment of Segment 3.
- May 2006 - A sixth Addendum was prepared to evaluate proposed relocations of an existing Chevron pipeline.
- November 2007 - A seventh Addendum was prepared to evaluate the Sand Creek Road Interchange.
- April 2009 – An eighth Addendum was prepared to evaluate the Mokelumne Trail Bicycle/Pedestrian Overcrossing.
- June 2011 – A ninth Addendum was prepared to evaluate the SR-4/SR-160 Freeway Connector
- August 2011 – A tenth Addendum was prepared to evaluate construction of an interchange at Balfour Road consisting of two phases (Phase 1 and Phase 2).
- November 2014 – An eleventh Addendum was prepared to evaluate design modifications to Phase 1 of the Project.
- June 2015 – A twelfth Addendum was prepared to evaluate changes in the utility relocation plan and the relocation components required for removal of the Kinder Morgan Brentwood Pump Station.

The four-volume 1993 draft EIR for the SR-4 Bypass Project, together with the 1994 FEIR volume, the twelve Addenda, and the Supplemental EIR now comprise the approved EIR and environmental record for the SR-4 Bypass Project. Once completed, this thirteenth Addendum will be added to the environmental record.

2.3 PROJECT DESCRIPTION MODIFICATIONS

As previously described in Addendums #11 and #12, as part of Phase 1 of the SR-4/Balfour Road interchange, a new eastbound SR-4 off-ramp and on-ramp would be constructed in the northwest quadrant of the SR-4/Balfour Road intersection. Construction of these ramps makes it necessary for Kinder Morgan to remove an existing oil pipeline pump station (the Brentwood Booster Station) at this location. The 1994 FEIR contemplated the potential relocation of utilities as part of construction of the SR-4 Bypass Project and required coordination with public utilities and/or private operators during construction to allow for relocation, as needed, without disruption to existing service. The utility relocation plan described in the previous addendums has not changed.

Addendum #12 evaluated two Kinder Morgan relocation components, both of which are still proposed as part of the Project. The first relocation component would occur at an existing Concord Pump Station, located at Arnold Industrial Way and Solano Way in Concord, California (approximately 20 miles northwest from the Project area). Terminal and substation transformers at the Concord Pump Station would be replaced to allow for increased pumping capacity. No

physical expansion of the Concord Pump Station would be needed. The second relocation component evaluated in Addendum #12 included the construction of new Kinder Morgan improvements, including the DRA Station and a pipeline loop and access road in the northwest quadrant of the interchange. A DRA would be injected approximately once per week into the new oil pipeline access point replacing similar DRA injections at the current Brentwood Booster Station that would be demolished.

This Addendum #13 addresses two additional elements associated with the relocation of the Kinder Morgan Brentwood Pump Station in the vicinity of the Project area as follows:

- The first element is related to access to the New Parcel. As stated in Addendum #12, the Drag Reducing Station, pipeline loop and appurtenances, will be relocated to a New Parcel located approximately 400 feet to the west of the existing Kinder Morgan Brentwood Pump Station. Also, as stated in Addendum #12, the New Parcel will have two points of access (ingress from Balfour Road and egress to Cortona Way), but the access from Balfour Road would be right-in only. Caltrans has determined that due to the proximity of the New Parcel to the future Balfour Road interchange off-ramp, the access from Balfour Road will only be allowed for so long as SFPP maintains its DRA station on the New Parcel, and thereby constitutes temporary ingress access to the New Parcel. Therefore, a permanent means of ingress needs to be established from Cortona Way, which will also constitute a portion of the substitute property. That permanent means of ingress will be established by acquiring nonexclusive permanent access easements for ingress over portions of Assessor's Parcel Nos. 019-150-094 (McDonald's) and 019-150-095 (Balfour Properties), as shown on Figure 2.
- The second element is related to replacement parking for Meridian Balfour. As stated in Addendum #12, the access road would travel north through the New Parcel, parallel to the existing state right-of-way, then continue west on the New Parcel and the northern portion of the Balfour Properties LLC parcel (2371 Balfour Road, APN 019-150-095) and the southern portion of the Meridian Balfour, et al parcel (100 Cortona Way, APN 019-900-016), until it reaches the Common Area Driveway for the various properties [McDonalds, Balfour Properties LLC (Chevron); and Meridian Balfour, et al (Meridian Professional Center)]. The access road across the Meridian Balfour property would eliminate 16 parking spaces. This Addendum #13 provides replacement parking (approximately 10,146 square feet) for Meridian Balfour directly to the east and adjacent to the existing parking lot.

Physical improvements to the land designated for replacement parking are evaluated as part of the project changes in this Addendum #13. **Figure 2** depicts the project changes evaluated in this report.

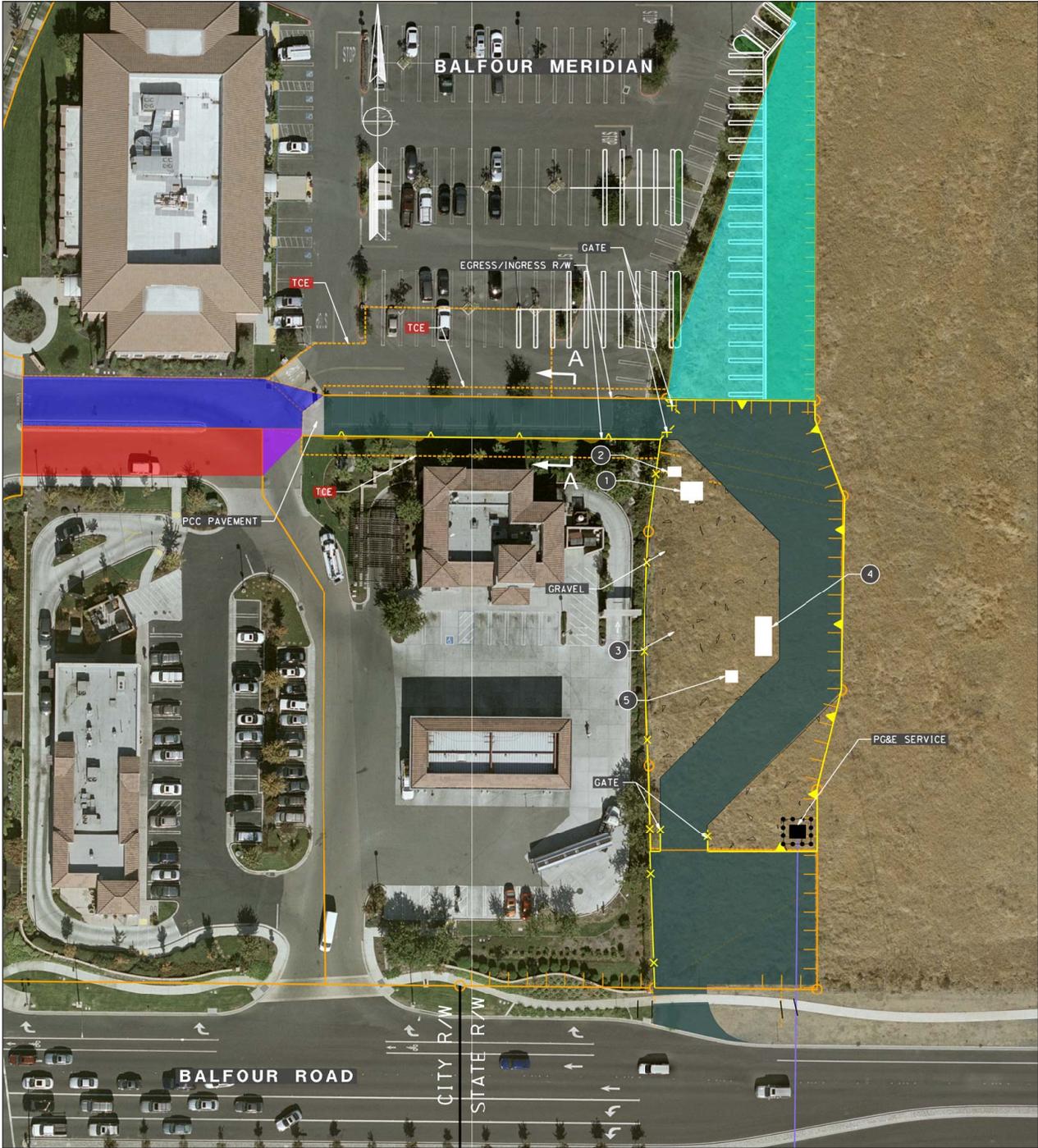
SR4/Balfour Road Interchange Project



Project Site & Vicinity

Figure

Source: Quincy Engineering, 2014



Legend

- Electrical Service Pad (90"x105")
- PG&E Box
- Proposed Pavement
- Fill Slopes
- SR4BA Parcel
- Egress - Balfour Meridian
- Ingress - McDonalds
- Ingress/Egress - Balfour Properties
- Property Lines
- ▲ Masonry Wall
- ▲ Retaining Curb
- ① PLC Enclosure
- ② Switchrack
- ③ Proposed 10"
- ④ KMEP LS-9
- ⑤ DRA Skid
- ⑤ Vault

Proposed Meridian Professional Center Parking Lot Reconfiguration

Figure 2

Source: Quincy Engineering, 2016

3 Impact Analysis

3.1 SUMMARY OF PROJECT IMPACTS ADDRESSED IN THE FEIR

The environmental impacts associated with the removal of the Kinder Morgan Brentwood Pump Station were evaluated in Addendum #11 and found to be comparable, if not the same, as the impacts of the SR-4 Bypass Project evaluated in the 1994 FEIR. Likewise, the environmental impacts associated with Addendum #12 addressed environmental impacts associated with the proposal to increase pump capacity at the Concord Pump Station and install a Drag Reducing Additive (DRA) Station which were found to be comparable, if not the same, as the impacts of the SR-4 Bypass Project evaluated in the 1994 FEIR. The project changes being addressed in this analysis are ingress access from Cortona Way and replacement parking for the 16 parking spaces eliminated on the Meridian Professional Center property.

The following environmental categories are examined in the context of the modifications to the design discussed above:

- Air Quality and Climate Change
- Biological Resources
- Cultural Resources
- Hazardous Materials
- Noise
- Traffic
- Visual Resources

For these categories, additional analysis has been conducted and the results are discussed in Sections 3.2 through 3.8.

All other environmental categories examined in the FEIR have been assessed and found not to have any material change from what has already been presented in the FEIR. The areas where the reconfigured parking lot would be constructed are within the unimproved areas of the Bypass Authority right-of-way. There are no agricultural and forest resources, or mineral resources, in the area of the proposed improvements. No new residences or businesses would be constructed or displaced as a result of the Project; therefore, no impacts to population and housing, public services, recreation, or utilities would occur. The reconfigured parking lot is consistent with the current Meridian Professional Center land use; no land use conflicts would occur. The improvements would be constructed according to the appropriate design standards for the area, and would not expose people to geological or seismic risks. The reconfigured parking lot would not be constructed within a floodplain and would not affect the local hydrology of the area. Water quality protection measures are covered in Section 3.3, Biological Resources, and are a condition of the Project's environmental permitting requirements.

All mitigation measures adopted in the 1994 FEIR and 2015 Addendum #12 continue to remain in effect and are incorporated by reference in this Addendum #13.

3.2 AIR QUALITY AND CLIMATE CHANGE

3.2.1 PRIOR FEIR ANALYSIS

As discussed in Section G of the 1994 FEIR, federal air quality regulations classified the Bay Area as a non-attainment zone for ozone and carbon monoxide, while state regulations classified the Bay Area as non-attainment for ozone, carbon monoxide, and particulate matter (PM) smaller than 10 microns in size.

The FEIR identified significant unavoidable adverse effects resulting from the SR-4 Bypass Project. Construction of the SR-4 Bypass Project would result in increased emissions that would exceed Bay Area Air Quality Management District (BAAQMD) criteria. Construction activities would temporarily generate substantial amounts of criteria air pollutants including nitrous oxide and PM smaller than 10 microns in size. Over the long term, the SR-4 Bypass Project would hinder regional efforts to attain transportation performance standards set forth in the California Clean Air Act (CCCA), such as decreasing vehicles miles traveled, increasing ridership per vehicle, and achieving no net increase in vehicle emissions.

Mitigation measures to reduce construction period and long term effects of the SR-4 Bypass Project are discussed in the FEIR. Such measures include dust abatement programs during the construction phase, developing high occupancy vehicle (HOV) lanes, and encouraging mixed-use development. However, the FEIR concluded that impacts related to the formation of ozone in the wider region, and attaining the transportation standards described above would remain significant.

3.2.2 UPDATED ANALYSIS

The proposed reconfiguration of the Meridian Professional Center parking lot (see **Figure 2**) would require minor excavation (approximately 10,146 square feet) to the Bypass Authority right-of-way property in order to reconfigure the existing parking lot. The construction activities necessary to reconfigure the parking lot to replace the 16 parking spaces would be very minor within the context of the Balfour Interchange and the SR-4 Bypass project. As such, this Project change would not create any new impact or increase the severity of those described in the 1994 FEIR, and no additional mitigation measures would be required.

3.2.3 POTENTIAL IMPACTS NOT PREVIOUSLY ADDRESSED

The effects of the SR-4 Bypass Project on greenhouse gases (GHG) emissions and climate change were not discussed in the 1994 FEIR. Since that time GHG emissions and climate change have been added as a CEQA topic that needs to be analyzed as part of the Project's environmental clearance. Addendum #11 evaluated Existing (2013), design year (2020), and horizon year (2040) CO₂ emissions which were estimated under Project and no-project conditions using the latest CT-EMFAC version 5 model based on EMFAC2011 for vehicles in Contra Costa County.¹ The analysis conducted in 2014 found that the Project impacts related to GHG emissions would be less than significant.

¹ The CT-EMFAC version 5 model only projects the emission rates up to the 2035 year. These 2035 emission rates were used to calculate the 2040 emissions.

Construction and use of the new Meridian Professional Center parking lot reconfiguration would not generate an increase of vehicle traffic that would affect the previous GHG impact conclusions. Therefore, impacts related to GHG emissions would continue to be less than significant.

3.3 BIOLOGICAL RESOURCES

3.3.1 PRIOR FEIR ANALYSIS

The 1994 FEIR identified possible effects of the SR-4 Bypass Project on habitats, wetlands, and species of concern, and the potential for direct effects on these species relative to harm or harassment resulting from construction activities. The FEIR included 14 significant, unavoidable effects to biological resources that would potentially occur despite implementation of the proposed mitigation measures.

Construction of the SR-4 Bypass Project was found to adversely impact riparian corridors, such as Deer Creek, which runs through the SR-4/Balfour Road interchange area. The potential loss or degradation of the riparian habitats would be significant because of their local and regional scarcity, possible classification as Waters of the U.S., continuing depletion, and increased threats to dependent species of concern. Following the certification of the FEIR in 1994, a Biological Opinion (BO) was issued by the USFWS for construction of a 2-lane expressway through the Segment 2 limits.

A Wetland Delineation was prepared in 1998 for the entire SR-4 Bypass Project area, and was verified by the U.S. Army Corps of Engineers (USACE) in 1999. The wetland delineation verification was valid for a period of five years, and expired on April 27, 2004. Re-verification of the wetland delineation is currently underway for the areas encompassing the SR-4/Balfour Road interchange. Deer Creek is the only waterway within the Project area.

No new plants or wildlife have been recorded in the Project area since the 1999 study. However, one species, the California tiger salamander, was upgraded to a federal listing of threatened in 2004.

The HCP/NCCP for East Contra Costa County was developed in consultation with the USFWS and adopted in July 2007. The HCP/NCCP establishes a coordinated process for permitting and mitigating the incidental take of endangered species identified in the plan. This process creates an alternative to the current project-by-project approach. Rather than individually surveying, negotiating, and securing mitigation and permit coverage, project proponents typically receive an endangered species permit by paying a fee/dedicating land and performing limited surveys and avoidance measures. A Supplemental EIR prepared in 2004 for Segment 3 of the SR-4 Bypass Project included revisions to the MMRP to reflect the HCP/NCCP's new mitigation language for biological resources. Further refinements to the MMRP were made as part of this addendum in order to accurately reflect the HCP/NCCP process, which does not require individual consultation with federal agencies and the issuance of a BO. The refined MMRP is included as **Appendix A**.

A biological assessment was conducted by RCL Ecology in 2011 as a part of the Addendum #10 efforts of the SR-4/Balfour Road Interchange Project. Since that time, additional botanical and general biological surveys were conducted in April and September 2013, and June 2014 to evaluate existing biological conditions in the interchange area. The assessment conducted in 2011 for Addendum #10, in combination with the updated surveys in 2013 and 2014, are being used to support an application for participation in the HCP/NCCP in order to receive an "Incidental Take" permit for federal and state listed species.

Permit coverage under the East Contra Costa County Habitat Conservancy HCP/NCCP was granted for the SR-4/Balfour Road interchange improvements in February 2015. The assessment and surveys also address biological resources as required by the California Environmental Quality Act (CEQA), and assisted in obtaining permits from other agencies such as the U.S. Army Corps of Engineers (USACE), California Department of Fish Game (CDFG), and the Regional Water Quality Control Board (RWQCB).

3.3.2 UPDATED ANALYSIS

The replacement parking spaces being provided at the Meridian Professional Center would be located within the existing surface parking lot, associated landscaped areas, and unimproved Bypass Authority right-of-way areas. All of these areas are included in the current HCP/NCCP. The landscaped land cover and parking lot is considered “urban” and do not present any new biological impacts or compensatory fees not previously included in the current HCP/NCCP.

The previously conducted biological surveys confirmed that potential breeding habitat exists within the Project area for the western burrowing owl (*Athene cunicularia hypugaea*), San Joaquin kit fox (*Vulpes macrotis mutica*), California red-legged frog (*Rana Draytonii*), California tiger salamander (*Ambystoma californiense*), and the white-tailed kite (*Elanus leucurus*). Potential habitat also occurs for other protected species such as the pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus blossevillii*) and state protected birds like the Swainson’s hawk (*Buteo swainsoni*) and golden eagle (*Aquila chrysaetos*).

To address potential biological impacts related to constructing the replacement parking spaces at the Meridian Professional Center parking lot, standard conservation measures included in the HCP/NCCP and the 1994 FEIR will be required. The required mitigation for any incidental take of endangered species is formalized in the HCP/NCCP.

Wetlands and Water Features

The replacement parking spaces at the Meridian Professional Center parking lot would be located approximately 375 feet west of the daylighted portion of Deer Creek. No new direct impacts to Deer Creek would occur as a result of these design changes.

Construction would involve limited grading and paving activities, and the loading, unloading, and transport of excavated and material. Rainfall could carry loose soils into adjacent waterways, resulting in increased sedimentation and adverse effects to water quality. Concentrated flow due to grading in some areas will increase the potential for erosion and for sediment transport into the adjacent areas. Construction equipment debris and fuel could also further degrade the quality of storm water runoff if fueling activity and maintenance products are not handled properly. This contamination could impact nearby waterways, including Deer Creek.

The replacement parking spaces at the Meridian Professional Center parking lot would result in a small net increase to impervious paved surfaces in the immediate area. This additional impervious area could prevent runoff from naturally dispersing and infiltrating into the ground, resulting in increased concentrated flow. The additional flow has the potential to transport an increased amount of sediment and pollutants to waterways and water resources, adversely impacting the water quality of Deer Creek. However, the minor increase in stormwater would be accommodated within the existing storm drain system in the area. Temporary and permanent Best Management Practices (BMPs) would be implemented in accordance with the state RWQCB 401 – (Water Quality Certification), Caltrans’ National Pollutant Discharge Elimination System

(NPDES) permit, and the Storm Water Management Plan (SWMP) to prevent adverse effects to water quality during construction and operation. No additional BMPs would be required as a result of this design change.

San Joaquin Kit Fox

The San Joaquin kit fox is a federally endangered and state listed threatened species. The San Joaquin kit fox is endemic to California and has known range in Alameda and Contra Costa counties. It is extremely rare and sparsely distributed due to habitat loss and the constriction of dispersal corridors. Dens are generally located in open areas with grass or grass and scattered brush. San Joaquin kit foxes maintain multiple dens and den use varies for breeding dispersal and temporary shelter.

Although ground squirrel burrows occur within the Project area, none appear to be of suitable size (e.g. 5-inches in diameter or greater) to serve as kit fox dens. However, to ensure that the Project will not affect the species, a kit fox preconstruction survey will be required prior to any ground disturbance related to the reconfiguration of the Meridian Professional Center parking lot, in accordance with the HCP/NCCP permit issued for the project.

