

VERTICAL CLEARANCE PROJECT
COLUSA AND YOLO COUNTIES, CALIFORNIA
DISTRICT 3 – YOL/COL – 5 (Various Post Mile)
EA: 03-3H391 EFIS: 0317000349

INITIAL STUDY

With Proposed Mitigated Negative Declaration



**Prepared by the
State of California Department of Transportation**

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated December 23, 2016, and executed by FHWA and Caltrans.



October 2020

General Information about this Document

What's in this document?

The California Department of Transportation (Caltrans) has prepared this Initial Study with proposed Mitigated Negative Declaration (IS/MND) which examines the potential environmental effects of a proposed project on Interstate 5 in Colusa and Yolo County in California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This document tells you why the project is being proposed, how the existing environment could be affected by the project, the potential impacts of the project, and proposed avoidance, minimization, and/or mitigation measures.

What should you do?

- Please read this document.
- Additional copies of this document and related technical studies are available for review at Caltrans District Office at 703 B Street Marysville, CA 95901, the Yolo County Library Branch at 226 Buckeye Street Woodland, CA 95695, and the Colusa County Library Branch at 738 Market Street Colusa, CA 95695. This document may be downloaded at the following website:
<https://dot.ca.gov/caltrans-near-me/district-3/d3-programs/d3-environmental/d3-environmental-docs>.
- Please send comments via U.S. mail to:
California Department of Transportation
Attention: Bria Miller
North Region Environmental–District 3
703 B Street
Marysville, CA 95901
- Send comments via e-mail to: Bria.Miller@dot.ca.gov
- Be sure to send comments by the deadline: **March 25, 2021**

What happens after this?

After comments are received from the public and reviewing agencies, Caltrans may (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, Caltrans could complete the design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Bria Miller, North Region Environmental-District 3, 703 B Street, Marysville, CA 95901; 530-741-5536 Voice, or use the California Relay Service TTY number, 711 or 1-800-735-2929.

VERTICAL CLEARANCE PROJECT

Increase the vertical clearance at five locations to meet vertical clearance requirements for permitted oversize vehicles on Interstate 5 in Colusa and Yolo counties at various post miles.

INITIAL STUDY

With Proposed Mitigated Negative Declaration

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

02/08/2021

Date of Approval

Mike Bartlett

Mike Bartlett, Office Chief
North Region Environmental-District 3
California Department of Transportation
CEQA Lead Agency

The following person may be contacted for more information about this document:

Bria Miller, North Region Environmental-District 3
703 B Street, Marysville, CA 95901
(530) 741-5536 or use the California Relay Service TTY number, 711 or 1-800-735-2929.

Proposed Mitigated Negative Declaration

Pursuant to: Division 13, California Public Resources Code

SCH Number: Pending

Project Description

The California Department of Transportation (Caltrans) is proposing to increase the vertical clearance at five locations on Interstate 5 in Yolo and Colusa counties to meet vertical clearance requirements for permitted oversized vehicles.

Determination

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt an MND for this project. This does not mean that Caltrans' decision regarding the project is final. This MND is subject to change based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for this project and, pending public review, has determined from this study that the proposed project would not have a significant impact on the environment.

The proposed project would have no effect on aesthetics, agriculture and forestry, air quality, geology/soils, hazardous materials, hydrology water quality, land use, mineral resources, housing, public services, recreation, tribal cultural resources, and utilities.

The project would have less-than-significant impacts regarding cultural resources, energy, greenhouse gas emissions, noise, transportation, and wildfire.

With the following mitigation measures incorporated, the project would have less-than-significant impacts regarding biological resources.

- Purchase of Giant Garter Snake mitigation bank credits.