California Red-legged Frog (CRLF) and California Tiger Salamander (CTS)

The California red-legged frog (CRLF) is a federally threatened species and a California species of special concern. The California tiger salamander (CTS) is a federally and State listed threatened species. The existing daylighted section of Deer Creek within the interchange area may serve as a breeding site for both CRLF and CTS and adjacent areas are potential aestivation habitats. The replacement parking spaces at the Meridian Professional Center parking lot would be located approximately 375 feet from the daylighted portion of Deer Creek. No new direct impacts to the creek and CRLF or CTS habitat would occur as a result of this design change.

Western Burrowing Owl

Western Burrowing owl is designated as California Species of Special Concern. The Western Burrowing owl prefers open, flat, or sloped grasslands and requires burrows for nesting and wintering habitat, but will also nest in artificial structures such as open pipes, concrete rubble piles, and small, dry culverts.

While only one burrowing owl was seen during the planning surveys, they have been routinely observed in the northwest quadrant of the Project area near the Kinder Morgan facility during previous studies of the area (RCL Ecology, 2011). In March 2015, a pre-construction survey for PG&E joint trench and tower relocation was conducted in this area and found two burrowing owls near the Kinder Morgan facility. Passive eviction techniques were used to clear the area of owls before the start of the nesting season (February 1) so that the construction of the preliminary utility relocation components for the Project had no effect on the western burrowing owl. All preconstruction survey requirements and avoidance measures identified for the burrowing owl in the HCP/NCCP would apply to construction of the replacement parking spaces at the Meridian Professional Center parking lot. No additional avoidance or minimization measures would be required as a result of this design change.

White-Tailed Kite

The white-tailed kite is classified as Fully Protected by the state. White-tailed kites breed in lowland grasslands, agriculture, wetlands, oak-woodland and savannah habitats, and riparian areas associated with open areas. Fremont cottonwoods within the daylighted portion of Deer Creek are large enough to furnish nesting habitat for the white-tailed kite. Therefore, preconstruction nest surveys will be conducted for the white-tailed kite if construction is planned to occur within the nesting season (February 1-August 31). All preconstruction survey requirements and avoidance measures identified in the HCP/NCCP for the white-tailed kite would apply to construction of the replacement parking spaces at the Meridian Professional Center parking lot, specifically within the areas that would be removing landscaped trees. No additional avoidance or minimization measures would be required as a result of this design change.

Pallid and Western Red Bat

The pallid and western red bats are listed as CDFW Special Concern species. The pallid bat prefers to roost in buildings, caves and other structures not present in the Project area but may forage in the habitat adjacent to the SR-4/Balfour Road intersection. The red bat is a riparian obligate and may roost and forage along the daylighted section of Deer Creek. The replacement parking spaces at the Meridian Professional Center parking lot would be located approximately 375 feet from the daylighted portion of Deer Creek. No new direct impacts to the creek and bat roosting habitat would occur as a result of this design change.

State Protected Birds

Several birds with potential to occur in the Project area are listed on the state watch list, or are of state special concern. These include birds of prey, the merlin, Cooper's hawk, Swainson's hawk, golden eagle, and loggerhead shrike; as well as a songbird – the California horned lark. All preconstruction survey requirements and avoidance measures identified in the HCP/NCCP for the state protected birds would apply to construction of the replacement parking spaces at the Meridian Professional Center parking lot, specifically within the areas that would be removing landscaped trees. No additional avoidance or minimization measures would be required as a result of this design change.

General Avoidance and Minimization Measures

In addition to the standard HCP/NCCP conservation measures outlined above, the following general measures identified in the 2014 Addendum #11 would also apply to construction of the additional parking spaces at the Meridian Professional Center parking lot. No additional avoidance or minimization measures would be required as a result of this design change.

- Prior to the start of construction, ESA fence will be installed by the contractor as shown on the plans to protect portions of Deer Creek during construction activity. A biological monitor will inspect the fence to ensure correct depth and placement and monitor the fencing to ensure that it remains during construction activity.
- The biological monitor will conduct Worker Environmental Awareness Training for all construction crews and contractors. The education training should be conducted prior to starting work on the Project and upon the arrival of any new workers. The training should include a review of sensitive areas and avoidance and minimization measures to be employed to protect the covered and no take species. A record of all personnel trained during the Project should be maintained for compliance verification.

- Staging areas and access routes through the Project area will be reviewed by the biological monitor to ensure that they do not impact any sensitive areas.

3.4 CULTURAL RESOURCES

3.4.1 PRIOR FEIR ANALYSIS

The 1994 FEIR analyzed the potential of the SR-4 Bypass Project to disrupt or adversely affect a prehistoric or historic archaeological site or property of historic or cultural significance. Cultural resources study for the SR-4 Bypass Project consisted of a detailed review of the previously completed archival literature review of the SR-4 Bypass Project right-of-way and an onsite surface archaeological reconnaissance. The supporting cultural reports for the 1994 FEIR did not identify cultural resources in the vicinity of the SR-4 Bypass Project area; however, only the 1992 SR-4 alignment north of Balfour Road was surveyed. South of Balfour Road, the proposed SR-4 alignment was inaccessible at the time of the survey. Because of differences between the 1992 SR-4 and the current SR-4 alignment, the majority of the SR-4 Bypass Project area was not surveyed in 1992.

Although no archaeological or subsurface cultural resources of significance or potential significance were observed along the segments of the SR-4 Bypass Project accessible to field surveys conducted for the 1994 FEIR, the document determined that impacts to undiscovered prehistoric resources could occur through implementation of the SR-4 Bypass Project. Mitigation measures to reduce construction period and long term effects of the SR-4 Bypass Project are discussed in the FEIR. Such measures include archaeological monitoring, suspending work in the event archaeological resources are discovered, development of an excavation plan, and the preparation of an historic property and architectural survey reports should any of the adjacent structures qualify for protection under the National Register of Historic Places and be altered, relocated, or demolished by construction of the SR-4 Bypass Project. However, the FEIR concluded that any impacts related to potential historic resources adjacent to the SR-4 Bypass Project would remain significant.

An Archaeological Survey and Cultural Resources Assessment were conducted for the SR4/Balfour Road interchange area by William Self Associates in 2014. A field survey of the area was conducted, which covered those areas not previously covered as a part of the 1994 FEIR. Pedestrian surveys of the area were conducted on September 4 and 5, 2014. During the course of the surveys, no cultural materials were observed. A search of the California Historic Resources Information System (CHRIS) records for the area was conducted, and indicates that no prehistoric cultural resources have been recorded within 1-mile of the SR-4/Balfour Road interchange area.² Thus the likelihood of encountering sensitive cultural resources in the SR-4/Balfour Road interchange area is low.

One historic cultural resource is reported by the Northwest Information Center (NWIC) within the study area, a mine adit (entrance) associated with the Brentwood Coal Company. However, detailed mapping of the location of this resource revealed that it is actually outside of the study area. No NRHP-listed or other local, state, or federally listed or recognized properties are known

² The records search covered a one-mile radius surrounding the Project area.

to exist in the study area. Coordination with the Native American Heritage Commission (NAHC) indicated that no Native American cultural resources are present in the study area.

3.4.2 UPDATED ANALYSIS

The portion of the replacement parking spaces at the Meridian Professional Center parking lot within the Bypass Authority right-of-way is within the area previously evaluated for cultural sensitivity in Addendum #11. However, the currently improved Meridian Professional Center parking lot, and associated landscaped areas were not part of the previous archeological survey.

The area previously evaluated was determined not to have any known cultural resources, and the likelihood of encountering potentially significant cultural resources within the area is low. As such, it is equally unlikely that potentially significant cultural resources exist within the Meridian Professional Center parking lot and landscaped areas. According to Contra Costa County Assessor Maps, this property was constructed between 2004 and 2005. Excavation work in the landscaped area and parking lot would be shallow (up to two feet) and within an area previously disturbed during the construction of the existing properties and associated ornamental vegetation.

Given the minimal excavation work and developed nature of the adjacent properties, the likelihood of encountering potentially significant cultural resources within the area is low. However, should any previously undiscovered historic or prehistoric resources be found during construction, work would stop, in accordance with CEQA regulations, until such time that the resource can be evaluated by a qualified archaeologist and appropriate mitigative action take as determined necessary by the lead agency. In the event that Native American human remains or funerary objects are discovered, the provisions of California Health and Safety Code Section 7050.5(b) would be followed. Section 5097.98 and 5097.99 of the Public Resources Code also call for “protection to Native American human burials and skeletal remains from vandalism and inadvertent destruction.”

The Project changes would not affect the determinations made in the 1994 FEIR, and the impacts would not be more severe than those described in the 1994 FEIR. No further discussion or mitigation is required as part of this Addendum #13.

3.5 HAZARDOUS MATERIALS

3.5.1 PRIOR FEIR ANALYSIS

The 1994 FEIR identified potential locations in the SR-4 Bypass Project area that could contain hazardous wastes left by former property users. At the time, the zoning along the SR-4 Bypass Project right-of-way allowed agricultural uses and well-head activities associated with a small oil field in the Sand Creek Area. The FEIR concluded that there were six locations where hazardous wastes could be present. These included a shooting range, two debris yards, a series of oil wells, a crude oil storage facility, and an electrical transformer site. The FEIR included mitigation measures requiring a comprehensive investigation of soil quality at the sites to be conducted by the County Department of Public Works. The mitigation measures reduced the potential impacts to less-than-significant levels.

The 1994 FEIR also contemplated the potential relocation of utilities as part of construction of the Bypass and required coordination with public utilities and/or private operators during construction to allow for relocation as needed without disruption to existing service.

None of the six sites listed in the 1994 FEIR are located within the SR-4/Balfour Road interchange area evaluated in Addendum #11. A Preliminary Site Investigation (PSI) Report was prepared by Geocon, Inc. in June, 2014. The PSI found that excavated soils would be classified as non-hazardous based on lead and chromium levels. Pesticides, arsenic, and petroleum hydrocarbons were found at concentrations less than the construction exposure Environmental Screening Levels (ESLs), but near or at residential and industrial/commercial ESLs.

The Kinder Morgan Brentwood Booster Station is located within the interchange area on the northwest corner of the SR-4/Balfour Road Bypass intersection. Kinder Morgan owns and operates a 10-inch-diameter petroleum pipeline and booster pump facility that transports refined petroleum products (i.e., gasoline, diesel, and jet fuels) from the Kinder Morgan Concord Station in Concord, California, to the Kinder Morgan Bradshaw Terminal in Stockton, California.

As previously discussed, the Phase 1 interchange improvements would remove the Brentwood Booster Station. Independent of the interchange improvements, Kinder Morgan is working with the Regional Water Quality Control Board (RWQCB) to address groundwater contamination at the Brentwood Booster Station. During 2010/2011, Kinder Morgan conducted sampling activities to characterize and address groundwater impacts. Kinder Morgan has accepted responsibility for the petroleum hydrocarbon impacts at this site and is working under RWQCB oversight to investigate, and remediate if necessary, impacts to the satisfaction of RWQCB. The sampling, characterization, and remediation activities, including the removal of contaminated soils from the site, are already occurring and will continue under the oversight of the RWQCB (the lead agency), independent of Project construction.

Following removal of the facility, the remediation work will continue until the contamination is addressed to the satisfaction of the RWQCB. The contamination therefore does not present a potential future hazard to the Bypass Authority or to Caltrans (the eventual owner of the interchange facility), as the RWQCB is already directing the remediation pursuant to state laws governing the characterization and remediation of contaminants.

3.5.2 UPDATED ANALYSIS

The replacement parking spaces at the Meridian Professional Center parking lot would require minor excavation work (up to two feet). No construction period impacts are anticipated since the depth to groundwater is below the limits of work to create the replacement parking spaces. Furthermore, pollutant levels in the soils are below the construction exposure ESLs.

Constructing the replacement parking spaces at the Meridian Professional Center parking lot would not affect the determinations made in the 1994 FEIR, and the impacts would not be more severe than those described in the 1994 FEIR. No further discussion or mitigation is required as part of this Addendum #13.

3.6 NOISE

3.6.1 PRIOR FEIR ANALYSIS

The 1994 FEIR concluded that development of the SR-4 Bypass Project would result in significant impacts related to noise. Specifically, the FEIR concluded that construction activities would temporarily increase ambient noise levels in the area, and that development of the SR-4 Bypass Project would create operational noise levels exceeding compatibility guidelines for residential uses. Following the certification of the FEIR, residential development projects were required to

construct their own sound barriers sufficient to mitigate potential future noise impacts to a less-than-significant level. The cities of Antioch and Brentwood have diligently implemented this requirement for all of the residential subdivisions that have been built and are being proposed along the SR-4 right-of-way.

Mitigation measures outlined in the FEIR included open space buffers, sound barriers, and installation of noise insulation for existing residences. The FEIR did not provide any guidance as to the proposed location or height of the recommended noise barriers.

3.6.2 UPDATED ANALYSIS

The replacement parking spaces at the Meridian Professional Center parking lot would provide the same parking capacity as what currently exists on site, and would not generate additional traffic noise in the Project area. Given the minimal excavation work (up to two feet), the construction period noise generated from these activities would be minimal and would not result in any substantial change in noise levels in this area. The replacement parking spaces at the Meridian Professional Center parking lot would not affect the determinations made in the 1994 FEIR, and the impacts would not be more severe than those described in the 1994 FEIR. No further discussion or mitigation is required as part of this Addendum #13.

3.7 TRAFFIC

3.7.1 PRIOR FEIR ANALYSIS

The 1994 FEIR analyzed potential impacts of the SR-4 Bypass Project on traffic and transportation in the area. The FEIR concluded that the general impact of the SR-4 Bypass Project was beneficial to traffic levels of service on roadways in the Project area. However, there were several locations where levels of service would worsen as a result of the SR-4 Bypass Project. The FEIR included three significant, unavoidable effects that would potentially occur despite implementation of the proposed mitigation measures.

3.7.2 UPDATED ANALYSIS

The replacement parking spaces at the Meridian Professional Center parking lot would provide the same parking capacity as what currently exists on site, and would not generate additional traffic in the Project area. Given the minimal construction work required (minor excavation work), and unchanged traffic volumes, traffic related impacts would be minimal and not significant. The access road improvements would not affect the determinations made in the 1994 FEIR, and the impacts would not be more severe than those described in the 1994 FEIR. No further discussion or mitigation is required as part of this Addendum #13.

3.8 VISUAL RESOURCES

3.8.1 PRIOR FEIR ANALYSIS

At the time the 1994 FEIR was prepared, the area adjacent to Balfour Road was primarily undeveloped agricultural land. Views of Mt. Diablo and intervening hills could be seen to the west from Balfour Road. The FEIR identified significant and unavoidable visual impacts as a result of SR-4 Bypass Project construction, as it would be visible from adjacent residential areas either already developed or under consideration for development and could affect views from outlying areas by introducing a roadway into the previously undeveloped landscape.

Mitigation measures addressing the impacts to the existing visual character of the area included various landscaping techniques, as seen in Mitigation Measure III.D.1 and III.D.2.

3.8.2 UPDATED ANALYSIS

Given that the replacement parking spaces at the Meridian Professional Center parking lot would require minor excavation work (up to two feet) and no change in the topography of the Project area, this work would not result in any substantial visual impact. Some ornamental vegetation and tree removal would occur along the landscaped areas on the east and southern boundaries of the Meridian Professional Center property; however, the landscaped vegetation is limited and does not significantly contribute to the existing visual quality of the surroundings. Therefore, the parking lot reconfiguration would not affect the determinations made in the 1994 FEIR, and the impacts would not be more severe than those described in the 1994 FEIR. No further discussion or mitigation is required as part of this Addendum.

4 Conclusion

The ingress access from Cortona Way to the New Parcel and the replacement parking at the Meridian Professional Center parking lot would not result in any new significant environmental effects or substantial increases in the severity of the previously identified significant effects of the 1994 FEIR.

None of the conditions described in §15162 of the CEQA Guidelines requiring for the preparation of a subsequent FEIR have occurred. Therefore, this Addendum to the 1994 FEIR is an appropriate level of environmental review for the reconfiguration of the Meridian Professional Center parking lot as identified in §15164 of the CEQA Guidelines.

Appendix A

MMRP

4.0 MITIGATION MONITORING AND REPORTING PROGRAM

The Mitigation Monitoring and Reporting Program (MMRP) is a CEQA-required component of the Environmental Impact Report (EIR) process for the project. The results of the environmental analyses, including proposed mitigation measures, are documented in the draft EIR.

CEQA requires that agencies adopting EIRs take affirmative steps to determine that approved mitigation measures are implemented subsequent to project approval.

As part of the CEQA environmental review procedures, Section 21081.6 requires a public agency to adopt a monitoring and reporting program to ensure efficacy and enforceability of any mitigation measures applied to the proposed project. The lead agency must adopt an MMRP for mitigation measures incorporated into the project or proposed as conditions of approval. The MMRP must be designed to ensure compliance during project implementation. As stated in Section 21081.6 (a) (1):

The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required to be incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead agency or a responsible agency, prepare and submit a proposed reporting or monitoring program.

Table 4-1 below is the MMRP. The table lists each of the mitigation measures proposed from the draft EIR and specifies the agency responsible for implementation of the mitigation measure and the time period for the mitigation measure.

Table 4-1 Mitigation Monitoring and Reporting Program

Environmental Impacts	Mitigation Measures	Implementation Procedure	Monitoring and Reporting Actions	Responsible Agency	Monitoring Schedule
Consistency with Existing Plans and Policies					
III.A.2 Development of the Project as a four-lane expressway is not consistent with the language of the Antioch General Plan which assumes a two-lane expressway.	III.A.2 Modify the language in Antioch’s General Plan Circulation Element to describe the State Route 4 Bypass Project as a four-lane expressway. (UNAVOIDABLY SIGNIFICANT)	(1) State Route 4 Bypass Joint Powers Authority (hereafter the Authority) will apply for a General Plan Amendment. (2) City will mail public notices of the General Plan Amendment and public hearing to required parties pursuant to Section 65352 and 65090. (3) City will hold public hearing. (4) City Council will consider public comments and vote to approve or deny the General Plan Amendment.	(1) Add a copy of mailing and record of public hearing to administrative record.	Authority, City of Antioch.	Prior to project approval.
III.A.3 Project Development would conflict with a goal in ABAG’s adopted “Land Use Policy Framework for the San Francisco Bay Area”; The goal is to “Allow for development of new	III.A.3 Communities located within the study area would change their General Plans to limit new development to areas within incorporated municipalities or County lands that are already developed and are served by mass transit services. (UNAVOIDABLY SIGNIFICANT)	See discussion above for III.A.2, which would apply to each jurisdiction proposing a General Plan Amendment.	See discussion above for III.A.2, which would apply to each jurisdiction proposing a General Plan Amendment.	See discussion above for III.A.2, which would apply to each jurisdiction proposing a General Plan Amendment.	Prior to Construction.

Environmental Impacts	Mitigation Measures	Implementation Procedure	Monitoring and Reporting Actions	Responsible Agency	Monitoring Schedule
<p>communities along transit corridors where interurban transit service and capacity are available or committed when they would be consistent with regional or subregional goals and objectives and not negatively impact existing communities.”</p>					
<p>III.A.4 The Project could induce growth outside the city of Antioch’s Urban Core before completion of development in the core. This is inconsistent with Goal A of the City’s General Plan.</p>	<p>III.A.4 This impact could be mitigated through changes in the General Plan land use element but the lead agency has no authority to enact such changes. (UNAVOIDABLY SIGNIFICANT)</p>	<p>Same as for III.A.3.</p>	<p>Same as for III.A.3.</p>	<p>Same as for III.A.3.</p>	<p>Same as for III.A.3.</p>

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Land Use					
<p>III.B.1 Development of the Project would result in the removal and relocation of existing residential and commercial land uses.</p>	<p>III.B.1 A relocation and assistance plan shall be developed as required by the California Relocation Assistance and Property Acquisition Act of 1971, Government Code 7260 et seq., for any residences or businesses displaced by the Project. This Act establishes policies and practices for the real property acquisition (including determination of just compensation), acquisition of buildings, structures and improvements, reimbursement for expenses incidental to transfer of title, and reimbursement of property owner's court costs in certain well- defined situations. The Act applies equally to all property owners regardless of race, color, religion, sex, or national origin. All actions taken by an acquiring agency must be in compliance with the non-discrimination requirements of Title VI of the Civil Rights Act of 1964. The process set out in the Act is initiated following the procurement of funding for a public project. (UNAVOIDABLY SIGNIFICANT)</p>	<p>(1) Develop and implement a relocation and assistance plan in accordance with the California Relocation Assistance and Property Acquisition Act of 1971.</p>	<p>(2) Add a copy of plan to the administrative record; verify compliance.</p>	<p>Authority.</p>	<p>(1) Prior to construction.</p>
<p>III.B.2 Development of the Project would result in the removal of prime agricultural land and Farmland of Statewide Importance.</p>	<p><u>III.B.2 Provide mitigation for farmland impacts through the acquisition of agricultural easements to confirm the property stays in agriculture, or through the payment of an agricultural mitigation fee to the Brentwood Agricultural Land Trust or the Contra Costa County Resource Conservation District for a total</u></p>	<p>(1) Review design of final alignment to ensure minimization of impacts to prime agricultural land. (2) Include requirements for location of final alignment and staging areas in construction contract</p>	<p>(1) Review alignment design and construction contract specifications to verify incorporation of mitigation measures; add to administrative record. (2) Inspect construction activity periodically; verify</p>	<p>Authority.</p>	<p>(1) Prior to the approval of final design and construction contract specifications. (2) Monthly during</p>

	<p><u>contribution not to exceed \$500,000.</u></p> <p><u>The mitigation for farmland impacts shall be implemented prior to the completion of the project.</u></p> <p><u>Following mitigation, the impacts to agricultural resources will remain significant and unavoidable.</u></p> <p><u>Design the final alignment to minimize impacts to prime agricultural lands.</u></p> <p><u>During construction, locate staging areas away from prime agricultural land as much as possible (UNAVOIDABLY SIGNIFICANT)</u></p>	<p>specifications.</p>	<p>compliance.</p>	<p>construction period.</p>
<p>III.B.3 Development of the Project would conflict with residential, religious and recreational land uses outside the right-of-way.</p>	<p>III.B.3 Provide a buffer zone between the Marsh Creek Road connector and existing or proposed adjacent land uses to minimize disruption to the latter. Plant with vegetation and consider constructing berms where proximity of land uses could be most adversely affected.</p>	<p>(1) The Authority will require the developers to include buffer zones, including vegetation and berms where necessary, in final project design plans and specifications.</p>	<p>(1) Review final project design plans and specifications before approval to verify incorporation of mitigation measure; add to administrative record.</p>	<p>Authority.</p> <p>(1) Prior to approval of final design.</p> <p>(2) Prior to construction of each alignment.</p> <p>(3) Following completion of construction of each alignment.</p>

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<p>III.B.4 Development of the Project would cross several trails which could be incompatible with pedestrian use of the trail and the recreational experience.</p>	<p>III.B.4 Provide grade separations between the Bypass right-of-way and the proposed trails.</p>	<p>(1) Consult agencies with jurisdiction over pedestrian trails prior to completion of final project design plans and specifications and incorporate findings into plans prior to approval.</p>	<p>(1) Review final project design plans and specifications before approval to verify incorporation of mitigation measure; add to administrative record. (2) Inspect construction activity periodically; verify compliance.</p>	<p>Authority.</p>	<p>(1) Prior to approval of construction contract specifications. (2) At least XX times per year.</p>
<p>Socioeconomics</p>					
<p>III.C.1 Development of the Project would displace existing residential structures within the 250-foot-wide expressway right-of-way and commercial structures within the 110-foot Marsh Creek Road right-of-way. Single family residences immediately adjacent to the Marsh Creek Road right-of-way could also require relocation dependent upon their proximity to the widened</p>	<p>III.C.1 A relocation and assistance plan shall be developed as required by the California Relocation Assistance and Property Acquisition Act of 1971, Government Code 7260 et seq., for any residences and/or businesses displaced by the Project. This Act establishes policies and practices for the real property acquisition (including determination of just compensation), acquisition of buildings, structures and improvements, reimbursement for expenses incidental to transfer of title, and reimbursement of property owner's court costs in certain well- defined situations. The Act applies equally to all property owners regardless of race, color, religion, sex or national origin. All actions taken by an acquiring agency must be in compliance with the non-discrimination requirements of Title VI of the Civil Rights Act of 1964. The process set out in the Act is initiated following the procurement of funding for a</p>	<p>See III.B.1 discussion.</p>	<p>See III.B.1 discussion.</p>	<p>See III.B.1 discussion.</p>	<p>See III.B.1 discussion.</p>

roadway.	public project. (UNAVOIDABLY SIGNIFICANT)				
III.C.2 Development of the Project would result in the loss of prime agricultural land along the length of the right-of-way currently in agricultural production.	III.C.2 Locate roadway right-of-way to minimize removal of prime agricultural lands. (UNAVOIDABLY SIGNIFICANT)	See III.B.2 discussion.	See III.B.2 discussion.	See III.B.2 discussion.	See III.B.2 discussion.
Visual Resources					
III.D.1 Development of the Project could affect views of the road from outlying areas.	<p>III.D.1</p> <ul style="list-style-type: none"> • Landscape roadsides, including planting rows of trees or bushes, to screen or block views of the road from nearby residences and to reduce glare and light from vehicles. • Exercise care in removing riparian vegetation and restoring vegetation where possible after construction. • Where cutting and filling activities are necessary, reseed with native grasses to reduce visual impacts of erosion and contrasts in color and texture with adjacent landscapes. • Park construction equipment in specially designated staging areas to remove it from view when not in use. Construction materials should be stored out of view of homes. 	(1) Include requirements for landscaping roadsides, removal of riparian vegetation, reseeding, and parking of construction equipment per Mitigation III.D.1 in the final design and in construction contract specifications.	(1) Review final design and construction contract specifications to verify incorporation of mitigation measures; add to administrative record. (2) Inspect construction activity periodically; verify compliance.	Authority.	(1) Prior to the approval of final design and construction contract specifications. (2) Monthly during construction period.

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(UNAVOIDABLY SIGNIFICANT)					
<p>III.D.2 The Project would be visible from adjacent residential areas either already developed or under consideration for development.</p>	<p>III.D.2 See Mitigation Measures III.B.3 and III.D.1. (UNAVOIDABLY SIGNIFICANT)</p>	<p>See III.B.3 and III.D.1 discussion.</p>	<p>See III.B.3 and III.D.1 discussion.</p>	<p>See III.B.3 and III.D.1 discussion.</p>	<p>See III.B.3 and III.D.1 discussion.</p>
<p>III.D.4 The Project would widen Marsh Creek Road, a designated Scenic Highway. This widening would impact existing vegetation and other landscape features contributing to its status as a scenic highway.</p>	<p>III.D.4 In addition to the mitigations identified under III.D.1, design the Marsh Creek Road roadway alignment to avoid removal of mature trees, where possible, or at a minimum, replant with vegetation of similar canopy.</p>	<p>(1) Review design of Marsh Creek Road alignment to ensure minimal impacts to mature trees. (2) Include requirements for replanting of any mature trees that must be removed in the final alignment design and construction contract specifications.</p>	<p>(1) Review final alignment design and construction contract specifications to verify incorporation of mitigation measures; add to administrative record. (2) Inspect construction activity periodically; verify compliance.</p>	<p>Authority.</p>	<p>(1) Prior to the approval of the final alignment design and construction contract specifications. (2) Monthly during construction period.</p>

Traffic and Transportation					
<p>III.E.2 The Project would have a detrimental impact on traffic levels of service at five intersections in the vicinity of the project under Phase I and at two intersections under Phase II.</p>	<p>III.E.2 Provide traffic engineering improvements as shown in Tables III.E.13, III.E.14, and III.E.15 of Volume 3 of this EIR for Year 2000 Project Phase I, Year 2010(+) Project Phase I, and Year 2010(+) Project Phase III intersection impacts. Traffic engineering improvements include increases in the number of approach lands at impacted intersections, or, in more severe cases, provision of grade separated interchanges. Traffic levels of service improve from E or F conditions prior to mitigation, to D or better conditions. (UNAVOIDABLY SIGNIFICANT)</p>	<p>See mitigation.</p>	<p>(1) Monitor to verify that traffic engineering improvements are carried out as proposed; add to administrative record.</p>	<p>Authority.</p>	<p>(1) According to schedule proposed in Tables III.E.13, III.E.14, and III.E.15 of Volume 3 of the 1994 FEIR</p>
<p>III.E.3 The Project would have a detrimental impact on traffic levels of service on the existing SR 4 freeway from SR 160 to Bailey Road.</p>	<p>III.E.3 Improve the State Route 4 Freeway to provide for additional capacity from the Bypass to Bailey Road, as follows:</p> <ul style="list-style-type: none"> • By year 2000, provide for widening from two to three lanes in each direction. The extra capacity would result in a v/c ratio of 0.78 (LOS C) in the evening peak hour on the section west of Railroad Avenue, and 0.67 (LOS B) on the section west of Lone Tree Way. • By year 2010(+), provide additional widening to four lanes in each direction (whether the Phase I or Phase II project is built by that time). The extra capacity would result in a v/c ratio of 0.93 (LOS E) in the evening peak hour on the section west of Railroad Avenue and 0.95 (LOS E) on the section west of Lone Tree Way for 		<p>(1) Monitor to verify that State Route 4 Freeway improvements are carried out as proposed; add to administrative record.</p>	<p>Authority.</p>	<p>(1) According to schedule proposed in the mitigation.</p>

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the Phase I project. Similar improvements to level of service would be obtained under Phase II project conditions.

It is important to note that these calculations do not account for diversion of traffic from parallel roadways such as Buchanan Road, Buchanan Road Bypass, Pittsburg/Antioch Highway and Delta Fair Boulevard/Leland Road that would result from additional freeway capacity. These diversions would result in near capacity conditions during the peak hour under the year 2010(+) conditions. The duration of congested conditions would, however, be less as a result of the highway widening.

<p>III.E.3 (a) Limit housing development in eastern Contra Costa County to avoid additional congestion on the existing State Route 4 freeway. This would reduce, but not eliminate, the severity of the impact. If the Project were built under a scenario of lower housing growth in eastern Contra Costa County, the existing State Route 4 freeway would still experience an increase in traffic demand, over the no-project condition, due to improved access. However, the level of congestion would be lower than if all growth expectations were met, albeit at a lower level.</p>	<p>Suggest to Contra Costa County Planning Department that potential addition to traffic congestion on State Route 4 be considered when approving housing developments. Mitigation for contribution to traffic congestion could be required for new development.</p>	<p>Ensure that communication is established with the County Planning Department regarding development's contribution to traffic.</p>	<p>Authority, Contra Costa County Planning Department.</p>	<p>(1) As major developments are proposed.</p>
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<p>III.E.3 (b) Participate in sub-regional and countywide efforts at growth management required as part of the Measure C Growth Management process. Regional solutions are being sought to roadway congestion in Contra Costa County. This is an ongoing effort that seeks to address the interrelated issues of land development and transportation infrastructure. An <i>Action Plan for Routes of Regional Significance</i> is currently being prepared by the members of the State Route 4 Bypass Authority, plus the City of Pittsburg, in coordination with</p>	<p>(1) Participate in cooperative efforts at growth management. (2) Complete and implement the <i>Action Plan for Routes of Regional Significance</i>.</p>	<p>(1) Verify the Authority's participation. (2) Add Plan to administrative record.</p>	<p>Authority.</p>	<p>As appropriate.</p>
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<p>the Contra Costa Transportation Authority. (UNAVOIDABLY SIGNIFICANT)</p>					
<p>III.E.4 Traffic conditions on the Bypass segment of the Project would exceed service standards.</p>	<p>III.E.4 Modifications to the proposed design for the Project should be made as follows Tables III.E.13, III.E.14 and III.E.15 of Volume 3 of this EIR include recommendations for changes to the proposed design for intersections on the Bypass and the Marsh Creek Road east-west connector. The improvement needs of the three project conditions studied are summarized below:</p>	<p>(1) Incorporate measures identified in mitigation into final design plans.</p>	<p>(1) Check final design plans to verify incorporation of mitigation measure; add to administrative record. (2) Monitor to verify that modifications are carried out; add to administrative record.</p>	<p>Authority.</p>	<p>(1) Prior to approval of final design plans. (2) Monthly, during construction of the modified project components.</p>
<ul style="list-style-type: none"> • Year 2000 Phase I Project Condition. Make modifications to Laurel Road, Lone Tree Way, Balfour Road and Marsh Creek Road intersections with the Bypass as shown in Table III.E.13. These should be sufficient to obtain acceptable operation on the two-lane expressway under anticipated year 2000 traffic conditions. Intersection level of service would improve from F to C or D at each of these locations. • Year 2010(+) Phase I Project Condition. Improvement needs at the proposed at-grade intersections with the proposed Phase I Bypass are shown in Table III.E.14. The intersections at Laurel Road, Lone Tree Way, and Balfour Road indicate the need for two through lanes in each direction, and the intersection at Sand Creek Road has a need for several additional turn lanes. This indicates that a four lane cross section should be provided from the SR 4 freeway to south 					

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of Balfour Road. Improvements would also be needed at the intersection of Sellers Avenue with the Marsh Creek Road east-west connector. Intersection level of service would improve from E and F conditions to B, C or D conditions with the recommended improvements.

- Year 2010(+) Phase II Project Condition. Improvement needs at the proposed at-grade intersections with the Phase II Bypass are shown in Table III.E.15. Demand under the Phase II project scenario indicates the need for three through lanes of capacity between Lone Tree Way and south of Balfour Road to maintain an at-grade project. The intersection geometrics shown are illustrative – the appropriate way to mitigate this deficiency would be to provide a grade separated interchange. Intersection level of service would improve from E and F conditions to B and D conditions.

<p>III.E.5 The Project is not included in the Metropolitan Transportation Commission’s Regional Transportation Plan Capital Improvement Program and is therefore not consistent with the Plan.</p>	<p>III.E.5 State Route 4 Bypass Authority shall assure that the Project is included on appropriate plans prior to proceeding with construction of the Project.</p>	<p>(1) Conduct a survey for plans and reports related to the proposed Project, and check to verify that proposed Project is included where necessary.</p> <p>(2) Ensure that proposed Project is added to plans and reports that should include the Project but do not yet do so.</p>	<p>(1-2) Verify that proposed Project is included as necessary in related transportation plans; add to administrative record.</p>	<p>Authority.</p>	<p>(1-2) Prior to commencement of construction.</p>
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<p>III.E.6 In the year 2010(+) scenario, traffic along Marsh Creek Road could reduce available gaps for motorists existing driveways and movement of farm equipment.</p>	<p>III.E.6 Provide improvements described in Response to Comment CC-3 on FEIR page IV-201. Options include provision of a median barrier and prohibition of left turns; provision of frontage roads or roads located behind structures to serve clusters of homes and lead to controlled intersections, or residential relocations.</p>	<p>(1) Incorporate measures identified in mitigation into final design plans.</p>	<p>(1) Check final design plans to verify incorporation of mitigation measure; add to administrative record. (2) Perform periodic surveys of traffic volume along Marsh Creek Road and evaluate/update conditions. Check final design plans to verify incorporation of mitigation measure; add to administrative record.</p>	<p>Authority.</p>	<p>(1) Prior to approval of final design plans. (2) To be determined by the rate of traffic growth or as deemed necessary by the Authority.</p>
<p>III.E.7 There will be a sharp 90° turn at the east end of the Marsh Creek Road Project segment as it joins the existing State Route 4. This may affect roadway safety and traffic conditions.</p>	<p>III.E.7 Redesign the intersection of Marsh Creek Road/Existing SR4 to facilitate a smooth transition for the east-west traffic flow. Marsh Creek Road would become a “through” or unimpeded roadway. The existing segment of SR 4 would intersect the through route as the minor leg of a new intersection. This would require a net take of approximately 2 acres of agricultural core land.</p>	<p>Incorporate measures identified in mitigation into final design plans.</p>	<p>Check final design plans to verify incorporation of mitigation measure; add to administrative record.</p>	<p>Authority.</p>	<p>Prior to approval of final design plans.</p>

Noise					
<p>III.F.1 Construction activities would temporarily increase ambient noise levels in the Project area.</p>	<p>III.F.1</p> <ul style="list-style-type: none"> • <u>Noise-generating activities at the construction site or in areas adjacent to the construction site associated with the project in any way should be restricted to the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 8:00 a.m. to 5:00 p.m. on Saturdays. No construction activities should occur Sundays or holidays.</u> • <u>Equip all internal combustion engine driven equipment with intake and exhaust mufflers which are in good condition and appropriate for the equipment.</u> • <u>Unnecessary idling of internal combustion engines should be strictly prohibited.</u> • <u>Avoid staging of construction equipment within 200 feet of residences and locate all stationary noise-generating construction equipment, such as air compressors and portable power generators, as far as practical from existing noise sensitive receptors. Construct temporary barriers to screen stationary noise generating equipment when located in areas adjoining noise sensitive land uses.</u> 	<p>(1) Authority will mail notices of construction activities to all nearby residents and/or landowners at least two weeks in advance with follow-up notices posted by the contractor.</p> <p>(2) Construction contract specifications will require contractor to limit noisy construction activity times and use particular construction equipment per Mitigation Measure III.F.1.</p>	<p>(1) Add a copy of mailing and posting to the administrative record.</p> <p>(2) Review construction contract specifications to verify incorporation of mitigation measures; add to administrative record.</p> <p>(3) Inspect construction activity periodically; verify compliance.</p>	<p>Authority.</p>	<p>(1) Minimum of two weeks advance notice prior to the start of each major segment of construction.</p> <p>(2) Prior to the approval of the construction contract specifications.</p> <p>(3) Weekly during construction period.</p>

- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
 - Route all construction traffic to and from the project site via designated truck routes. Prohibit construction related heavy truck traffic in residential areas where feasible. Prohibit construction truck traffic in the project vicinity during non-allowed hours.
 - Notify adjacent residents to the project site of the construction schedule in writing.
 - Designate a "noise disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and would require that reasonable measures warranted to correct the problem be implemented. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule. (The City should be responsible for designating a noise disturbance coordinator and the individual project sponsor should be responsible for posting the phone number and providing construction schedule notices).
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~~The following measures would reduce the noise from construction equipment and the accompanying disturbance to sensitive land uses in the corridor:~~

~~Limit noisy construction activities to these hours: 7:00 a.m. and 6:00 p.m., Monday through Friday, and 8:00 a.m. to 5:00 p.m., on Saturdays.~~

~~Use power construction equipment with state of the art noise shielding and muffling devices.~~

~~Provide notification and schedule information (including blasting times) concerning road construction to residents within the corridor, and provide a means whereby residents can call with complaints or questions.~~

<p>III.F.2 Over the long term, the Project would substantially increase noise in the vicinity of the Bypass right-of-way and along Marsh Creek Road.</p>	<p>III.F.2 Several measures can be implemented to reduce potential incompatibility between existing and future land uses in the vicinity (and within) the corridor and the freeway (see Measure III.F.3), but no practical measure exists to reduce the noise impacts from the Bypass to a less than significant level because existing noise levels are so low and future traffic volumes would be substantial. Thus, the increase in ambient noise levels within the Project vicinity would be significant, unavoidable impact of the Project. (UNAVOIDABLY SIGNIFICANT)</p>	<p>See III.F.3 discussion.</p>	<p>See III.F.3 discussion.</p>	<p>See III.F.3 discussion.</p>	<p>See III.F.3 discussion.</p>
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<p>III.F.3 Development of the Project would generate noise levels that exceed compatibility guidelines for residential uses over a wide area.</p>	<p>III.F.3 <u>The text of mitigation measure III.J.3 is modified as shown below:</u></p> <p>The following measures could be implemented to reduce potential incompatibility between operation of the Project and existing and future sensitive land uses:</p> <ul style="list-style-type: none"> • Maintain a sufficient buffer (open space) between the Bypass and future sensitive land uses. This measure will require implementation by the jurisdictions, including the City of Brentwood and Contra Costa County, with land use authority over the land adjacent to the corridor. These jurisdictions could amend their General Plans to specify that a sufficient buffer distance (consistent with the estimates in this report for the 60 dBA, Ldn contour) between the Project and sensitive land uses be maintained. As an alternative or in combination with a buffer (open space), the affected jurisdictions could plan for less sensitive land uses (commercial, office, business park, or industrial) between more-sensitive uses and the ROW. • Such uses would act to shield the more-sensitive uses allowing for a compatible residential noise environment closer than the distances identified in the impact section above. These jurisdictions would enforce Title 24 standards for multi-family residential development proposals within 2,000 feet of the center of the 	<p>(1) Add measures identified in the mitigation to final design plans.</p>	<p>(1) Review final design plans to verify incorporation of mitigation measures; add to administrative record.</p>	<p>Authority.</p>	<p>(1) Prior to the approval of final design plans.</p>
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ROW, and could apply the same insulation requirements to single-family residential proposals, as well.

- Construct sound barriers to reduce traffic noise at noise-sensitive locations. Barriers can take various forms, including landscaped earthen berms, walls, depressed roadways, and even thick stands of vegetation, or some combination of the four. This measure would be best suited for a 2,500-foot-long segment east of the alignment where the alignment runs closest to the residences near the Southern Pacific line and Neroly Road.
- Provide noise insulation for existing residences that would be significantly affected by project noise.