Mike Bartlett

Mike Bartlett, Office Chief
North Region Environmental-District 3
California Department of Transportation

02/08/2021

Date

Table of Contents

	Page
Proposed Mitigated Negative Declaration.....	i
Project Description.....	i
Determination	i
Table of Contents	ii
List of Appendices	iii
List of Tables and Figures.....	iv
List of Abbreviated Terms.....	v
Chapter 1. Proposed Project.....	8
1.1 Project History	8
1.2 Project Description	8
1.3 Project Location	8
1.4 Project Purpose and Need.....	10
1.5 Alternatives	10
1.6 Permits and Approvals Needed	11
Chapter 2. CEQA Environmental Checklist	12
Environmental Factors Potentially Affected.....	12
Project Impact Analysis Under CEQA	13
2.1 Aesthetics	16
2.2 Agriculture and Forest Resources	17
2.3 Air Quality	19
2.4 Biological Resources	20
2.5 Cultural Resources	30
2.6 Energy.....	33
2.7 Geology and Soils	34
2.8 Greenhouse Gas Emissions.....	36
2.9 Hazards and Hazardous Materials	53
2.10 Hydrology and Water Quality.....	57
2.11 Land Use and Planning	59
2.12 Mineral Resources.....	60
2.13 Noise.....	61
2.14 Population and Housing.....	64
2.15 Public Services.....	65
2.16 Recreation.....	67
2.17 Transportation/Traffic	68
2.18 Tribal Cultural Resources.....	69
2.19 Utilities and Service Systems.....	70
2.20 Wildfire.....	71
2.21 Mandatory Findings of Significance	72
Chapter 3. List of Preparers.....	74
Chapter 4. References	75
Appendix A. Project Layouts	79
Appendix B. Title VI Policy Statement.....	86
Appendix C. USFWS and Species List	87
Appendix D. ESA Action Plan.....	97
Appendix E. Response to Comments	99

List of Appendices

APPENDIX A.	Project Layouts
APPENDIX B.	Title VI Policy Statement
APPENDIX C.	USFWS and Species List
APPENDIX D.	Environmental Sensitive Areas Action Plan
APPENDIX E.	Response to Comments

List of Tables and Figures

	Page
Table 1. Existing Vertical Clearance.....	9
Table 2. Agency Approvals.....	11
Table 3. Traffic Volumes (2018 Traffic Volumes on California State Highways).....	66

	Page
Figure 1. Project Vicinity Map	10
Figure 2. U.S. 2016 GHG Gas Emissions.....	41
Figure 3. California 2017 Greenhouse Gas Emissions.....	42
Figure 4. Change in California GDP, Population, and GHG Emissions Since 2000.....	42
Figure 5. California Climate Strategy.....	45

List of Abbreviated Terms

Abbreviation	Description
AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
APE	Area of Potential Effect
ARB	Air Resources Board
ARPA	Archaeological Resources Protection Act
BAU	Business as Usual
BMPs	Best Management Practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGF	California Fish and Game Code
CFR	Code of Federal Regulations
CH ₄	methane
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CRHR	California Register of Historical Resources
CTP	California Transportation Plan
CWA	Clean Water Act
dB	decibel
DBH	diameter at breast height
Department	Caltrans
EIR	Environmental Impact Report
EO	Executive Order
EPA	Environmental Protection Agency
EPACT92	Energy Policy Act of 1992
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
GGG	Giant Garter Snake
GHG	greenhouse gas
HFC-23	fluoroform
HFC-134a	s,s,s,2-tetrafluoroethane

Abbreviation	Description
HFC-152a	difluoroethane
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
LCFS	low carbon fuel standard
LSAA	Lake or Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendent
MMTC02e	million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MS4s	Municipal Separate Storm Sewer Systems
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
ND	Negative Declaration
NEPA	National Environmental Policy Act
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NO ₂	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
O ₃	ozone
OHWM	Ordinary High-Water Mark
OPR	Office of Planning and Research
OSTP	Office of Science and Technology Policy
Pb	lead
PCBR	Pacific Coast Bike Route
PDT	Project Development Team
PM	particulate matter
PM _{2.5}	particles of 2.5 micrometers and smaller
PM ₁₀	particles of 10 micrometers or smaller
PM	post mile
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PRC	Public Resources Code
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SCS	Sustainable Communities Strategy
SDC	Seismic Design Criteria
SF ₆	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SLR	Sea Level Rise

Abbreviation	Description
SMARA	Surface Mining and Reclamation Act of 1975
SO ₂	sulfur dioxide
SWMP	Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TMDLs	Total Maximum Daily Loads
TMP	Traffic Management Plan
TPZ	Timber Production Zones
U.S. or US	United States
U.S. 101	U.S. (United States) Highway 101
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDOT	U.S. Department of Transportation
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VMT	Vehicle Miles Traveled
WDRs	Waste Discharge Requirements
WQOs	Water Quality Objectives

Chapter 1. Proposed Project

1.1 Project History

In Yolo and Colusa counties, five structures do not meet current design standards for vertical clearance making portions of Interstate 5 (I-5) unusable by oversized vehicles. The result is a five-mile detour around county road 95 and 96, an eight-mile detour at Lurline avenue, and detours using the interchange on and off ramps around Zamora and E street overcrossings. The Caltrans Highway Design Manual Index 309.2(1)(a) standard for minimum vertical clearance on Freeways and Expressways with new construction, lane additions, reconstruction or modification is 16 feet 6 inches.