As shown in Figure 16 of the Draft Supplemental EIR, the subdivision area was divided into three sections because varying noise level projections warrant different noise barrier heights at different locations. In each case, a resulting exterior noise level of 60 dBA or less at residential receptors would be considered acceptable according to City and County standards:

Section 1. Based on the results of the noise modeling, a 14-foot noise barrier shall be constructed at the northbound SR4 Bypass edge-of-pavement to reduce future noise levels. 1 A 14-foot barrier would yield noise levels ranging from about 60 dBA to 62 dBA Ldn at the nearest receivers to the

Bypass. The approximate length of the proposed barrier would be 2,760 feet. The Authority would need to fund the construction of this barrier because the development application for the adjacent subdivision preceded the 1994 EIR.

Section 2. At the time when the City considered the application for this development, the City approved construction of an eight-foot barrier based on a noise study prepared for the development. This existing eight-foot barrier would be maintained. With the operation of the project, the future noise levels are projected to be 63 dBA to 64 dBA Ldn.

Section 3. The developer of the adjacent subdivision put aside funding for construction of a sound wall at the Bypass edge-of-pavement. Two barrier alternatives were tested for Location 3. Alternative A tested a barrier that followed the edge of the pavement for its entire length. Under this alternative, it was assumed that the existing right-of-way barrier would remain, but possibly be heightened. Alternative A would construct a 14-foot barrier, yielding future noise levels of about 61 dBA to 63 dBA Ldn at the closest residential receptors. Alternative B tested a barrier at the right-of-way for a portion of the section and the edge-of-pavement for the remainder of the section. A similar level of noise reductions would be achieved with the

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implementation of Alternative B. A 14-foot barrier would yield noise levels of about 59 dBA to 64 dBA Ldn. The Authority, in conjunction with the City of Brentwood, has selected Alternative A for implementation.

Air Quality

<p>III.G.1 Construction activities would temporarily generate substantial amounts of criteria air pollutants, particularly NO_x and fine particulate matter (PM₁₀).</p>	<p>III.G.1 To reduce the amount of particulate matter generated by earth-moving activities and vehicle travel over unpaved surfaces, implement the following dust abatement program. This program would benefit from the designation of a person or persons by the construction contractor to oversee implementation of all the aspects of the program.</p> <ul style="list-style-type: none"> • <i>All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.</i> • Suspend all excavating and grading operation when wind speeds (as instantaneous gusts) exceed 25 miles per hour. • <i>All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.</i> • Enclose, cover, water twice daily, or apply soil binders to exposed stock 	<p>(1) Add dust abatement measures identified in the mitigation to construction contract specifications.</p>	<p>(1) Review construction contract specifications to verify incorporation of mitigation measures; add to administrative record. (2) Inspect construction activity periodically; verify compliance.</p>	<p>Authority.</p>	<p>(1) Prior to the approval of the construction contract specifications. (2) Monthly during construction period.</p>
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piles (e.g., sand, gravel, or dirt)

- Sweep streets at the end of day if any visible soil material is carried over to adjacent thoroughfares.
- Limit speeds on unpaved road surfaces to 15 mph or less.
- Cover all trucks hauling dirt, sand, soil, or other loose materials. Maintain at least six inches of freeboard (i.e. the minimum required space between the top of the load and the top of the trailer).
- ***All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.***

To reduce combustion emissions from construction equipment, the following measures should be implemented:

- ***Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.***
- ***All construction equipment shall be maintained and properly tuned in***

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accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.

- Require catalytic converters for all gasoline-powered equipment, where feasible.

Caltrans special provisions and standard specifications will include the requirement to minimize or eliminate dust through application of water or dust palliatives. The following construction dust and equipment exhaust emissions measures are consistent with the BAAQMD CEQA Guidelines for basic and enhanced control measures and shall be implemented when practical, during all phases of construction work:

- **AQ-1: The project will follow Caltrans Standard Specification Sections 14-9.01 and 14-9.02, which address the requirements of the local air pollution control district (BAAQMD) and dust control and dust palliative application, respectively.**
- **AQ-2: The project will implement all feasible respirable PM (PM10) control measures required by BAAQMD.**

<p>III.G.2 Development of the Project would result in an increase in emissions over those expected under the no-</p>	<p>III.G.2 The following measures would reduce the net increase in motor vehicle emissions associated with the Project.</p> <ul style="list-style-type: none"> • The project sponsor shall encourage Metropolitan Transportation 	<p>(1) Add measures related to construction identified in the mitigation to final design plans. (2) Develop program to</p>	<p>(1) Review final design plans to verify incorporation of mitigation measures; add to administrative record.</p>	<p>Authority.</p>	<p>(1) Prior to the approval of final design plans. (2) Annually, monitor County</p>
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project scenario.	<p>Commission (MTC) to amend its High-Occupancy Vehicle (HOV) Lane Master Plan 2005 and RTP to include HOV lanes on State Route 4 east of Railroad Avenue. This would provide the opportunity to connect to HOV lanes developed under Phase II for that portion of the proposed Bypass north of Balfour Road.</p> <ul style="list-style-type: none"> If MTC amends its HOV Plan and RTP, the project sponsor shall develop HOV/express bus lanes and develop Park & Ride lots that support their usage with transit easements for preferential parking policies, express bus turnouts, and special HOV ramps. The development of HOV lanes in the Bay Area is one of the transportation control measures (TCM) contained in the '91 Clean Air Plan and is expected to reduce HC and NOx from mobile sources (TCM #8 Bay Area '91 Clean Air Plan, Volume II, Appendix F, Transportation Control Measure Descriptions, October 1991). Development of HOV lanes along the proposed alignment under Phase II would contribute to the effectiveness of this regional TCM, but the extent to which it would contribute in terms of reductions in lb/day of HC or NOx cannot be quantitatively estimated. Based on emissions estimates made during EMFAC7F, mitigation measures must demonstrate a reduction of 262 lb/day of PM10 by Year 2000 to reduce 	<p>encourage replacement of older model (more polluting) vehicles and replacement of fireplaces and woodstoves with EPA-certified woodstoves.</p> <p>(3) Propose programs to County: pave public roads; encourage future mixed- use development and alternate transit features.</p>	<p>(2) Confer with County Public Works and Planning Departments.</p>	actions.
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PM10 air quality impacts to less-than-significant (i.e. to reduce the project incremental increase to less than 150 lb/day). By 2010, under Phase I, mitigation measures must demonstrate a reduction of approximately 390 lb/day of PM10. Under Phase II (Year 2010), the necessary reduction would be 399 lb/day of PM10.

- The project sponsor shall work with Contra Costa County to identify and pave public roads within the County that area currently unpaved. Based on emissions factors and assumptions contained in BAAQMD's Base Year 1990 Emissions Inventory Source Category Methodologies (October 1993), paving of unpaved roads would reduce PM10 emissions by two lb/VMT (based on a particle size multiplier of 0.36 for PM10 and 60 rain days per year). Assuming 10 VMT per day on any given unpaved road, paving of unpaved roads would reduce PM10 emissions by 20 lb PM10 per day for each mile paved. Thus, the goal for this measure would be to pave approximately 13 miles by 2000 and an additional seven miles by 2010.
 - Based on emissions estimates made during EMFAC7F, mitigation measures must demonstrate a reduction of 56 lb/day of HC and 140 lb/day of NOx by Year 2000 to reduce ozone precursor
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(i.e. HC and NOx) air quality impacts to less-than-significant (i.e. to reduce the project incremental increase to less than 150 lb/day). By 2010, under Phase I, mitigation measures must demonstrate reductions of approximately 167 lb/day of NOx, and under Phase II (Year 2010), the necessary reductions would be 406 lb/day of HC and 451 lb/day of NOx.

- The Authority shall encourage Antioch, Brentwood, and Contra Costa County to use their land use development authority to see that proposed residential development in the East County area includes sufficient mixed-use character and alternate transit features (e.g. bike lanes) that future residents would not be forced to use their vehicles for every trip (work, shopping, school, etc.) outside the home.
 - The Authority shall encourage Antioch, Brentwood, and Contra Costa County to coordinate land use development with BART and Eastern Contra Costa County Transit Authority to ensure that future development would be provided with realistic alternatives to automobile use. The effectiveness of this measure cannot be quantitatively estimated.
 - The Authority shall encourage Antioch, Brentwood, and Contra Costa County to provide retail and services at
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	<p>employment sites, incentives for infill development, and increased densities near existing and planned transit facilities.</p> <ul style="list-style-type: none"> • The Authority shall encourage Antioch, Brentwood, and Contra Costa County to require developers to include bicycle and pedestrian amenities in their site designs. • The Authority shall encourage Antioch, Brentwood, and Contra Costa County to amend their parking requirements to reduce the number of parking spaces that developers must provide. (UNAVOIDABLY SIGNIFICANT) 				
III.G.5 Development of the Project would hinder regional efforts to attain the transportation performance standards set forth in the California Clean Air Act.	III.G.5 See Mitigation Measure III.G.2. (UNAVOIDABLE SIGNIFICANT)	See III.G.2 discussion.	See III.G.2 discussion.	See III.G.2 discussion	See III.G.2 discussion
III.G.6 The Project may not conform to the state implementation plan (developed pursuant to the Federal Clean Air Act Amendments of 1990) in effect at the time of project approval.	III.G.6 Prior to development of the State Route 4 Bypass Project, include the project in the Regional Transportation Plan and Transportation Program. Perform specific CO analysis to assure conformance with air quality standards.	See mitigation.	(1) Verify inclusion of project in Regional Transportation Plan and Program; add to administrative record.	Authority.	Prior to construction.

Geology, Seismicity, and Soils					
<p>III.H.1 Construction of the Project would require the movement of approximately 3.3 million cubic yards of earth for roadway excavation. Displacement and compaction would occur during construction of this Project.</p>	<p>III.H.1 Employ the following engineering techniques to mitigate the impact of moving approximately 3.3 million cubic yards of earth associated with excavation of the roadway:</p> <ul style="list-style-type: none"> • Develop a transportation and disposal plan for soils that will not be re-used in roadbed construction, in coordination with state and county agencies. • Move to an off-site area soils deemed inappropriate for re-use in roadbed construction, such as those with high shrink-swell or erosion potential, or loose, cohesionless sands prone to liquefaction. The determination of lack of suitability of these soils will be made on-site by a qualified geotechnical engineer or engineering geologist certified by the State of California. • Use engineered fill to replace those soils with inappropriate qualities for construction purposes. The fill will be approved by an on-site qualified geotechnical engineer or engineering geologist certified by the State of California. • To further enhance the likelihood of successful revegetation and long-term vegetative slope stabilization, topsoil materials to be disturbed or removed during construction will be carefully distinguished, stockpiled, and 	<p>(1) Locate an appropriate off-site area for receiving soils that cannot be used on-site.</p> <p>(2) Develop soils transportation and disposal plan.</p> <p>(3) Include compliance with plan and soils inspection by a qualified engineer/geologist in construction contract specifications.</p> <p>(4) Have soils inspected by a qualified engineer/geologist.</p> <p>(5) Carry out plan.</p> <p>(6) Include requirement in construction contract specifications that contractor use only fill which has been approved by a qualified engineer/geologist.</p>	<p>(1-2) Add plan (including record of selected disposal site) to administrative record.</p> <p>(3) Verify construction contract specifications.</p> <p>(4-5) Monitor to ensure that soils are inspected, transported, and disposed of according to plan.</p> <p>(6) Monitor to verify that only approved fill is used.</p>	<p>Authority.</p>	<p>(1-2) Prior to commencement of construction.</p> <p>(3) Prior to approval of contract.</p> <p>(4-5) Monthly, during construction.</p>

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protected separately from other soil materials that would be reused in roadbed construction by the on-site geotechnical engineer. As soon as is possible, stockpiled topsoil materials will be reused as a component of the revegetation seed bed materials for all cut and fill slopes, where feasible.

<p>III.H.2 Construction of the Project would require grading which would alter the topography in the Project area.</p>	<p>III.H.2 Employ the following engineering techniques to mitigate slope instability and erosion/siltation impacts resulting from development of a roadway in the right-of-way:</p> <ul style="list-style-type: none"> • Perform all grading and slope operations during the dry season (May – September). • Engineer cut slopes that area up to 15 feet high to no steeper than a 1.5:1 slope in soil, or a 0.75:1 slope in bedrock. • Engineer cut slopes that are higher than 15 feet to no steeper than 2:1 in soil or 1:1 in bedrock. • Engineer fill slopes less than 15 feet high to 1.5:1 or less; and 2:1 or less for slopes higher than 15 feet. • Scarify or serrate slopes into benches, 8” to 10” in width and height, to increase overall stability and allow for the re-establishment of vegetation. • Align roadways so as to not be parallel with the dip direction of adjacent 	<p>(1) Develop an Erosion and Sedimentation Control Plan.</p> <p>(2) Incorporate mitigations in engineering and design plans, as appropriate.</p> <p>(3) Include mitigations, including compliance with Erosion and Sedimentation Control Plan, in construction contract specifications.</p>	<p>(1) Add plan to administrative record.</p> <p>(2) Review engineering and design plans for inclusion of mitigations.</p> <p>(3) Review construction contract.</p> <p>(4) Monitor construction to verify compliance with mitigations, including Erosion and Sedimentation Control Plan.</p> <p>(5) Inspect slopes following construction to verify that mitigations regarding slope stabilization and revegetation are carried out.</p>	<p>Authority.</p>	<p>(1-2) Prior to commencement of construction.</p> <p>(3) Prior to approval of contract.</p> <p>(4) Monthly, during construction.</p> <p>(5) Following completion of construction of each segment of roadway.</p>
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slopes.

- Stabilize barren soil slopes with jute netting or similar geotextile fabric, and revegetate slopes with fast-growing, continuous, deep-rooting, and fire- and drought-resistant vegetation.
- Divert storm water runoff from slopes using temporary or permanent swales, slope drains (flexible down drains, pipe drops, or chutes) and interceptor ditches, which will be emplaced immediately after cutting or filling of the slopes and prior to revegetation.
- Retain existing vegetation wherever possible and minimize its removal.
- Hydroseed barren soil slopes with plant species that are fast-growing, with dense cover and fibrous root systems, adapted to poor soil conditions and to the local climate; that re-seed and re-grow well; that are fire- and drought-resistant; and that are low-cost and easy to maintain. Examples: Annual Ryegrass, Brome, Fescue, Oats, Barley, Clover, Trefoil, California poppy.
- Apply straw or other mulch after seeding and fertilizing barren slopes.
- Erect berm or hay bale barriers to direct runoff away from cleared areas.
- Cover stockpiles of soil.

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- An erosion and sedimentation control plan will be developed, using the Safety Element of the *Contra Costa County General Plan (1991)* and the *Contra Costa County Grading Ordinance* as guidelines. Caltrans may also have existing erosion control guidelines which could be consulted. The Erosion & Sedimentation Control Plan developed will include discussions of these elements: Project Description; Existing Site Conditions; Adjacent Areas; Soils; Critical Areas (high-erosion areas); Erosion and Sediment Control Measures; Temporary & Permanent Stabilization Measures; Maintenance Measures; and Map (showing existing and final contours, existing vegetation, soils, existing and final drainage patterns, limits of clearing and grading, and a storm water management system).

<p>III.H.3 Construction of the Project would occur in areas with unstable soils. Erosion and sedimentation could occur during construction.</p>	<p>III.H.3 See Mitigation Measure III.H.2.</p>	<p>See III.H.2 discussion.</p>	<p>See III.H.2 discussion.</p>	<p>See III.H.2 discussion.</p>	<p>See III.H.2 discussion.</p>
<p>III.H.4 Development of the Project including the widening of Marsh Creek Road could</p>	<p>III.H.4 Follow the performance standards listed below to mitigate earthquake-related impacts affecting development of a roadway in the right- of-way:</p>	<p>(1) Include mitigation in engineering and design plans.</p>	<p>(1) Check engineering and design plans. (2) Monitor construction to verify consistency with</p>	<p>Authority.</p>	<p>(1) Prior to approval of plans/ commencement</p>

<p>expose travelers to hazards such as ground shaking, liquefaction and flooding during a strong earthquake.</p>	<ul style="list-style-type: none"> • <u>Fault rupture.</u> Design roadways which cross surface fault traces with flexible materials to allow some lateral displacement or offset without rupturing severely, particularly overpass structures. • <u>Liquefaction.</u> Identify areas along the corridor that are prone to liquefaction during an earthquake, using existing data on soil types, depth to groundwater, and degree of saturation of soils during non-drought conditions. Avoid constructing the roadway in these areas where possible. Where this is not possible, excavate the natural soils and replace them with engineered fill. • <u>Ground shaking.</u> Avoid constructing elevated roadway structures across or close to known faults. Consider using engineered fill embankments rather than pile supports for any necessary roadway crossings, with culverts emplaced for stream crossings where appropriate. 	<p>engineering and design plans.</p>	<p>of construction. (2) Following completion of construction of each segment of roadway.</p>
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<p>III.H.5 Construction of the Project would remove lands designated prime agricultural and lands of statewide importance. Road construction could affect agricultural productivity of prime soils (SCS Grade 1 and 2) both directly and indirectly.</p>	<p>III.H.5 Avoid where possible constructing the roadway through areas containing prime agricultural soils, identified using maps produced by the U.S. Department of Agriculture Soil Conservation Service.</p>	<p>See III.B.2 discussion.</p>	<p>See III.B.2 discussion.</p>	<p>See III.B.2 discussion.</p>	<p>See III.B.2 discussion.</p>
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Hydrology, Drainage, and Floodplains					
<p>III.I.1 Construction of the Project could result in the alteration of floodplains and flood routing.</p> <p>Flooding beyond the capacity of creek crossings, including those at Sand Creek and Marsh Creek, would result in water elevations above the stream banks with extensive sideways expansion of the water surface. The flood waters would form a slow-moving backwater condition adjacent to the stream which would correspond to the area delineated within the 100-year flood zone.</p>	<p>III.I.1 Follow the performance standards listed below to mitigate the impacts of alteration of floodplains and flood routing resulting from development of a roadway in the Corridor:</p> <ul style="list-style-type: none"> • Confirm and finalize delineation of the 100- year floodplains during preliminary engineering of the roadway, using aerial photographs and site surveys. • Use FEMA FIRM maps and on-site data to determine the hydraulic flood elevations for those portions of the proposed roadway that pass through floodplains. • Design bridges, low bridges, and culverts for stream and artificial drainage crossings of the roadway to allow passage of normal flows without excessive hindrance. • To further enhance the likelihood of successful revegetation and long-term vegetative slope stabilization, topsoil materials to be disturbed or removed during construction will be carefully distinguished, stockpiled, and protected separately from other soil materials that would be reused in roadbed construction by the on-site geotechnical engineer. As soon as is possible, stockpiled topsoil materials will be reused as a component of the 	<p>(1) Consult with the Contra Costa County Conservation & Flood Control District and Corps about project development in floodplains and consequent mitigation measures.</p> <p>(2) Add measures agreed upon by all parties to construction contract specifications.</p>	<p>(1) Review final design plans to verify incorporation of mitigation measures; add to administrative record.</p> <p>(2) Inspect construction activity; verify compliance</p>	<p>Authority, Contra Costa County Conservation & Flood District, Corps, CDFG</p>	<p>(1) Prior to the approval of final design plans.</p>

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revegetation seedbed materials for all cut and fill slopes, where feasible.

The measures taken to mitigate these impacts must comply with the Public Facilities/Services Element (7.8: Drainage and Flood Control) and Safety Element of the *Contra Costa County General Plan* (1991). The State Route 4 Bypass Authority shall work with the Contra Costa County Conservation & Flood Control District to determine the extent of cumulative flood hazard posed by development of the East County Corridor roadway. The U.S. Army Corps of Engineers (Corps) and the California Department of Fish and Game (CDFG) will be contacted for permission to do construction within the floodway of stream channels and their adjacent floodplains. For any alteration to a streambed, work with the CDFG to develop a Streambed Alteration Agreement that will minimize construction impacts to floodplains.

<p>III.I.2 Construction of the Project would increase the amount of impervious surface in the region which would generate additional runoff that could affect groundwater resources.</p>	<p>III.I.2 Follow the performance standards listed below to mitigate the impacts of an increase in impervious surface in the region, which will increase storm water runoff and its vehicle- derived pollutants, due to development of the roadway:</p> <ul style="list-style-type: none"> • Divert storm water runoff from roadway embankments to minimize entrainment of soil particles and adsorbed pollutants, particularly at the crossings of canals and streams, using temporary or permanent swales, slope 	<p>(1) Add measures identified in the mitigation to final design plans.</p>	<p>(1) Review final design plans to verify incorporation of mitigation measures; add to administrative record. (2) Inspect construction activity; verify compliance.</p>	<p>Authority.</p>	<p>(1) Prior to the approval of final design plans. (2) After completion of each roadway segment.</p>
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	<p>drains (flexible down drains, pipe drops, or chutes), and interceptor ditches. Divert runoff to the nearest crossover point for discharge into existing drainage channels.</p> <ul style="list-style-type: none"> Use runoff detention basins to restrict peak flow from roadway and cleared right-of-way surfaces in areas where runoff is severe. Siting of detention basins may be accomplished using computer simulations for storm water runoff within the watersheds affected by the proposed roadway. On-site detention basins will be constructed following blue-green storage concepts such as using roadway embankments as flood control structures, ponding flows that exceed the pass-through rate used in the hydraulic design of culverts. Storm water detention ponds may also be constructed along portions of the roadway that cannot be elevated on embankments. Detention basins will be sited on soils that allow for groundwater recharge. 				
<p>III.I.4 Implementation of the Project could expose motorists to a project flood should reservoirs in the area be damaged by an earthquake and flood.</p>	<p>III.I.4 Follow the performance standards listed below to mitigate the impact of an earthquake- induced flood from a damaged reservoir to motorists using the proposed roadway:</p> <ul style="list-style-type: none"> Using maps of potential inundation routes from the Marsh Creek, Los Vaqueros, and other existing or proposed reservoirs prepared by the Office of Emergency Response, 	<p>(1) Add measures identified in the mitigation to final design plans.</p>	<p>(1) Review final design plans to verify incorporation of mitigation measures; add to administrative record. (2) Inspect construction activity; verify compliance.</p>	<p>Authority.</p>	<p>(1) Prior to the approval of final design plans. (2) After completion of each roadway segment.</p>

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determine which sections of the roadway will lie in the path of inundation.

- Determine the potential hydraulic flood elevations from these inundation events, and elevate the roadway along these sections, using anticipated flow rates in the hydraulic design of culverts or bridges at these elevated sections.

III.I.5 Construction of the Project would occur in areas of very slight topographic relief and would therefore have the potential to alter existing flow patterns of rainfall runoff.

III.I.5 Follow the performance standards identified under Mitigation Measures III.I.1 and III.I.2. In addition, implement standards listed below to further reduce the impacts of changes in existing flow patterns of streams and stormwater runoff due to development of the Project:

- Before altering natural surface water flow patterns, obtain a Section 404 Dredge & Fill Permit from the Corps, and a Streambed Alteration Agreement from the California Department of Fish & Game, as needed on a case-by-case basis. Follow the procedures developed by these agencies to prevent adverse impacts to water quality or habitat.
- Divert storm water runoff from roadway embankments and from cut or fill slopes associated with construction using temporary or permanent swales, slope drains (flexible down drains, pip drops, or chutes), and interceptor ditches.

See III.I.1 and III.I.2 discussion.

Biological Resources and Wetlands					
<p>III.J.1 Construction of the Project would indirectly affect habitat of individuals of Longhorn fairy shrimp, Vernal pool fairy shrimp, California linderiella, curved-foot hygrotos diving beetle, Ricksecker's water scavenger beetle, and California tiger salamander (refer to III.J.3 for discussions relating to California tiger salamander).</p>	<p>III.J.1 The seasonal pond located along the tributary to Kellogg Creek would be avoided by adoption of the Project, Cowell, or Nunn "Mitigated" Alternatives. As such, direct impacts to these species will be avoided. Standard provisions to control construction activities, protect water quality, and provide for dust and erosion control as well as the designation of Environmentally Sensitive Areas (ESAs) to protect this habitat will be implemented to substantially reduce or eliminate potential indirect impacts. Additional measures which will be instituted include clearly flattening the limits of this habitat, revegetating disturbed and adjacent areas with native species, utilizing erosion control techniques to reduce siltation and sedimentation of low lying areas, watering of the construction area to reduce dust impacts, and providing a biologist approved by USFWS and CDFG to ensure avoidance and to implement any necessary corrective measures during the construction period.</p>	<p>(1) Include dust, erosion control, and other habitat protection measures specified in the mitigation in the construction contract specifications.</p>	<p>(1) Review construction contract specifications to verify incorporation of mitigation measures; add to administrative record.</p> <p>(2) Inspect construction activity periodically; verify compliance.</p>	<p>Authority, USFWS, Corps, CDFG.</p>	<p>(1) Prior to approval of construction contract.</p> <p>(2) Periodically during construction, as specified by USFWS and CDFG.</p>
<p><i>(As a result of more detailed project design and subsequent wetland delineations, it was found that the previously identified seasonal pond located along the tributary to Kellogg Creek is located outside the project ROW and isn't</i></p>					

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categorized as Waters of the U.S. As a result, the pond will not be affected by the project.)

III.J.3 Construction of the Project would affect habitat and could directly or indirectly cause destruction of individuals of California tiger salamander.

III.J.3-1 **Mitigation for potential impacts to wildlife habitat areas will be based upon the mitigation guidance already developed in the 1999 Biological Opinion, and will involve fee contributions to the East Contra Costa Habitat Conservation Plan program (HCP). The required mitigation for any incidental take of endangered species will be formalized in the HCP permit application. an updated Biological Opinion to be issued by the U.S. Fish and Wildlife Service, in response to the current USACE application.**

Measures to reduce the identified impact to below the level of significance are identical to those described under Mitigation Measure III.J.1.

In addition, the Authority shall consult with CDFG and USFWS to determine if surveys for suitable aestivation habitat occurs within the Project, Cowell, or Nun n "Mitigation" Alternatives. Based on survey results and/or consultation, the Authority shall implement measures to reduce the identified impact (if any) as specified by USFWS and CDFG. This may include limiting construction within these areas to defined seasons, detailed construction monitoring, and/or acquisition of additional suitable

(1) Include dust, erosion control, and other habitat protection measures specified in the mitigation in the construction contract specifications.
(2) Consult with CDFG and USFWS.

(1) Review construction contract specifications to verify incorporation of mitigation measures; add to administrative record.
(2) Inspect construction activity periodically; verify compliance.

Authority, USFWS, Corps, CDFG.

(1) Prior to approval of construction contract.
(2) Periodically during construction, as specified by USFWS and CDFG.

restoration habitat.

III.J.4 Construction of the Project would affect habitat and could directly or indirectly cause destruction of individuals of California red-legged frog (*Rana aurora draytonii*).

III.J.4-I **Mitigation for potential impacts to wildlife habitat areas will be based upon the mitigation guidance already developed in the 1999 Biological Opinion, and will involve fee contributions to the East Contra Costa Habitat Conservation Plan program (HCP). The required mitigation will be formalized in The required mitigation for any incidental take of endangered species will be formalized in the HCP permit application. an updated Biological Opinion to be issued by the U.S. Fish and Wildlife Service, in response to the current USACE application.**

Specific surveys to determine the status of this species will be conducted from February through May by a qualified biologist hired by the Authority prior to ROW construction. Documentation of the survey, including methodology, textual discussion of individuals or populations of these species (if present), will be forwarded to the USFWS and CDFG for their review. If accepted survey methodologies are adhered to and this species is not located within the ROW, no impact would occur and no further mitigation is necessary.

(1) Authority will hire a qualified biologist to perform status surveys of species impacted as stated in mitigation.

(2) Forward survey documentation to USFWS and CDFG for review.

(1) Ensure that biological surveys are carried out by qualified individual; add results to administrative record.

(2) Add copy of surveys to administrative record.

Authority, USFWS, CDFG.

(1) February through May prior to construction.

(2) Prior to construction.

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III.J.4 Continued	<p><u>III.J.4-II <i>Mitigation for potential impacts to wildlife habitat areas will be based upon the mitigation guidance already developed in the 1999 Biological Opinion, and will involve fee contributions to the East Contra Costa Habitat Conservation Plan program (HCP). The required mitigation for any incidental take of endangered species will be formalized in the HCP permit application. an updated Biological Opinion to be issued by the U.S. Fish and Wildlife Service, in response to the current USACE application.</i></u></p>	No action necessary.	No action necessary.	Not applicable.	Not applicable.
	<p>Adoption of the Project, Cowell, or Nunn “Mitigated” Alternatives would avoid the seasonal pond located along the tributary to Kellogg Creek and would diminish impacts to Marsh Creek (because the proposed Marsh Creek Road Interchange would be located away from this drainage).</p>				
	<p>If individuals or populations of this species are present and will be impacted by ROW development, the Authority shall initiate informal consultation with USFWS and CDFG. The Authority shall prepare and implement a mitigation program approved by USFWS and CDFG prior to the initiation of any ground clearing, grading, construction, or other activities which could disrupt this species. The mitigation program shall include, but not be limited to, the following standards:</p> <p>The mitigation plan shall provide for no</p>	<p>(1) Authority shall initiate informal discussion with USFWS and CDFG.</p> <p>(2) Authority shall prepare and implement a mitigation program approved by USFWS and CDFG, incorporating requirements stated in mitigation.</p>	<p>(1) Add records of discussions to administrative record.</p> <p>(2) Monitor implementation of mitigation plan on annual basis; add results to administrative record.</p>	<p>Authority, USFWS, CDFG.</p>	<p>(1) Prior to construction.</p> <p>(2) Mitigation Plan shall be prepared, approved by USFWS and CDFG, and implemented prior to construction. Plan would be monitored annually for 10</p>

~~net loss of California red-legged frog currently utilizing the project ROW.~~

years.

~~Mitigation shall follow the hierarchy outlined in Section 15370 of the CEQA Guidelines, which directs mitigation to~~

- ~~• Avoid the impact altogether by not taking certain action;~~
- ~~• Minimize impacts by limiting the degree of magnitude of an action and its implementation;~~
- ~~• Rectify the impact by repairing, rehabilitating, or restoring the impacted environment;~~
- ~~• Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action;~~
- ~~• Compensate for the impact by replacing or providing substitute resources of environments.~~

~~Any mitigation plan shall be monitored annually for five years (or a period specified by the resource agencies) after implementation to assure the success of the mitigation. If at any point during the monitoring period, the mitigation plan is judged to have not been successful, the mitigation action shall be re-initiated, after modification as necessary, and monitored for a succeeding five-year period.~~

~~If mitigation is not accomplished within the area affected, the mitigation shall take~~

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~~place adjacent to existing significant populations of this species, if any such areas exist and are not proposed for elimination. In general, off-site mitigation should occur as close to the affected habitat as possible. The USFWS and CDFG may require that these areas be acquired by the Authority and be set aside in perpetuity.~~

~~Application of chemicals and intrusion during construction and operational phases of the ROW shall be prohibited to maintain the integrity of this habitat.~~

~~Standard provisions to control construction activities, protect water quality, and provide for dust and erosion control as well as the designation of Environmentally Sensitive Areas (ESAs) to protect habitat for this species will be implemented to substantially reduce or eliminate potential indirect impacts. Additional measures which will be instituted include temporal separation of construction activities and the breeding season, clearly flagging the limits of this habitat, revegetating disturbed and adjacent areas with species native to the area, utilizing erosion control techniques to reduce siltation and sedimentation of low-lying areas, watering of the construction area to reduce dust impacts, and providing an on-site biologist to ensure avoidance and to implement any necessary corrective measures during the construction period. (UNAVOIDABLY~~

SIGNIFICANT)					
<p>III.J.5 Construction of the Project would affect habitat and could directly or indirectly cause destruction of individuals of Western spadefoot toad (<i>Scaphiopus hammondi</i>).</p>	<p>III.J.5 <u>Mitigation for potential impacts to wildlife habitat areas will be based upon the mitigation guidance already developed in the 1999 Biological Opinion, and will involve fee contributions to the East Contra Costa Habitat Conservation Plan program (HCP). The required mitigation will be formalized in the HCP permit application. an updated Biological Opinion to be issued by the U.S. Fish and Wildlife Service, in response to the current USACE application.</u></p> <p>Measures to reduce the identified impact to below the level of significance are identical to those described under Mitigation Measure III.J.4.</p>	<p>(1) Authority will hire a qualified biologist to perform status surveys of species impacted as stated in mitigation.</p> <p>(2) Forward survey documentation to USFWS and CDFG for review.</p>	<p>(1) Ensure that biological surveys are carried out by qualified individual; add results to administrative record.</p> <p>(2) Add copy of surveys to administrative record.</p>	<p>Authority, USFWS, CDFG.</p>	<p>(1) February through May prior to construction.</p> <p>(2) Prior to construction.</p>
<p>III.J.6 Construction of the Project would affect habitat and could directly or indirectly cause destruction of individuals of Northwestern pond turtle (<i>Clemmys marmorata marmorata</i>).</p>	<p>III.J.6-I <u>Mitigation for potential impacts to wildlife habitat areas will be based upon the mitigation guidance already developed in the 1999 Biological Opinion, and will involve fee contributions to the East Contra Costa Habitat Conservation Plan program (HCP). The required mitigation will be formalized in the HCP permit application. Biological Opinion to be issued by the U.S. Fish and Wildlife Service, in response to the current USACE application.</u></p> <p>Prior to construction, specific surveys to determine the status of this species within the ROW will be conducted. Documentation of the survey, including methodology, textual discussion of</p>	<p>(1) Authority will hire a qualified biologist to perform status surveys of species impacted as stated in mitigation.</p> <p>(2) Forward survey documentation to USFWS and CDFG for review.</p>	<p>(1) Ensure that biological surveys are carried out by qualified individual; add results to administrative record.</p> <p>(2) Add copy of surveys to administrative record.</p>	<p>Authority, CDFG, USFWS.</p>	<p>(1) Prior to construction.</p> <p>(2) Prior to construction.</p>

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~~individuals or populations of this species (if present), will be forwarded to the USFWS and CDFG for their review. If accepted survey methodologies are adhered to and this species is not located within the ROW, no further mitigation is necessary.~~

~~III.J.6 II Adoption of the Project, Cowell, or Nunn “Mitigated” Alternatives would diminish impacts to Marsh Creek (because the proposed Marsh Creek Road Interchange would be located away from this drainage). Standard provisions to control construction activities, protect water quality, and provide for dust and erosion control as well as the designation of ESAs to protect this habitat will be implemented to substantially reduce or eliminate potential indirect impacts. Additional measures which will be instituted include clearly flagging the limits of this habitat, revegetating disturbed and adjacent areas with native species, utilizing erosion control techniques to reduce siltation and sedimentation of low lying areas, watering of the construction area to reduce dust impacts, and providing a biologist approved by USFWS and CDFG to ensure avoidance and to implement any necessary corrective measures during the construction period.~~

~~Streams supporting turtles will be temporarily dammed up both up and downstream of construction and turtles relocated upstream of construction activities by a qualified biologist. Temporary dams will remain in place until construction activities have ceased.~~

~~Additional mitigation may include acquisition~~

(1) Include dust, erosion control, and other habitat protection measures specified in the mitigation in the construction contract specifications.

(1) Review construction contract specifications to verify incorporation of mitigation measures; add to administrative record.

(2) Inspect construction activity periodically; verify compliance.

Authority, USFWS, CDFG.

(1) Prior to approval of construction contract.

(2) As specified by USFWS and CDFG.

~~of suitable habitat that will be set aside in perpetuity (by the Authority) or enhancement of suitable habitat proximate to the ROW. The mitigation lands should be geographically proximate to the project right of way and be selected by a qualified biologist. A monitoring plan to ensure the success of the mitigation bank or enhancement will be implemented for a minimum of five years (or a period specified by the resource agencies).~~

III.J.7 Construction of the Project would affect habitat and could directly or indirectly cause destruction of individuals of California Horned Lark (*Eremophila alpestris actiai*).

III.J.7 Mitigation for potential impacts to wildlife habitat areas will be based upon the mitigation guidance already developed in the 1999 Biological Opinion, and will involve fee contributions to the East Contra Costa Habitat Conservation Plan program (HCP). The required mitigation will be formalized in the HCP permit application, an updated Biological Opinion to be issued by the U.S. Fish and Wildlife Service, in response to the current USACE application.

~~Prior to construction, specific surveys to determine the status of this species within the ROW will be conducted. Documentation of the survey, including methodology, textual discussion of individuals or populations of this species (if present), will be forwarded to the USFWS and CDFG for their review. If accepted survey methodologies are adhered to and this species is not located within the ROW, no further mitigation is necessary.~~

(1) Authority will hire a qualified biologist to perform status surveys of species impacted as stated in mitigation.

(1) Forward survey documentation to CDFG and USFWS for review.

(1) Ensure that biological surveys are carried out by qualified individual; add results to administrative record.

(2) Add copy of surveys to administrative record.

Authority, CDFG, USFWG.

(1) Prior to construction.
(2) Prior to construction.

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<p>Construction (in areas found to support horned lark during the pre-construction surveys) will not proceed until after horned lark nesting season. If individuals or populations of horned lark remain within the ROW after nesting, the Authority will hire a qualified biologist approved by USFWS and CDFG to institute exclusionary methods to remove and keep horned larks out of the construction zone. This will include a monitoring plan to ensure the success of the mitigation.</p> <p>Standard provisions to control construction activities and provide for dust and erosion control as well as the designation of ESAs to protect horned lark habitat will be implemented to substantially reduce or eliminate potential indirect impacts. Additional measures which will be instituted include temporal separation of construction activities and horned lark nesting season, clearly flagging the limits of this habitat, revegetating disturbed and adjacent areas with native species, watering of the construction area to reduce dust impacts, and providing an on-site biologist to ensure avoidance and to implement any necessary corrective measures during the construction period.</p>	<p>(3) Include restriction in construction contract that only allows construction activities in areas that support horned lark to commence once nesting season is over.</p> <p>If horned lark remains, Authority will hire qualified biologist to remove lark from construction area.</p> <p>(4) Include dust, erosion control, and other habitat protection measures specified in the mitigation in the construction contract.</p>	<p>(3-4) Review construction contract to verify incorporation of mitigation measures; add to administrative record.</p> <p>Inspect construction activity periodically; verify compliance.</p>	<p>Authority, CDFG, USFWG.</p>	<p>(3-4) Prior to approval of construction contract.</p> <p>As specified by USFWS and CDFG.</p>
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<p>III.J.8 Construction of the Project would indirectly affect habitat of Pallid bat and Townsend's western big-eared bat.</p>	<p>III.J.8 Adoption of the Project, Cowell, or Nunn "Mitigated" Alternatives would avoid the sandstone caves that provide roosting habitat for these bats and would eliminate direct impacts to these species (if present). Although adoption of these alternatives would avoid direct impacts to this species, ROW development in close proximity to these caves would result in increased noise and human disturbance and may lead to bat abandonment of this habitat.</p>	<p>See discussion below.</p>	<p>See discussion below.</p>	<p>See discussion below.</p>	<p>See discussion below.</p>
	<p>The Authority will coordinate with the resource agencies to determine acceptable mitigation. This may include acquisition of suitable habitat that will be set aside in perpetuity (by the Authority). The mitigation lands should be geographically proximate to the project right-of-way and be selected by a qualified biologist. A monitoring plan to ensure the success of the mitigation bank will be approved by USFWS and CDFG and implemented for a minimum of ten years. (UNAVOIDABLY SIGNIFICANT)</p>	<p>(3) If necessary, Authority shall initiate informal discussion with USFWS and CDFG. (4) Authority shall prepare and implement a mitigation program, incorporating requirements stated in mitigation.</p>	<p>(3) Add records of discussions to administrative record. (4) Monitor implementation of mitigation plan on annual basis; add results to administrative record.</p>	<p>Authority, USFWS, CDFG.</p>	<p>(3) Prior to construction. (4) Mitigation Plan shall be prepared, approved by USFWS and CDFG, and implemented prior to construction. Plan would be monitored annually for 10 years.</p>
<p>III.J.9 Construction of the Project would affect habitat and could directly or indirectly cause destruction of individual of San Joaquin Kit fox</p>	<p>III.J.-I <u>Mitigation for potential impacts to wildlife habitat areas will be based upon the mitigation guidance already developed in the 1999 Biological Opinion, and will involve fee contributions to the East Contra Costa Habitat Conservation Plan program (HCP). The required mitigation will be formalized in the HCP permit</u></p>	<p>(1) Authority will hire a qualified biologist to perform status surveys of species impact as stated in mitigation. (2) Forward survey documentation to CDFG and</p>	<p>(1) Ensure that biological surveys are carried out by qualified individual; add results to administrative record. (2) Add copy of surveys to administrative record.</p>	<p>Authority, CDFG, USFWS, Corps.</p>	<p>(1) Sixty days prior to construction. (2) Prior to construction.</p>