The existing vertical clearances at the structures are shown in the table below:

Table 1: Existing Vertical Clearance

Structure Name	Existing Vertical Clearance
County Road 96 Structure	15' 11"
County Road 95 Structure	15' 9"
Zamora Structure	15' 11"
E Street Structure	15' 11"
Lurline Avenue Structure	15' 11"

1.2 Project Description

Caltrans proposes to increase the vertical clearance to the required minimum of sixteen feet and six inches by lowering the vertical profile at the bridge overcrossings located at County Road 96 Yolo County post mile (PM) R14.27, County Road 95 Yolo County PM R15.85, Zamora Yolo County PM R17.62, and E Street Colusa County PM R22.74. At Lurline Avenue Colusa County PM R22.74, the structures would be raised to meet the vertical clearance minimum requirement.

1.3 Project Location

This project is at various locations on I-5 in Yolo and Colusa counties from post mile (PM) Yol-R14.27 to Col-R22.74. The identified structures are as follows:

County Road 96 OC Bridge 22-0155 (Yol PM R14.27)
 County Road 95 OC Bridge 22-1056 (Yol PM R15.85)
 Zamora OC Bridge 22-0157 (Yol PM R17.62)
 E Street OC Bridge 15-0067 (Col PM R17.98)
 Lurline Avenue OC Bridge 15-0075 (Col PM R22.74)



1.4 Project Purpose and Need

Purpose

The purpose of this project is to improve freight mobility along I-5 by increasing the vertical clearance of five bridges to meet the current Caltrans design standard.

Need

Structures Maintenance and Investigations (SM&I) has identified five overcrossings within the I-5 corridor as priority structures that do not meet the current Caltrans design standard for vertical clearance. This requires taller or high load vehicles to divert onto other roads to bypass these low structures. Increasing the vertical clearance of these structures is needed to reduce high load hits, improve freight mobility within the corridor and improve traffic safety along diversion routes.

1.5 Alternatives

Three alternatives were studied including a no-build alternative. Of those, Alternative 2 was rejected because of cost. Alternatives 1 and 3 are described below.

Alternative 1

Alternative 1 would lower the vertical profile of I-5 by eight to ten inches to increase vertical clearance to 16 feet 6 inches at County Road 95, County Road 96, Zamora and E Street. Raise the Lurline Avenue structure nine inches by jacking to increase the minimum vertical clearance to 16 feet 6 inches and reconstruct the Lurline Avenue profile grade to match the raised profile.

The pavement structural section for the new I-5 vertical profiles is 2.8 feet in depth. The maximum depth of excavation to accommodate the new structural section and meet the required vertical clearance is up to 3.6 feet. The profile reduction would extend for approximately 70 feet on each side of the overcrossing before transitioning back to the existing grade at a 400:1 vertical taper.

The existing I-5 pavement sections have various depths of Hot Mix Asphalt (HMA) over crack and seated Portland Cement Concrete Pavement (PCCP).

Alternative 3

The No Build alternative would not increase the vertical clearance at the five overcrossings to meet the vertical clearance requirements for permitted oversized vehicles. This alternative does not meet the project purpose and need.

Alternative Considered but Eliminated from Further Consideration

Alternative 2

Alternative 2 would replace the overcrossings at all five locations by reconstructing each overcrossing with a vertical profile eight to ten inches higher to increase the minimum I-5 vertical clearance to 16 feet 6 inches. This would require that I-5 traffic be detoured around the construction area using interchange ramps and local roads. County Roads 96, 95, 13, E Street (Highway 20) in Williams and Lurline Avenue at I-5 would be closed for the duration of demolition and reconstruction work.