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<p>(Vulpes macrotis mutica)</p>	<p><u>application. an updated Biological Opinion to be issued by the U.S. Fish and Wildlife Service, in response to the current USACE application.</u></p> <p>The Authority shall survey the portion of the ROW south of Marsh Creek Road according to accepted USFWS and CDFG methodologies (preferred survey season occurs between March 1 and July 31). Results of these surveys will be submitted to USFWS and CDFG. If no evidence of this species is located within the ROW, no further mitigation is required.</p>	<p>USFWS for review.</p>	<p>(3) See mitigation for den protection and/or den replacement procedures.</p>	<p>(3) Verify compliance with mitigation plan during construction; add results to administrative record.</p>	<p>Authority, CDFG, USFWS, Corps.</p>	<p>(3) As specified by USFWS and CDFG.</p>
	<p>III.J.9 II The ROW will be surveyed within 60 days prior to initiation of construction by a qualified biologist approved by USFWS and CDFG (preferred survey season occurs between March 1 and July 31). Results of this survey will be submitted to the USFWS and the CDFG.</p> <p>If dens are located outside the immediate construction ROW, each den will be protected by fencing about a predetermined buffer zone. Flagging, signing, and exclusion of all construction and operational disturbances will be required. If destruction of a den(s) cannot be reasonably avoided, den removal should be accomplished according to USFWS guidelines.</p> <p>The amount of San Joaquin kit fox habitat lost to development of Row, as determined the pre-construction kit fox survey, would require habitat compensation which offsets the area removed by development through protection/restoration of a suitable area in</p>					

~~perpetuity (permanently dedicated by the Authority to public ownership and management or through establishment of a private, non-profit land trust or land conservancy organization to take legal title to mitigation lands and be responsible for their maintenance). Replacement of dens destroyed through site development would also likely be required. The replacement ratio (area protected/restored: area lost) may be set by the resource agencies at 3:1 (that is, for every one acre of kit fox habitat destroyed, three acres of suitable habitat will be acquired by the Authority, unless otherwise stipulated by USFWS and CDFG). Mitigation lands will consist of one contiguous parcel of high quality kit fox habitat in the immediate vicinity. Such an area would include flat or low rolling hills near known kit fox populations.~~

~~The Authority, in consultation with USFWS and CDFG, will determine success criteria for mitigation lands. The Authority will be responsible for monitoring mitigation lands for kit fox habitat suitability and use and will set aside an operations and maintenance budget sufficient to meet the needs of the mitigation and monitoring program for a minimum of ten years. Annual monitoring reports will be submitted to USFWS and CDFG. If the success criteria agreed on are not met, the Authority will be responsible for corrective measures outlined by USFWS and CDFG. (UNAVOIDABLY SIGNIFICANT)~~

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<p>III.J.10 Construction of the Project would impact seasonal wetlands. The loss of degradation of these communities would be considered significant because of their local and regional scarcity, potential classification as jurisdictional wetlands, ongoing community depletion, increased threats to dependent special status species, and their importance to dependent common plant and wildlife species.</p>	<p>III.J.10 Partial mitigation may be achieved through a synthesis of both retention/enhancement of portions of the existing wetlands and in-kind enhancement mitigation of other wetland communities in the immediate vicinity to achieve an overall “no net loss” of wetland acreage or value. Three levels of mitigation are considered in this program: 1) avoidance of wetlands to the extent possible, 2) creation of new wetlands for those areas lost or altered, and 3) acquisition and preservation of mitigation lands that contain high quality, in-kind wetlands. The plan proposes the following:</p> <ul style="list-style-type: none"> • Road crossings over open channels and drainage ditches should be bridged when possible. • Establish a minimum setback or buffer between the development area (edge of grading, pavement and structures) and the edge of existing wetlands which are proposed to be preserved. The width of this setback shall vary based on the quality of the wetland the resource that is being protected. In general, the setback shall be no less than 100 feet and shall include as much of the natural watershed as possible. • All wetland vegetation and hydrology of areas preserved shall be maintained. • Require restoration or creation of new wetlands at a ratio of 3:1 for any acreage of wetland that is lost or 	<p>(1) Develop a wetlands mitigation plan incorporating measures identified in this mitigation.</p> <p>(2) Finalize mitigation plan for wetlands restoration when final roadway alignment maps are available, incorporating measures in this mitigation.</p> <p>(3) Develop and submit a monitoring and management plan with final wetlands mitigation plan incorporating measures in this mitigation.</p> <p>(4) Continue coordinating with the Corps to determine the extent of their jurisdiction pursuant to Section 404(b)(1) of the Federal Clean Water Act and need for additional permits for wetlands and/or waters that support federally listed species.</p>	<p>(1) Add a copy of draft plan to the administrative record.</p> <p>(2) Submit final plan to Corps and CDFG for approval.</p> <p>(3) Submit as part of final plan to Corps and CDFG for approval.</p> <p>(4) Add discussions with Corps to administrative record.</p>	<p>Authority, Corps, CDFG.</p>	<p>(1) Prior to construction.</p> <p>(2) Prior to approval of grading permit or as part of Final Map approval process.</p> <p>(3) Begin implementation prior to construction. Plan would be monitored annually for 10 years.</p> <p>(4) Ongoing.</p>
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altered by development. General guidelines for selecting areas for wetlands creation area are as follows:

- Locate near or adjacent to existing manmade drainages, ponds, and seasonal wetlands. With proper excavation and contouring, channels and existing pond areas can provide a source of water during winter and spring seasons.
 - Locate where elevations are low and where wetlands can either be protected or buffered. Such areas would be least impacted by human activity and would thus be more inviting for wildlife use.
 - Mitigation sites shall be located outside of developed areas and (if possible) linked with appropriate natural travel corridors to facilitate wildlife movement and to minimize isolation and fragmentation of the habitats.
 - Created wetlands shall be revegetated with native wetland species.
 - The plan shall include an implementation schedule relative to project construction (showing that plan approval would occur and wetlands creation begin prior to the loss of existing wetlands).
 - The use of non-biodegradable
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herbicides and pesticides shall be avoided.

- Alternatively, the Authority may compensate for wetland loss through acquisition/protection of a suitable mitigation area (one that contains wetlands of similar function and value) in perpetuity. Replacement ratio (protected: area lost) should be set at ~~2~~:1.
 - The Authority, in consultation with CDFG and USFWS, shall locate a suitable mitigation area and purchase this land prior to construction. This land would then be permanently dedicated by the Authority to public ownership and management, or the Authority could establish a private, non-profit land trust or land conservancy organization to take legal title to mitigation lands and be responsible for their maintenance. In either case, an operations and maintenance budget sufficient to meet the needs of the organization for five years (or a period specified by the resource agencies) should be established.
 - The Authority shall monitor the use and condition of the mitigation lands for a minimum period of five years. Annual reports documenting general condition, habitat (vegetation) characterization, and wildlife use will be submitted to USFWS and CDFG for
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their review.

The final mitigation plan for wetlands restoration shall be based on the final roadway alignment map. The final mitigation plan shall be submitted as part of the Final Map process or prior to approval of a grading permit, whichever occurs first. Modifications of the final plan may be required as a result of permit requirements imposed by the Corps or CDFG. This plan may include the following components, as required by the resource agencies:

- A plan identifying existing topography and proposed grading. Grading shall identify proposed excavation and fill as well as earth movement quantities. The grading plan shall also identify final hydrology and drainage supported by engineering calculations.
 - Cross-sections of proposed grading for wetlands restoration.
 - A planting program that will include planting for all wetland areas and surrounding buffer zones. Selected species shall be consistent with the guidelines established by planting list approved by the Corps and CDFG (if applicable).
 - The final program shall include site construction techniques for resource protection. Techniques shall include fencing around existing wetlands and detailed erosion and sediment control
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measures.

- A final irrigation plan that will include specifications on installation and a schedule identifying the frequency of irrigation for each selected area.

A monitoring and management plan shall be submitted with the final mitigation plan. This program shall identify monitoring and management techniques for a period of ten years (minimum) following implementation. The monitoring and management plan shall include the following components:

- The plan shall establish success criteria and describe steps to be taken to replace vegetation or modify wetland management not meeting the success criteria.
 - Plant survival shall be evaluated with field surveys. Trees and shrubs shall be tagged during the first year of implementation, catalogued in a database, and surveyed for survival, growth and vigor. Grasses and forbs shall be surveyed for species richness and cover.
 - Monitoring reports are to be prepared annually. At the end of the ten-year monitoring period, a compilation of the annual reports shall be submitted to the City and to CDFG. The annual reports shall include monitoring data and shall discuss any corrective actions needed. At the end of the ten-year monitoring period, the report shall
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evaluate the success of the mitigation program against the initial goals and purpose. Appropriate corrective actions shall be taken if the initial goals and purpose have not been met.

Management techniques for wetland development shall include recommendations for hydrology/water levels and flushing.

In addition to the mitigation outlined above, the Authority is currently coordinating with the Corps to determine the extent of their jurisdiction pursuant to Section 404 of the Federal Clean Water Act. Corps permitting for the roadway may include a series of permits, for example, separate nationwide permits for stream corridors and possibly an individual permit for wetlands and/or waters that support federally listed species. The following measures may be required by the Corps:

- Conduct a Section 404 (b)(1) alternatives analysis for areas covered under an individual permit. In order for the Corps to issue an individual permit to allow the filling to proceed, it must be demonstrated that there are no practicable alternatives, either on- or off-site, that would avoid or minimize filling of wetlands, such as through Project alteration.
- If no such alternatives are found, the Corps would require mitigation for the portion of wetland acreage lost or

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degraded to development. This could be at least partially accomplished by purchasing, enhancing/restoration, monitoring, and dedicating as permanent open space lands containing similar wetlands in the vicinity of the proposed expressway. A detailed evaluation of the hydrological effects of the proposed Project on adjacent wetlands would likely also be required to ensure adequacy of this mitigation because of the development's location within at least a portion of these wetland's watershed. **(UNAVOIDABLY SIGNIFICANT)**

<p>III.J.11 Construction of the Project would impact riparian corridors. Implementation of the Project would result in the loss of approximately 1.04 acres of stream channel. Riparian vegetation occurs along Sand Creek, the tributary to Deer Creek, and Marsh Creek. The remaining waterways within the ROW support only herbaceous or weedy vegetation.</p>	<p>III.J.11 Four levels of mitigation are considered as part of this plan: 1) all tree preservation techniques, 2) redesign of the roadway to protect significant trees, 3) a revegetation program, and 4) habitat acquisition. This plan proposes the following:</p> <ul style="list-style-type: none"> • Conduct surveys to characterize riparian habitats that will be lost or degraded due to project implementation. These surveys shall include documentation of all native trees six inches at diameter breast height (dbh) or greater which would be directly or indirectly affected due to the Project. This survey should be conducted by a qualified plant ecologist, and should include identification of species, the dbh of 	<p>(1) Develop a riparian corridor mitigation plan incorporating measures identified in this mitigation.</p> <p>(2) Finalize mitigation plan for riparian corridor restoration when final roadway alignment maps are available, incorporating measures in this mitigation.</p> <p>(3) Develop and submit a monitoring and management plan with final riparian corridor mitigation plan incorporating measures in this mitigation.</p> <p>(4) Enter into a "Streambed Alteration Agreement" (SAA)</p>	<p>(1) Add a copy of draft plan to the administrative record.</p> <p>(2) Submit final plan to Corps and CDFG for approval.</p> <p>(3) Submit as part of final plan to Corps and CDFG for approval.</p> <p>(4) Add agreement and discussions with CDFG to administrative record.</p>	<p>Authority, Cities of Antioch and Brentwood, CDFG.</p>	<p>(1) Prior to construction.</p> <p>(2) Prior to approval of grading permit process.</p> <p>(3) Begin implementation prior to construction. Plan would be monitored annually for 10 years.</p> <p>(4) Prior to construction.</p>
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each individual, condition of tree, location on a topographic map, and general nature of impact each tree will receive due to the proposed Project.

- Redesign the roadway to reduce significant tree removal.
- Obtain the necessary permission for vegetation removal from the City of Antioch and/or the County of Contra Costa (depending on location of removed vegetation).
- Trees to be retained within the Project right-of-way should be fenced off at a distance of 1.5 times the drip-line (approximately equal to the area covered by the tree’s canopy) prior to any construction- related activities in order to prevent accidental damage due to construction activities. These fences should remain in place until all construction-related activities have ceased.
- Irrigation or potential runoff associated with the proposed Project should be diverted away. Revegetate along the roadway system where grading (cut and fill) results in tree removal.
- An on-site acorn and cutting collection system shall be implemented. Acorns and cuttings shall be collected from the immediate area during selected times of the year and used for establishment of seedlings/saplings. This collection system shall be a priority as use of on-

with the CDFG pursuant to Fish and Game Code 1601 to allow alteration and bridging of creeks under current corridor plans.

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site material promotes revegetation with native plantings and genetic sustainability within the population

- Require replanting at a ratio of 1:1 for native trees lost that are less than 2 inches in trunk diameter. In general, require a 3:1 (or an amount specified by the resource agencies) replanting for loss of native trees with trunk diameters of 2 inches or greater. Replacement vegetation should be planted in various age and size classes to mimic natural community structure.
- Plant a combination of species, primarily focusing on oaks and natives. Trees shall be planted at a combination of sizes, ranging from seedlings on up. Spacing shall range from 5 feet to 15 feet, depending on species, location, and size of initial planting.

The final mitigation plan for tree/vegetation planting shall be based on the final roadway design layout. The final mitigation plan shall be submitted prior to approval of a grading permit for improvement plans, whichever occurs first. Prior to implementation, the final plan shall be approved by the Cities of Antioch and Brentwood, Contra Costa County, and CDFG. This plan may include the following components:

- A plan identifying existing topography and proposed grading. Grading shall identify proposed excavation and fill as well as earth movement quantities. The grading plan shall also identify final hydrology and drainage supported by engineering calculations.
 - A planting program that will include selected species consistent with the guidelines established by CDFG.
 - The final program shall include site construction techniques for resource protection. Techniques shall include fencing around existing trees proposed for preservation at a distance of 1.5 times the distance from the trunk to the dripline, establishment of a root protection zone for trees, and detailed erosion and sediment control measures.
 - Proposed grade changes within tree root zones shall be reviewed to identify trees that could be jeopardized in the long term (that would die slowly following construction) and implement measures to prevent damage to those trees.
 - Construction around trees shall be monitored periodically by a qualified ecologist to ensure that trees are not damaged or removed unnecessarily.
 - A final irrigation plan that will include specifications on installation and a schedule identifying the frequency of
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irrigation for each selected area.

- Long-term irrigation or potential runoff associated with the proposed development shall be diverted away from retained oaks to guard against fungal root infections.
- Replacement trees shall be planted as contiguous habitat, and not as isolated, scattered trees, to provide similar community structure and habitat value for wildlife.
- The Authority shall provide calculations of 1) riparian woodland directly and indirectly impacted due to Project implementation, 2) riparian woodland retained within the corridor, 3) riparian woodland proposed to be created (this calculation shall not include areas planted with trees not native to the area or trees planted along the roadway), and 4) riparian woodland acquired and preserved as a mitigation area.

A monitoring and management plan shall be submitted with the final mitigation plan. This program shall identify monitoring and management techniques for a period of five years (or a period specified by the resource agencies) following implementation. The monitoring and management plan shall include the following components:

- The plan shall establish success criteria and describe steps to be taken to replace vegetation not meeting the success criteria.
- Plant survival shall be evaluated with field surveys. Trees and shrubs shall be tagged during the first year of implementation, catalogued in a database, and surveyed for survival, growth and vigor.
- Monitoring reports are to be prepared annually. At the end of the ten-year monitoring period, a compilation of the annual reports shall be submitted to the Cities of Antioch and Brentwood, Contra Costa County, and to CDFG. The annual reports shall include monitoring data and shall discuss any corrective actions needed and/or taken. At the end of the ten-year monitoring period, the report shall evaluate the success of the mitigation program against the initial goals and purpose. Appropriate corrective action shall be taken if the initial goals and purpose have not been met.

In addition to the above measures, the Authority shall enter into a “Streambed Alteration Agreement” (SAA) with CDFG pursuant to Fish and Game Code 1601-1603. This agreement is necessary to allow alteration and bridging of creeks under current corridor plans. CDFG will only grant a SAA once all other permits (for example,

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Corps, USFWS) and certifications are obtained. Construction would not be permitted by CDFG until a SAA is executed.

- A formal creek realignment and revegetation plan should be submitted to CDFG for their review and approval. Such a plan should include planned dimensions of modified watercourses; documentation of use of specific native species of trees, shrubs, and herbs as riparian vegetation; methods for bank stabilization/erosion control both during construction and operational phases; methods for maintaining plantings in a healthy state given the soil characteristics; appropriate contingency plans; maintenance requirements; and monitoring periods and conditions. (Note: species used for the revegetation of individual creeks should be consistent with native species currently occurring along these waterways.) If bank stabilization or flood control measures are deemed necessary, creek modifications should be devised on a creek-by-creek basis. Lining of waterways with concrete should be avoided because of the detrimental effect this has on the aquatic environment. Other techniques that could be used instead of concrete include wood crib walls and rock and earth filled gabions that provide a medium for native plantings.
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- In addition to the above mitigations, streams and creeks may also be classified as “waters of the US” subject to Corps jurisdiction and would require the above mitigations/permits in addition to those listed under Mitigation Measure III.J.12 above.

(UNAVOIDABLY SIGNIFICANT)

<p>III.J.13 Development of the Project would result in a loss of non-native grassland.</p>	<p>III.J.13 Implementation of measures identified under Mitigation Measure III.J.9 would reduce project-related impacts to non-native grasslands to below the level of significance.</p>	<p>See III.J.9 discussion.</p>	<p>See III.J.9 discussion.</p>	<p>See III.J.9 discussion.</p>	<p>See III.J.9 discussion.</p>
<p>III.J.16 Development of the project corridor could facilitate increased growth in eastern Contra Costa County, which could increase significant impacts to biological resources.</p>	<p>III.J.16 Condition approval of any development project in the State Route 4 Bypass area, whether by the County of Contra Costa or the Cities of Antioch or Brentwood, upon provision of mitigation measures to reduce identified biological resource impacts to below the level of significance.</p>	<p>(1) Incorporate mitigation measure into project approval process for the County of Contra Costa or the Cities of Antioch or Brentwood.</p>	<p>(2) Add condition of approval to administrative record.</p>	<p>Authority.</p>	<p>(1) Ongoing.</p>

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Cultural Resources					
<p>III.K.1 Although no archaeological or subsurface cultural resources of significance or potential significance were observed along the segments of the Project accessible to field reconnaissance, impacts to undiscovered prehistoric resources could occur through implementation of the Project.</p>	<p>III.K.1(a) Retain the services of a qualified archeological consultant to serve as an on-site archeological monitor to provide appropriate consulting services throughout the course of grading and other topographic modification associated with the proposed Project. The principal task of the designated archaeological consultant would be to insure that no significant cultural resources of either prehistoric/protohistoric or historic period age or character would suffer adverse impacts as a consequence of planned construction within the Project right-of-way.</p> <p>III.K.1 (b) If prehistoric and/or historic cultural resources are discovered during construction work, avoid damaging identified archaeological sites to the extent feasible. Examples of such methods include</p> <ul style="list-style-type: none"> • avoiding identified archaeological sites, • “capping” or covering identified archaeological sites with a layer of soil before building any homes, roadways, or other structures (capping may be used where the soils to be covered will not suffer serious compaction, the covering materials are not chemically active, the site is one in which the natural processes of deterioration have been effectively arrested, and the site has been recorded), or 	<p>(1) Include requirement in construction contract specifications that cultural resources mitigations be observed.</p> <p>(2) Contract a qualified archaeologist.</p> <p>(3) If cultural resources are encountered, have the archaeological consultant inspect the finding.</p> <p>(4) Carry out recommendations of archaeological consultant regarding appropriate mitigation, including any necessary resource exploration, avoidance, preservation, or excavation.</p>	<p>(1) Review construction contract specifications.</p> <p>(2) Ensure that a qualified archaeological consultant is contracted.</p> <p>(3) Monitor construction to ensure that archaeologist is consulted when necessary and mitigations are carried out.</p> <p>(4) Add any plans and reports regarding cultural resources affected by the proposed Project to the administrative record.</p>	<p>Authority.</p>	<p>(1) Prior to approval of contract.</p> <p>(2) Prior to commencement of construction.</p> <p>(3) Monthly during construction period.</p> <p>(4) As plans and reports are generated.</p>

- deeding identified archaeological sites into permanent conservation easements.

III.K.1(c) If archaeological resources are discovered during development, suspend all work in the immediate vicinity (approximately 250 feet) and avoid altering the materials and their context pending site investigation by qualified professionals. Use a qualified archaeologist or cultural resources consultant to assess the materials and determine their significance. If the qualified professional determines that the site will yield new information or important verification of previous findings, the sites should not be destroyed. Construction work should not commence again until the qualified professional has been given an opportunity to examine the findings, assess their significance, and offer proposals for any additional exploratory measures deemed necessary for the further evaluation of and/or mitigation of adverse impacts to any significant (or potentially significant) cultural resources which have been encountered.