The ramp terminal areas at the Zamora and E Street interchanges would be reconstructed. This includes County Roads 96, 95, 13, Highway 20, and Lurline Avenue to match the increased profile grades at each overcrossing.

Alternative 2, Replacing Structures, is rejected because the existing structures are in good to fair condition with only minor maintenance concerns. Therefore, there is no justification to expend a significant amount of funds to replace them.

1.6 Permits and Approvals Needed

Table 2: Agency Approvals

Agency	Permit/Approval	Status
California Department of Fish and Wildlife (CDFW)	2080.1 Consistency Determination	Pending
U.S. Fish and Wildlife Service (USFWS)	Section 7 Endangered Species Act consultation	Pending
California Transportation Commission (CTC)	CTC Approve Funding for the Project	Pending

Chapter 2. CEQA Environmental Checklist

Environmental Factors Potentially Affected

The environmental factors noted below would be potentially affected by this project. Please see the CEQA checklist on the following pages for additional information.

Potential Impact Area	Impacted: Yes / No
Aesthetics	No
Agriculture and Forestry	No
Air Quality	No
Biological Resources	Yes
Cultural Resources	Yes
Energy	No
Geology/Soils	No
Greenhouse Gas Emissions	Yes
Hazards and Hazardous Materials	Yes
Hydrology/Water Quality	No
Land Use/Planning	No
Mineral Resources	No
Noise	Yes
Population/Housing	No
Public Services	Yes
Recreation	No
Transportation/Traffic	No
Tribal Cultural Resources	No
Utilities/Service Systems	No
Wildfire	No
Mandatory Findings of Significance	Yes

The CEQA Environmental Checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the project will indicate there are no impacts to a resource. A “No Impact” answer in the last column of the checklist reflects this determination. The words “significant” and “significance” used throughout the checklist and this document are only related to potential impacts pursuant to CEQA. The

questions in the CEQA Checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project as well as standard measures that are applied to all or most Caltrans projects (such as Best Management Practices (BMPs) and measures included in the Standard Plans and Specifications or as Standard Special Provisions) are considered to be an integral part of the project and have been considered prior to any significance determinations documented in the checklist or document.

Project Impact Analysis Under CEQA

CEQA broadly defines “project” to include “the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment” (14 CCR § 15378). Under CEQA, normally the baseline for environmental impact analysis consists of the existing conditions at the time the environmental studies began. However, it is important to choose the baseline that most meaningfully informs decision-makers and the public of the project’s possible impacts. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project’s impacts, a lead agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence. In addition, a lead agency may also use baselines consisting of both existing conditions and projected future conditions that are supported by reliable projections based on substantial evidence in the record. The CEQA Guidelines require a “statement of objectives sought by the proposed project” (14 CCR § 15124(b)).

CEQA requires the identification of each potentially “significant effect on the environment” resulting from the action, and ways to mitigate each significant effect. Significance is defined as “Substantial or potentially substantial adverse change to any of the physical conditions within the area affected by the project” (14 CCR § 15382). CEQA determinations are made prior to and separate from the development of mitigation measures for the project.

The legal standard for determining the significance of impacts is whether a “fair argument” can be made that a “substantial adverse change in physical conditions” would occur. The fair argument must be backed by substantial evidence including facts, reasonable assumption predicated upon fact, or expert opinion supported by facts. Generally, an environmental professional with specific training in an area of environmental review can make this determination.

Though not required, CEQA suggests Lead Agencies adopt thresholds of significance, which define the level of effect above which the Lead Agency would consider impacts to be significant, and below which it would consider impacts to be less than significant. Given the size of California and its varied, diverse, and complex ecosystems, as a Lead Agency that encompasses the entire State, developing thresholds of significance on a state-wide basis has not been pursued by Caltrans. Rather, to ensure each resource is

evaluated objectively, Caltrans analyzes potential resource impacts based on their location and the effect of the potential impact on the resource in the project area. For example, if a project has the potential to impact 0.10 acre of wetland in a watershed that has minimal development and contains thousands of acres of wetland, then a “less than significant” determination would be considered appropriate. In comparison, if 0.10 acre of wetland would be impacted that is located within a park in a city that only has 1.00 acre of total wetland, then the 0.10 acre of wetland impact could be considered “significant.”

If the action may have a potentially significant effect on any environmental resource (even with mitigation measures implemented), then an Environmental Impact Report (EIR) must be prepared. Under CEQA, the lead agency may adopt a negative declaration (ND) if there is no substantial evidence that the project may have a potentially significant effect on the environment (14 CCR § 15070(a)). A proposed negative declaration must be circulated for public review, along with a document known as an Initial Study. CEQA allows for a “mitigated negative declaration” in which mitigation measures are proposed to reduce potentially significant effects to less than significant (14 CCR § 15369.5).

Although the formulation of mitigation measures shall not be deferred until some future time, the specific details of a mitigation measure may be developed after project approval when it is impractical or infeasible to include those details during the project’s environmental review. The lead agency must (1) commit itself to the mitigation, (2) adopt specific performance standards the mitigation will achieve, and (3) identify the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure. Compliance with a regulatory permit or other similar processes may be identified as mitigation if compliance would result in implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards (§15126.4(a)(1)(B)). Per CEQA, measures may also be adopted, but are not required, for environmental impacts that are not found to be significant (14 CCR § 15126.4(a)(3)). Under CEQA, mitigation is defined as avoiding, minimizing, rectifying, reducing, and compensating for any potential impacts (CEQA 15370).

Regulatory agencies may require additional measures beyond those required for compliance with CEQA. Though not considered “mitigation” under CEQA, these measures are often referred to in an Initial Study as “mitigation”, Good Stewardship or Best Management Practices. These measures can also be identified after the Initial Study/Negative Declaration is approved.

CEQA documents must consider direct and indirect impacts of a project (CAL. PUB. RES. CODE § 21065.3). They are to focus on significant impacts (14 CCR § 15126.2(a)). Impacts that are less than significant need only be briefly described (14 CCR § 15128). All potentially significant effects must be addressed.

For each of the following CEQA questions, the “No Build” alternative has been determined to have "No Impact". Under the “No Build” alternative, no alterations to the existing conditions would occur, nor would any proposed improvements be implemented. The “No Build” alternative is not discussed further in this document.

2.1 Aesthetics

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Have a substantial adverse effect on a scenic vista?	No	No	No	Yes
Would the project: b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No	No	No	Yes
Would the project: c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	No	No	No	Yes
Would the project: d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	No	No	No	Yes

A “No Impact” determination for sections a) through d) are based on the scope, description, and the Scenic Resources Evaluation and Visual Impact Assessment (Caltrans 2018a).

Potential impacts to the project location and setting, visual resource change, and viewer sensitivity are not anticipated due to all work would be done within the existing right of way. The expected temporary and permanent work would be noticeable but negligible. Temporary construction impacts include minor cut and fill and ground disturbance. There would be road widening, cut and fill, and minor vegetation removal as well as changes to the existing draining system. However, the work that would be done would not obstruct views of the surrounding landscape or diminish the visual character or quality of the project corridor. Overall, the proposed project has no visual impacts and no avoidance, minimization, or mitigation are necessary including measures.

2.2 Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	No	No	No	Yes
Would the project: b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No	No	No	Yes
Would the project: c) Conflict with existing zoning, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	No	No	No	Yes
Would the project: d) Result in the loss of forest land or conversion of forest land to non-forest use?	No	No	No	Yes
Would the project: e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	No	No	No	Yes

A “No Impact” determination for sections a) through e) are based on the scope, description, and review of the Yolo County General Plan Land Use Map (Yolo 2009a) and the Colusa County General Plan Land Use Map (Colusa 2012a). No Williamson Act land or forest was identified within the project limits. The project would have no impact on agriculture and forest resources.

2.3 Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Conflict with or obstruct implementation of the applicable air quality plan?	No	No	No	Yes
Would the project: b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	No	No	No	Yes
Would the project: c) Expose sensitive receptors to substantial pollutant concentrations?	No	No	No	Yes
Would the project: d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	No	No	No	Yes

A “No Impact” determination for sections a) through d) are based on the scope, description, and the Air Quality Analysis (Caltrans 2018b). Potential impacts to air quality are not anticipated as this project would not change traffic volume, fleet mix, speed, or any other factor that would cause an increase in emissions relative to the no build alternative; therefore, this project would not cause an increase in operational emissions. No minimization measures are recommended for operational emission and the project would have no impact on air quality.