III.K.1 (d) If avoidance of a discovered important archaeological resource would not be feasible, require an excavation plan. An excavation plan would consist of the methodical excavation of those portions of the site(s) that would be adversely affected. The work should be accomplished within the context of a detailed research design and in accordance with current professional

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standards. The plan should result in the extraction of sufficient volumes of non-redundant archaeological data so as to address important regional research consideration, should be performed by qualified professionals, and should result in detailed technical reports.

III.K.1 (e) Allow only a qualified archaeologist or cultural resources consultant to collect any cultural resources discovered in the Project right-of-way.

III.K.1 (f) Prohibit project personnel from collecting any cultural resources discovered during development of the Project. Prehistoric resources include chert or obsidian flakes, projectile points, mortars and pestles, and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic resources include stone or adobe foundations or walls, structures and remains with square nails, and refuse deposits, often in old wells and privies.

III.K.1 (g) If prehistoric archaeological deposits that include human remains are discovered, notify the County Coroner immediately. If the remains are found to be Native American the Native American Heritage Commission must be notified within 24 hours. The most likely descendant of the deceased Native American will be notified and given the chance to make recommendations for the remains. If no recommendations are made within 24 hours, remains may be reinterred

	elsewhere on the property. If recommendations are made and not accepted, the Native American Heritage Commission will mediate the problem.				
III.K.2 Construction of the Project could impact adjacent structures, some of which have the potential to qualify for the National Register of Historic Places.	<p>III.K.2 There are a number of structures along Marsh Creek Road that are over 60 years and could possibly qualify for the National Register of Historic Places (NRHP) should they meet the National Register criteria. To be eligible for the NRHP, a property must meet one or more of the four specific criteria to represent a significant theme or pattern in the history, architecture, archaeology, engineering, or culture of an area (36 C.F.R. 60.4 [1989]) (criteria for inclusion in the National Register of Historic Places). These four criteria include properties</p> <ul style="list-style-type: none"> • that are associated with events that have made a significant contribution to the broad patterns of our history (Criterion A); • that are associated with the lives of persons significant in our past (Criterion B); • that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose component may lack individual distinction (Criterion C); or 	<p>(1) Conduct an evaluation of the eligibility of resources along the Project route for the NRHP.</p> <p>(2) If any properties are found to be eligible, prepare necessary documentation/reports, including an HPCP or an HASR.</p> <p>(3) Carry out any mitigations recommended in HPCP or HASR.</p>	<p>(1-2) Add record of initial eligibility evaluation and any follow-up reports and documentation to the administrative record.</p> <p>(3) Monitor to verify that mitigations are carried out.</p>	Authority.	<p>(1-2) As records/reports are produced.</p> <p>(3) If eligible resources are found, monitor as recommended in reports.</p>

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- that have yielded, or may be likely to yield, information important in prehistory or history (Criterion D).

These properties may also meet the criteria for inclusion in the California Register of Historic Places, which are

- Places associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- Places associated with the lives of persons important in California or American history.
- Places that embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic value.
- Places which have yielded or may be likely to yield information important in prehistory or history.

Should any of these structures meet the criteria and be altered, relocated or demolished by construction of the Project, preparation of an Historic Property Clearance Report (HPCR) would be required under California Law (if there was no Federal involvement), or preparation of an Historic Architectural Survey Report (HASR) would be required under the Section 106 Federal process. Such a study would use the historic overview, photos, and other

information developed as part of this report. For historic properties comprising the built environment, mitigation practices under CEQA parallel those undertaken for Federal projects.

The abandoned farmstead (Attachment A, number 26) should be recorded and evaluated as a potential historic archaeological site. The Sand Creek Bridge (resource number 25), a small bridge on Sand Creek Road, crosses San Creek in Section 10 TIN R2E MDM near the Project area. This bridge, Caltrans number 28CO174, was rated as a 5 (not significant) on the Caltrans Bridge Inventory (Hope, 1993). Therefore it would not qualify for the NRHP. **(UNAVOIDABLY SIGNIFICANT)**

Energy

<p>III.L.1 Construction of the project would require both direct and indirect expenditures of energy.</p>	<p>III.L.1 Implement the following measures to reduce energy expended in construction and maintenance:</p> <ul style="list-style-type: none"> • Minimize the number of trips transporting material to and from construction sites. • Turn off truck and construction equipment engines when unneeded for substantial periods, as feasible. • Require that all construction equipment engines be properly tuned. • Encourage ridesharing by construction personnel traveling to and from construction sites. 	<p>(1) Add measures identified in the mitigation to construction contract specifications.</p>	<p>(1) Review construction contract specifications to verify incorporation of mitigation measures; add to administrative record.</p> <p>(2) Inspect construction activity periodically; verify compliance.</p>	<p>Authority.</p>	<p>(1) Prior to the approval of the construction contract specifications.</p> <p>(2) Monthly during construction period.</p>
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- Plan construction activities so as to minimize the use of all on-site construction equipment.
- Select pavement materials on the basis of their future potential to be recycled.

To reduce the energy related to the increase in VMT, the Project under Phase II could include (HOV) lanes and/or bus-only lanes during peak periods. **(UNAVOIDABLY SIGNIFICANT)**

Utilities					
<p>III.M.1 The Project would cross major water collection and distribution facilities.</p>	<p>III.M.1 Coordinate with the appropriate public utilities and/or private operators during the Project construction to minimize potential impacts to existing water transmission facilities. Schedule construction so that any facilities that require relocation can be moved without disruptions in bulk service delivery.</p>	<p>(1) Consult with appropriate public utilities and/or private operators about minimizing impacts to services. (2) Add measures identified in meeting(s) to construction contract specifications.</p>	<p>(1) Review construction contract specifications to verify incorporation of mitigation measures; add to administrative record. (2) Inspect construction activity periodically; verify compliance.</p>	<p>Authority.</p>	<p>(1) Prior to the approval of the construction contract specifications. (2) Monthly during construction period.</p>
	<p>Slight revisions to the Bypass Project alignment should be implemented where the revisions would reduce or eliminate impacts to the pipelines for the Los Vaqueros Project. Coordinate with the CCWD Los Vaqueros Project to ensure that the Pipeline is constructed such that the impact from Bypass roadway construction will be minimized. The State Route 4 Bypass Authority will work with CCWD to ensure that the final adopted Bypass alignment will cause minimal impact and disruption to the Pipeline where the two</p>				

	<p>cross.</p> <p>Encase underground pipelines in large diameter concrete pipe, to ensure that the pipelines are not damaged by either construction or operation of the roadway and to protect the roadway in the event of failure.</p> <p>Coordinate with the Vasco Road and Utility Relocation Project to minimize disruptions to utilities where the expressway would connect to the relocated Vasco Road.</p>				
III.M.3 The Project would cross natural gas pipelines.	III.M.3 Coordinate with the appropriate public utilities and/or private operators during Project construction to minimize potential impacts to existing natural gas pipelines. Schedule construction so that any facilities that require relocation can be moved without disruptions in bulk service delivery. Coordinate with the Vasco Road and Utility Relocation Project to minimize disruptions to utilities where the expressway would connect to the relocated Vasco Road.	See III.M.1 discussion.	See III.M.1 discussion.	See III.M.1 discussion.	See III.M.1 discussion.
III.M.4 The Project would cross oil pipelines.	III.M.4 Coordinate with the appropriate public utilities and/or private operators during Project construction to minimize potential impacts to existing oil pipelines. Schedule construction so that any facilities that require relocation can be moved without disruptions in bulk service delivery.	See III.M.1 discussion.	See III.M.1 discussion.	See III.M.1 discussion.	See III.M.1 discussion.
III.M.5 The Project could cross proposed sewer	III.M.5 Should proposed sewer lines be scheduled for construction prior to Project construction, establish a formal agreement	See mitigation.	(1) Add a copy of the agreement to administrative record.	Authority, and Cities of Antioch and Brentwood.	(1) Prior to construction.

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lines.	between the cities of Antioch and Brentwood and the developers to incorporate relocation and/or encasement of the sewer line into the Project construction plan.				
III.M.7 Construction of the Project could result in interruptions of local deliveries of water and electricity.	III.M.7 Ensure that the public is adequately informed of expected or potential interruptions of local deliveries of water and electricity. Publish notices of construction location, schedule and locations of detours in local newspapers so that public and service providers are informed of activities and the resultant need for temporary rerouting and adjustments to delivery schedules.	(2) Publish public notices of the expected or potential interruptions of public services as identified in mitigation.	(1) Add a copy of public notice to administrative record.	Authority.	(1) Prior to construction.
III.M.8 Development of the Project could facilitate increased growth in eastern Contra Costa County, which could generate increased demand for public utilities.	III.M.8 Condition approval of any development project in the Project area upon the provision of adequate utilities. This condition of approval is consistent with the Growth Management Element of the <i>Contra Costa County General Plan</i> , which states that the County shall require new development to demonstrate that adequate water quantity and quality and adequate sanitary sewer quantity and quality can be provided. The Growth Management Element also states that the County will adopt a development mitigation program to ensure that new development pay its fair share of the cost of various utilities and public services. (UNAVOIDABLY SIGNIFICANT)	(1) Incorporate mitigation measure into project approval process for the County of Contra Costa.	(2) Add condition of approval to administrative record.	Authority.	(1) Ongoing.

Public Services					
<p>III.N.1 Construction of the Project could temporarily disrupt emergency police response, and could temporarily increase the number of emergency responses.</p>	<p>III.N.1 During Project construction, coordinate between constructors and public safety providers to minimize or eliminate interference with the provision of police services. Notify the police departments of construction schedules.</p> <p>During construction, ensure that the construction contractor(s) provide traffic control, appropriate warning devices and signals, and public notice to minimize the chances that construction activities could pose a traffic hazard. During construction, maintain two-way traffic on all roads at all times, and use flaggers when only one lane of a roadway is open.</p>	<p>(1) Notify appropriate police departments of construction activities.</p> <p>(2) Add measures identified in mitigation to construction contract specifications.</p>	<p>(1) Review construction contract specifications to verify incorporation of mitigation measures; add to administrative record.</p> <p>(2) Inspect construction activity periodically; verify compliance.</p>	<p>Authority.</p>	<p>(1) Prior to the approval of the construction contract specifications.</p> <p>(2) Monthly during construction period.</p>
<p>III.N.2 Construction of the Project could temporarily disrupt emergency fire response and could temporarily increase the number of emergency responses.</p>	<p>III.N.2 During Project construction, coordinate between constructors and public safety providers to minimize or eliminate interference with the provision of fire services. Notify the fire departments of construction schedules.</p> <p>During construction, ensure that the construction contractor(s) follow standard industry safety precautions to guard against on-the-job injuries. Ensure that the contractor(s) take precautions to minimize the risk of accidental fire. Such precautions could include consulting local fire districts, maintaining equipment in good working order, proper storage of flammable materials (including fuels), and keeping water on hand for extinguishing small fires.</p>	<p>(1) Notify appropriate fire departments of construction activities.</p> <p>(2) Add measures identified in mitigation to construction contract specifications.</p>	<p>(1) Review construction contract specifications to verify incorporation of mitigation measures; add to administrative record.</p> <p>(2) Inspect construction activity periodically; verify compliance.</p>	<p>Authority.</p>	<p>(1) Prior to the approval of the construction contract specifications.</p> <p>(2) Monthly during construction period.</p>

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	<p>If water supply is to be disrupted, provide a temporary bypass pipeline to ensure adequate fire flow.</p> <p>During construction, ensure that the construction contractor(s) provide traffic control, appropriate warning devices and signals, and public notice to minimize the chances that construction activities could pose a traffic hazard. During construction, maintain two-way traffic on all roads at all times, and use flaggers when only one lane of a roadway is open.</p>				
<p>III.N.3 Construction of the Project could temporarily disrupt emergency ambulance response and could temporarily increase the number of emergency responses.</p>	<p>III.N.3 During Project construction, coordinate between constructors and public safety providers to minimize or eliminate interference with the provision of emergency medical services. Notify the ambulance services of construction schedules.</p> <p>During construction, ensure that the construction contractor(s) provide traffic control, appropriate warning devices and signals, and public notice to minimize the chances that construction activities could pose a traffic hazard. During construction, maintain two-way traffic on all roads at all times, and use flaggers when only one lane of a roadway is open. During construction, ensure that construction contractor(s) follow standard industry safety precautions to guard against on- the-job injuries.</p>	<p>(1) Notify appropriate fire departments and/or ambulance services of construction activities.</p> <p>(2) Add measures identified in mitigation to construction contract specifications.</p>	<p>(1) Review construction contract specifications to verify incorporation of mitigation measures; add to administrative record.</p> <p>(2) Inspect construction activity periodically; verify compliance.</p>	<p>Authority.</p>	<p>(1) Prior to the approval of construction contract specifications.</p> <p>(2) Monthly during construction period.</p>
<p>III.N.9 Development of the Project could facilitate growth in</p>	<p>III.N.9 Condition approval of any development project in the Project area, whether by the County or by one or more</p>	<p>(1) Incorporate mitigation measure into project approval process for the</p>	<p>(2) Add condition of approval to administrative record.</p>	<p>Authority.</p>	<p>(1) Ongoing.</p>

<p>eastern Contra Costa County, which could generate increased demand for public services.</p>	<p>cities, upon provision of adequate public services. This condition of approval is consistent with the Growth Management Element of the <i>Contra Costa County General Plan</i>, which states that the County will adopt a development mitigation program to ensure that new development pay its fair share of the cost of various utilities and public services. (UNAVOIDABLY SIGNIFICANT)</p>	<p>County of Contra Costa.</p>			
<p>Hazardous and Toxic Waste</p>					
<p>III.O.1 Construction of the Project may expose workers to hazardous materials located at the Brentwood Gun Club.</p>	<p>III.O.1 – III.O.6 A comprehensive investigation of soil quality at the sites identified in this report shall be done by the County Department of Public Works. The investigation will be done after alignment surveying has been completed but prior to any construction or excavation work in the alignment that would encroach across the identified sites. The soil quality investigation will also include surveying for hazardous wastes that could be found along shoulders of existing roadways, as soils that are excavated during widening of roadways may exhibit hazardous waste characteristics.</p>	<p>See mitigation.</p>	<p>(1) Ensure that surface soil quality investigation is carried out by qualified individual; add results to administrative record.</p>	<p>Authority, (Contra Costa County Department of Public Health Services, environmental division or qualified REA).</p>	<p>(1) Prior to commencement of construction or excavation.</p>
<p>III.O.2 Construction of the Project may expose workers to hazardous materials located on the Laurel Interchange Junk Yard.</p>	<p>III.O.1 – III.O.6 A comprehensive investigation of soil quality at the sites identified in this report shall be done by the County Department of Public Works. The investigation will be done after alignment surveying has been completed but prior to any construction or excavation work in the alignment that would encroach across the identified sites. The soil quality investigation will also include surveying for hazardous wastes that could be found along shoulders of existing roadways, as soils that are excavated during widening of roadways may exhibit hazardous waste characteristics.</p>	<p>See mitigation.</p>	<p>(1) Ensure that surface soil quality investigation is carried out by qualified individual; add results to administrative record.</p>	<p>Authority, (Contra Costa County Department of Public Health Services, environmental division or qualified REA).</p>	<p>(1) Prior to commencement of construction or excavation.</p>
<p>III.O.3 Construction of the Project may expose workers to hazardous materials located at the Neroly Road Debris Dump.</p>	<p>The results of such an investigation, together with all available soil reports and chemical analyses shall be submitted to the oversight agency for approval. In order to determine whether contaminants at an impaired site would pose a potential threat to human health and safety or to the environment, the Department of Toxic</p>	<p>See mitigation.</p>	<p>(2) Submit investigation results to appropriate regulatory agency.</p>	<p>Authority, (Contra Costa County Department of Public Health Services, environmental division or qualified REA).</p>	<p>(2) Prior to commencement of construction or excavation.</p>

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<p>III.O.4 Construction of the Project may expose workers to hazardous materials located at the Sand Creek Oil Wells.</p>	<p>Substances Control may require a Human Health Screening Evaluation as part of a Preliminary Endangerment Assessment (PEA), as described in the DTSC Preliminary Endangerment Guidance Manual (1994).</p>	<p>See mitigation.</p>	<p>(3) If a PEA report is required, ensure that qualified individual prepares PEA according to the DTSC PEA Guidance Manual. Add report to administrative record.</p>	<p>Authority, DTSC.</p>	<p>(3-8) Prior to construction or excavation.</p>
<p>III.O. 5 Construction of the Project may expose workers to hazardous materials at the San Jose Avenue Crude Oil Tank Farm.</p>	<p>The PEA should include the following information: a site description and site history, including a description of past and current site activities and a description of handling procedures for hazardous substances associated with the site business activities; a description of the apparent problem such as documentation of spills or releases, and the results of any sampling and analysis that has been completed to characterize these; a description of potential pathways for exposure to chemicals (such as soil, water and air); a description of any sampling and analysis performed to evaluate the extent of chemicals identified in the soil and/or groundwater; an assessment of the threat to the public health and the environment; an identification of possible remediation strategies; and conclusions and recommendations. Specific details to be included in the PEA are described in the DTSC Preliminary Endangerment Assessment Guidance Manual (1994).</p>	<p>See mitigation.</p>	<p>(4) Verify approval by the DTSC; add to administrative record.</p>	<p>Authority, DTSC.</p>	<p>(3-8) Prior to construction or excavation.</p>
<p>III.O.6 Construction of the Project may expose workers to hazardous materials related to the private transformers at the Lopez Farm.</p>	<p>As part of the site assessment process, the Public Works Department will collect soil samples at locations to be affected by the project. The number of samples collected would be based on the size of the</p>	<p>See mitigation.</p>	<p>(5) Ensure that surface soil sampling is carried out by qualified individual; add results to administrative record.</p>	<p>Authority, DTSC.</p>	<p>(3-8) Prior to construction or excavation.</p>
			<p>(6) Prepare a soil sampling plan for each identified site per guidelines in this mitigation.</p>		
			<p>(7) Submit to Contra Costa County, Department of Environmental Health for approval.</p>		
			<p>(8) Verify approval by County.</p>		

contaminated site, site activities, and possible transportation or migration routes. Samples might include soil, soil gas, or groundwater, depending on the nature of the contaminants suspected to be present.

The Public Works Department shall prepare a soil sampling plan for each identified site prior to initiation of excavation or construction. Each site specific sampling plan shall be submitted to the Contra Costa County Department of Environmental Health for approval before sampling begins.

The sampling plan shall contain all proposed sampling locations, sample collection procedures, name of the certified laboratory doing the chemical analysis, sample handling procedures, test methodology in conformance with the following analysis protocol, chain of custody requirements, site safety plan, and quality assurance plan to verify the laboratory results. The sampling plan shall also include the reporting format for all laboratory analysis sheets, field logs, Chain of Custody forms and laboratory quality control information.

Each sampling plan shall specify that all soil and groundwater chemical analyses shall be performed by a California-certified laboratory, using standard EPA and California chemical testing methods in the following sequence:

Metals Analysis (III.O.1 – III.O.3)

For soil samples collected from the

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Brentwood Gun Club and both the Neroly Road Debris Dump and the Laurel Interchange Junk Yard, a tiered soils analysis approach is required.

First Tier – All samples shall be analyzed for Soluble Threshold Limit Concentrations (STLC) under the methodology of the California Waste Extraction Test. All samples shall also be tested for Total Threshold Limit Concentrations (TTLC) of metals. All samples that have a STLC less than the state limit for soluble metals are representative of a non-hazardous soil. All samples with a STLC equal to or greater than the state limit for soluble metals are regulated in California and are subject to additional testing under the provisions of the Federal Resource Conservation and Recovery Act (RCRA).

Second Tier – Samples with a STLC equal to or greater than the state limit for soluble metals shall be tested using the Toxicity Characteristic Leaching Procedure (TCLP). Those samples having results above the TCLP threshold are considered representative of RCRA hazardous wastes and must be remediated as such. Those samples having results below the TCLP threshold are California regulated waste and may be disposed of as hazardous waste or reclassified by request as non-hazardous waste for purposes of an identified disposal option.

Crude Oil Analysis (III.O.4 – III.O.5)

For soil samples collected from the area of the Sand Creek oil field and the San Jose Tank Farm, soil samples shall be analyzed for total petroleum hydrocarbons and flammability. Soil samples with total petroleum hydrocarbons above 100 parts per million shall be subject to additional characterization for waste classification. Soils with elevated levels of hydrocarbon that can qualify as recycled materials for reprocessing shall be recycled.

PCB Analysis (III.O.6)

If the transformers at the Lopez Farm are to be removed by the Department of Public Works, the transformers shall be tested for the presence of PCB-containing fluids. Soils directly under the transformers shall also be tested for PCBs.

Additional Analyses (III.O.1 – III.O.6)

In addition to oil, metals, and PCBs as specified above, sample analysis would very likely include testing for semivolatile organics, total petroleum hydrocarbons as diesel and gasoline, pesticides, asbestos, and pH. Sampling locations of these tests, such as along shoulders of existing roadways, would be specified at the discretion of the oversight agency during preparation of the sampling plans.

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Using the information generated from the sampling and analysis program, a remedial action plan shall be prepared. If hazardous wastes are identified in soil or groundwater at levels that present a risk to the public, to construction workers, or to the environment, it would be necessary to remediate the site in compliance with applicable laws and regulations prior to construction to reduce the potential for exposing persons to hazardous substances during construction activities. Prior to implementing the remediation, a detailed remediation plan would be developed by the Public Works Department and submitted to regulatory agencies for review to ensure their concurrence with the plans and compliance with applicable laws and regulations. Following remediation of the project site, a report documenting the remedial process would be submitted to the agencies.

See mitigation.

- (9) Prepare remedial action plan.
- (10) Submit to regulatory agencies for review.
- (11) Prepare report documenting remedial process and submit to regulatory agencies.

Authority.

(9-11) After soil sampling has been completed; prior to construction.

Growth Inducement					
<p>V.A.1 The Bypass Project will induce growth in East Contra Costa County.</p>	<p>V.A.1 The following combination of mitigation measures could reduce the impact of growth inducement. These include</p> <ul style="list-style-type: none"> • limit allowable development through the General Plan Amendment process at County and local levels; • commit to the development of urban core areas of East County prior to developing open space and agricultural land; • adopt community planning guidelines and design features that promote efficient land use with a high degree of multi-modal accessibility between land uses; • cluster residential units into medium densities to promote use of transit; • develop where transit service is currently available. <p>These combinations of measures could mitigate the impact to a less-than-significant level. However, the lead agency does not have the authority to implement them. Therefore, this impact remains significant and unavoidable. (UNAVOIDABLY SIGNIFICANT)</p>	<p>See mitigation.</p>	<p>Ensure that communication is established with the relevant Planning Department regarding new development in Alameda and Contra Costa Counties.</p>	<p>Authority, County and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>

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Cumulative Impacts					
<p>V.B.1 The Bypass project would induce growth in East Contra Costa County. In combination with anticipated <i>planned</i> growth, this would be a significant cumulative impact, with attendant secondary cumulative impacts.</p>	<p>V.B.1 Growth in Alameda and Contra Costa Counties outside of planned growth in the general plans of cities and counties would require a General Plan Amendment. Amendments to general plans to control the location, rate, and timing of growth could mitigate land use impact from induced growth. However, because general plan amendments are not within the Bypass Authority's control, this would remain a significant and unavoidable impact.</p>	<p>See mitigation.</p>	<p>Ensure that communication is established with the relevant Planning Department regarding new development in Alameda and Contra Costa Counties.</p>	<p>Authority, County and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>
<p>V.B.2 Development of the Project would result in cumulative disruption of established communities through the removal and/or relocation of existing residential and commercial structures within the right-of-way and potential relocation within the contemplated growth areas under general plans. This would be a significant cumulative impact.</p>	<p>V.B.2 Amendments to general plans to control the location, rate, and timing of growth could mitigate potential community disruption. Similarly, project-level environmental review for each project analyzed as part of this cumulative development scenario would also consider impacts to land uses, in particular potential community disruption, and would propose mitigation measures. However, because neither general plan amendments nor project-level mitigation is within the Bypass Authority's control, this would remain a significant and unavoidable impact.</p>	<p>See mitigation.</p>	<p>Ensure that communication is established with the relevant Planning Department regarding new development in Alameda and Contra Costa Counties.</p>	<p>Authority, County and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>

<p>V.B.3 Development of the Project, in combination with anticipated urban development under general plans, would result in direct and secondary removal of prime agricultural land and Farmland of Statewide Importance.</p>	<p>V.B.3 Amendments to general plans to control the location, rate, and timing of growth could mitigate impacts from conversion of prime agricultural lands. Similarly, project-level environmental review for each project analyzed as part of this cumulative development scenario would also consider impacts to land uses, in particular conversion of prime agricultural land, and would propose mitigation measures. However, because neither general plan amendments nor project-level mitigation is within the Bypass Authority's control, this would remain a significant and unavoidable impact.</p>	<p>See mitigation.</p>	<p>Ensure that communication is established with the relevant Planning Department regarding new development in Alameda and Contra Costa Counties.</p>	<p>Authority, County and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>
<p>V.B.4 The development of the Project, by inducing growth in the project area, would contribute to a cumulative increase in population and attendant demand for and availability of housing.</p>	<p>V.B.4 Amendments to general plans to control the location, rate, and timing of growth could mitigate potential impacts to population growth and thus maintain appropriate jobs-housing balances. Similarly, project-level environmental review for each project analyzed as part of this cumulative development scenario would also consider impacts to socioeconomics and would propose mitigation measure(s). However, because neither general plan amendments nor project-level mitigation is under the Bypass Authority's control, this would remain a significant and unavoidable impact.</p>	<p>See mitigation.</p>	<p>Ensure that communication is established with the relevant Planning Department regarding new development in Alameda and Contra Costa Counties.</p>	<p>Authority, County and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>
<p>V.B.5 The Bypass project would contribute to cumulative</p>	<p>V.B.5 Amendments to general plans to control the location, rate, and timing of growth could mitigate potential impacts to population growth and thus minimize</p>	<p>See mitigation.</p>	<p>Ensure that communication is established with the relevant Planning</p>	<p>Authority, and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>

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<p>development, resulting in potential displacement and closure or relocation of commercial land uses including agriculture.</p>	<p>impacts to commercial land uses from development, especially conversion of prime agricultural lands. Similarly, project-level environmental review for each project analyzed as part of this cumulative development scenario would also consider impacts to socioeconomics, including conversion of commercial land uses such as prime agricultural land and would propose mitigation measure(s). However, because neither general plan amendments nor project-level mitigation is under the Bypass Authority's control, this would remain a significant unavoidable impact.</p>	<p>Development regarding new development in Alameda and Contra Costa Counties.</p>	<p>Ensure that communication is established with the relevant Planning Departments regarding new development in Alameda and Contra Costa Counties.</p>	<p>Authority, and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>
<p>V.B.6 Development of the Bypass project would directly and indirectly, by inducing growth, contribute regional, cumulative loss of open space vistas by introducing visually intrusive urban features into the natural landscape.</p>	<p>V.B.6 To minimize the individual visual impacts of Bypass development, mitigation listed in Table III.1, Impact and Mitigation III.D.1, can be employed; to minimize the visual disruption resulting from introducing urban features into natural landscapes, would require defining and enforcing appropriate general plan policies and ordinances, and identifying aesthetic conditions (mitigation) for individual project plan review, such as set-backs, height and mass limits, landscaping, etc. The Authority does not have control over imposition of these mitigations beyond the Bypass project itself.</p>	<p>See mitigation.</p>	<p>Ensure that communication is established with the relevant Planning Departments regarding new development in Alameda and Contra Costa Counties.</p>	<p>Authority, and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>
<p>V.B.7 The East County Corridor and other cumulative transportation projects would generally have a</p>	<p>V.B.7 Same as proposed in Volume 3, Section III.E (Impact and Mitigation III.E.4). Also see Mitigation V.B.3 above. Otherwise, no mitigation is needed to address the impact of the cumulative transportation projects.</p>	<p>See III.E.4 discussion.</p>	<p>See III.E.4 discussion.</p>	<p>See III.E.4 discussion.</p>	<p>See III.E.4 discussion.</p>

<p>beneficial impact on traffic flow on key roadway links and intersections in the study area, except along SR4 west of Lone Tree Way.</p>	<p>V.B.8 Prior to considering transportation improvements through the East County Corridor, include the Corridor on appropriate transportation and land use plans. The modification of these plans to include the Corridor would require additional environmental analyses under CEQA and under NEPA if federal funds are involved. However, the Bypass Authority has no authority to implement these changes and the impact would remain significant.</p>	<p>See mitigation.</p>	<p>Ensure that communication is established with MTC and relevant Planning Departments regarding inclusion of the East County Corridor in transportation and land use plans.</p>	<p>Authority, MTC, and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>
<p>V.B.9 The additional transportation capacity from the Project in conjunction with other cumulative transportation projects, combined with additional proposed development, may hasten or induce development growth to proceed toward allowable levels quicker than would otherwise be</p>	<p>V.B.9 The Authority shall implement mitigation proposed in Volume 3 of the EIR to reduce identified cumulative impacts (2010+) on the State Route 4 Bypass to a less-than-significant level. In addition, Contra Costa County, Caltrans, and Alameda County should coordinate efforts to complete the regional transportation system within the MTC's constrained funding scenario, advancing those projects deemed most beneficial to maintain regional traffic service goals. However, the Bypass Authority lacks the authority to insure that this occurs.</p>	<p>See mitigation.</p>	<p>Ensure that communication is established with MTC and relevant Planning Departments regarding establishment of regional transportation system.</p>	<p>Authority, MTC, and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>

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<p>the case, particularly as a “free” (i.e. non-toll facility) roadway.</p>	<p>V.B.10 Cumulative impacts of the Mid-State Toll Road, with or without the East County Corridor (including the Bypass project segment), and with other roadway improvements and additional development, could occur causing peak period travel demand to exceed the capacity of most regional routes in eastern Contra Costa and Alameda County.</p>	<p>V.B.10 The only means available to prevent the chronic congestion forecasted for the regional roadways in eastern Contra Costa and Alameda Counties will be to limit not yet approved development, allowing it to occur based on forecasted residual transportation capacity on the transportation network. However, this will require a high degree of inter-regional cooperation; the Bypass Authority lacks the authority to insure that this occurs over time.</p>	<p>See mitigation.</p>	<p>Ensure that communication is established with MTC and relevant Planning Departments regarding transportation and land use plans.</p>	<p>Authority, MTC, and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>
<p>V.B.11 Development of the Bypass project, in combination with the southern segment of the East County Corridor and/or Mid-State Toll Road, would result in a significant cumulative increase in noise levels</p>	<p>V.B.11 Development of either the Corridor or Mid-State Toll Road would occur only after subsequent environmental review. Additional berms, walls, or increased heights to barriers developed as a part of the project may be required to meet FHWA/Caltrans Noise Abatement criteria. However, even assuming that FHWA/Caltrans Noise Abatement criteria are met, significant cumulative noise increases would still occur, particularly in the north Livermore area.</p>	<p>See mitigation.</p>	<p>See mitigation.</p>	<p>Through communication with relevant Planning Departments, ensure that project-level mitigation is implemented.</p>	<p>Authority, and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>

between Lone Tree Way and Interstate 580 due to redistributing traffic in the East County subregion.

<p>V.B.12 Assuming that commuter service from Oakland to Brentwood would use the Southern Pacific rail line, there could be more extensive noise impacts than those described for the project for residences near the proposed State Route 4/Bypass Interchange in the vicinity of Frandoras Circle. This is because increased rail noise would add cumulatively to the noise level that would increase due to higher future traffic volumes on the proposed Bypass, State Route 4, and the proposed extension of Sunset Drive.</p>	<p>V.B.12 Commuter rail service from Oakland to Brentwood would also occur only after subsequent environmental review; such review would probably provide the basis for additional noise mitigation along the rail line consistent with Federal Transit Administration (FTA) standards and regulations. Additional mitigation could include additional walls and berms, or improved track, but it would be speculative to conclude whether future FTA noise abatement standards and regulations would reduce the cumulative impact to less-than-significant.</p>	<p>See mitigation.</p>	<p>Through communication with relevant Planning Departments, ensure that project-level mitigation is implemented.</p>	<p>Authority, and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>
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<p>V.B.13 Cumulative development, particularly the East County Corridor and Mid-State Toll Road in conjunction with the 2010(+) scenario, would result in additional vehicle trips and/or vehicle miles-traveled (VMT), resulting in additional emissions of ozone precursors [i.e. hydrocarbons (HC) and nitrogen oxides (NOx)] and respirable particulate matter (PM10).</p>	<p>V.B.13 Since significant cumulative air quality impacts are regional in nature and apply to two regions, the San Francisco Bay Area and San Joaquin Valley, the most reasonable approach to mitigation would involve coordinating the activities and decisions of all relevant agencies that affect transportation infrastructure, air quality management, and land use development. These agencies include, among others, the metropolitan Transportation Commission, Contra Costa Transportation Agency, State Route 4 Bypass Authority, San Joaquin counties' regional transportation agencies, air quality regulatory agencies (Bay Area Air Quality Management District and San Joaquin Valley Air Pollution Control District), and local cities and counties.</p> <p>Effective, long-term mitigation for cumulative air quality impacts would involve a greater degree of emphasis on air quality concerns from local and county jurisdictions in their land use decisions. This would necessitate local agencies taking a regional view of the effects of their decisions which, historically, has been difficult to do given that the benefits (e.g. increased tax revenue and political power) of development are local and the adverse effects are spread over two wide regions.</p>	<p>See mitigation.</p>	<p>Ensure that communication is established with MTC, BAAQMD, SVAPPCD and relevant local Planning Departments regarding air quality emissions from future development.</p>	<p>MTC, BAAQMD, SVAPPCD, and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>
<p>V.B.15 Development assumed in this cumulative analysis would increase the</p>	<p>V.B.15 Project-level environmental review for each project analyzed as part of this cumulative development scenario would review the hazards (impacts) associated with geology, seismicity and soils and</p>	<p>See mitigation.</p>	<p>Through communication with relevant Planning Departments, ensure that project-level mitigation is</p>	<p>Authority, and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>

number of people exposed to earthquake-related risks.	proposed mitigation measures. Mitigation for earthquake-related risks such as avoidance of known fault lines and areas of liquefaction could reduce the magnitude of seismic impacts, but not below the threshold of significance.		implemented.		
V.B.16 Cumulative development would result in removal of vegetation and alterations to drainage and slopes in varying degree. In addition, alteration of existing geologic features and development in areas of high shrink-swell characteristics would continue.	V.B.16 Project-level mitigation for soil-related impacts such as revegetation, replacement of high shrink-swell potential soils with engineered fill and construction standards to avoid soil erosion could reduce project-related and thus cumulative impacts to a less-than-significant level. However, because the Bypass Authority will not have control over environmental review of future projects, this remains a significant unavoidable cumulative impact.	See mitigation.	Through communication with relevant Planning Departments, ensure that project-level mitigation is implemented.	Authority, and City Planning Departments.	(1) As major developments are proposed.
V.B.17 Cumulative land development assumed in this cumulative analysis, in conjunction with induced growth resulting from the Bypass and other transportation projects, would result in the further alteration of floodplains and flood routing. This would increase the	V.B.17 Mitigation for flood-related risks such as avoidance of high flood areas, designing structures and roadways to withstand 100-year floods and inundation from dam failure, and implementation of flood control measures such as new channels or storm water detention basins could, for individual projects, generally reduce the magnitude of flooding impacts to a less-than-significant level. However, because the Bypass Authority does not have control over environmental review of future projects, this impact remains significant and unavoidable.	See mitigation.	Through communication with relevant Planning Departments, ensure that project level- mitigation is implemented.	Authority, and City Planning Departments	(1) As major developments are proposed.

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<p>number of people exposed to flood-related hazards, including dam failure.</p>	<p>V.B.18 Alteration of existing stream or runoff flow patterns would require permitted approval from the Corps and CDFG on a project-by- project basis. Permits from these agencies generally are not approved without mitigation measures that, for CEQA purposes, would reduce both individual and cumulative impacts to less-than-significant levels. However, because the Authority will not have control over individual permits, this impact remains significant and unavoidable.</p>	<p>See mitigation.</p>	<p>Through communication with the Corps, CDFG, and relevant Planning Departments, ensure that project-level mitigation is implemented.</p>	<p>Authority, Corps, CDFG, and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>
<p>V.B.19 Direct and secondary cumulative impacts to sensitive biological resources, including significant natural communities and special-status plant and wildlife species in the northeastern area of Contra Costa County, would occur from cumulative development assumed in this analysis.</p>	<p>V.B.19 Environmental review for specific development projects would identify site specific impacts to biological resources and would propose mitigation. If conditional approval is required for any development project in the State Route 4 Bypass area, whether by the County of Contra Costa or the Cities of Antioch or Brentwood, upon provision of mitigation measures to reduce identified project-related biological resource impacts to below the level of significance, then the cumulative impact would be reduced to a less-than-significant level. However, since the Bypass Authority does not have direct control over the environmental review of future development projects, the cumulative impacts cited above would be significant and unavoidable.</p>	<p>See mitigation.</p>	<p>Through communication with relevant Planning Departments, ensure that project-level mitigation is implemented</p>	<p>Authority, and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>

<p>V.B.20 Future development induced by the Project, in combination with build-out of specific long-term development projects (Mountain House, Discovery Bay West, and Cowell Ranch) would result in secondary impacts to significant natural communities and special- status plant and wildlife species in eastern Contra Costa and western San Joaquin Counties. The resources in eastern Contra Costa County are described in Chapters III.J of the DEIR, Volumes 2 and 3. Expansion of the Byron Airport would contribute marginally to this cumulative impact. This would be a significant, cumulative impact.</p>	<p>V.B.20 Same as above.</p>	<p>See mitigation.</p>	<p>Through communication with relevant Planning Departments, ensure that project-level mitigation is implemented.</p>	<p>Authority, and City Planning Departments</p>	<p>(1) As major developments are proposed.</p>
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<p>V.B.21 Cumulative development could have a significant impact on unidentified archaeological and cultural resource sites.</p>	<p>V.B.21 Environmental review for specific development projects would identify site specific impacts to cultural resources and propose mitigation. If conditional approval of any development project in the State Route 4 Bypass area requires, whether by the County of Contra Costa or the Cities of Antioch or Brentwood, provision of mitigation measures to reduce identified project-related cultural resource impacts to below the level of significance, then the cumulative impact would be reduced to a less-than-significant level. However, since the Bypass Authority does not have control of environmental review or permitting of future projects, the impact remains significant and unavoidable.</p>	<p>See mitigation.</p>	<p>Through communication with relevant Planning Departments, ensure that project-level mitigation is implemented.</p>	<p>Authority, and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>
<p>V.B.22 Cumulative development would add to the significant impact of increased consumption of non- renewable energy sources through construction and increased vehicular traffic.</p>	<p>See discussion above.</p>	<p>See mitigation.</p>	<p>Through communication with relevant Planning Departments, ensure that project-level mitigation is implemented.</p>	<p>Authority, and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>

<p>V.B.23 Future urban development assumed in this cumulative analysis, in combination with development induced by the Bypass project, would cumulatively contribute to impacts to utilities.</p>	<p>V.B.23 Environmental review for specific development projects would identify impacts to public utilities and propose mitigation. Development projects in Contra Costa County must provide adequate utility services to receive project approval. This condition of approval is consistent with the Growth Management Element of the <i>Contra Costa County General Plan</i>, which states that the County shall require new development to demonstrate that adequate water quantity and quality and adequate sewer quantity and quality can be provided. The Growth Management Element also states that the County will adopt a development mitigation program to ensure that new development pay its fair share of the cost of various utilities and public services. Public utility services are generally handled on a fee-for-service basis, so increased demand would not likely create impacts. After mitigation, the impact to public utilities would be reduced to a less-than- significant level.</p>	<p>See mitigation.</p>	<p>Through communication with relevant Planning Departments, ensure that project-level mitigation is implemented.</p>	<p>Authority, and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>
<p>V.B.24 Future development assumed in this cumulative analysis would contribute to impacts to public services.</p>	<p>V.B.24 Environmental review for specific development projects would identify impacts to public services and propose mitigation. Development projects in Alameda and Contra Costa Counties must provide adequate public service to receive project approval. In Contra Costa County, this condition of approval is consistent with the Growth Management Element of the <i>Contra Costa County General Plan</i>, which states that the County will adopt a</p>	<p>See mitigation.</p>	<p>Through communication with relevant Planning Departments, ensure that project-level mitigation is implemented.</p>	<p>Authority, and City Planning Departments.</p>	<p>(1) As major developments are proposed.</p>

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development mitigation program to ensure that new development pay its fair share of the additional costs to public services and utilities. However, developer fees to fund public services, especially new schools, are not guaranteed. Also, the Bypass Authority has no control over payment of developer fees to local jurisdictions for other cumulative projects considered. Therefore, the impact to public services would remain significant and unavoidable.

Source: Circlepoint, 2014.