2.4 Biological Resources

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?	No	Yes	No	No
Would the project: b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	No	Yes	No	No
Would the project: c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No	Yes	No	No
Would the project: d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	No	No	No	Yes
Would the project: e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No	No	No	Yes
Would the project: f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No	No	No	Yes

A “less than Significant with Mitigation” determination for sections a), b), and c) and a “No Impact” determination for sections d) through f) are based on the scope, description, the Biological Resources Evaluation Memo (Caltrans 2018c), and the Natural Environment Study (Caltrans 2020a) and are discussed below.

Regulatory Setting

The topics are separated into Natural Communities, Wetlands and Other Waters, Plant Species, Animal Species, and Threatened and Endangered Species. The plant and animal species that are listed as “threatened” or “endangered” are covered within the Threatened and Endangered sections. Other special-status plant and animal species, including California Department of Fish and Wildlife (CDFW) fully protected species, species of special concern, the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Services (NMFS) candidate species, and California Native Plant Society (CNPS) rare and endangered plants are covered in the Plant and Animal sections.

Natural Communities

The CDFW maintains records of sensitive natural communities (SNC) in the California Natural Diversity Database (CNDDB). The SNC are those natural communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special-status taxa or their habitat.

Plant Species

The USFWS and the CDFW have regulatory responsibility for the protection of special-status plant species. The primary laws governing plant species include:

Federal Endangered Species Act (FESA), United States Code 16 (USC), Section 1531, et seq. See also 50 CFR Part 402

California Endangered Species Act (CESA), California Fish and Game Code, Section 2050, et seq.

Native Plant Protection Act, California Fish and Game Code, Sections 1900–1913

National Environmental Policy Act (NEPA), 40 C.F.R. § 1500 through § 1508

California Environmental Quality Act (CEQA), California Public Resources Code, Sections 21000–2117

Animal Species

The USFWS, the NMFS, and the CDFW have regulatory responsibility for the protection of special-status plant species. The primary laws governing animal species include:

NEPA, 40 C.F.R. § 1500 through § 1508
California Public Resources Code, Sections 21000–2117
Migratory Bird Treaty Act, 16 U.S.C. §§ 703–712
Fish and Wildlife Coordination Act, 16 U.S. Code § 661
Sections 1600–1603 of the California Fish and Game Code
Sections 4150 and 4152 of the California Fish and Game Code

Threatened and Endangered Species

The primary laws governing threatened and endangered species include:

- The FESA, United States Code 16 (USC), Section 1531, et seq. See also 50 CFR Part 402
- The CESA, California Fish and Game Code, Section 2050, et seq.
- The CEQA, California Public Resources Code, Sections 21000–21177 Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S. Code § 1801

Environmental Setting

The project is located along I-5 at five different bridge overcrossings in Yolo and Colusa County. The overcrossings in Yolo county are located at County Road 96 post mile (PM) R14.27, County Road 95 Yolo County PM R15.85, and Zamora Yolo County PM R17.62. The bridge overcrossings in Colusa County are located at E Street Colusa County PM R22.74 and Lurline Avenue Colusa County PM R22.74. The natural community around the project is classified urban and rice development habitats. The vegetative community inside the project limits consists of highly disturbed ruderal grasses within the road median. Irrigation canals and agricultural ditches are present outside the project.

The physical setting and climate of the project limits are typical of Sacramento River valley, California. The climate in the project region is generally Mediterranean, with cool, wet winters and hot, dry summers. The average summer high temperature is 92 degrees Fahrenheit (°F); the average winter low temperature is 40 °F. Precipitation occurs primarily in the winter, from October through May, with a distinct dry period from June through September.

The project occurs within the Sierra Nevada ecological subsection M262A (Central California Great Valley Section), which is characterized by a low-elevation fluvial plain

formed on nonmarine sedimentary rocks. Cover type is primarily agricultural; cover types include annual grasslands, western hardwoods, and wet grasslands.

A Natural Environment Study (NES) was prepared for this project. The biological study area (BSA), represented by the Environmental Surveys Limits (ESL), is approximately 27 acres, occurs within the Williams USGS 7.5 Minute Quadrangle and includes the Lurline overcrossing where it crosses the Interstate 5 (I-5). The ESL consists of the paved roadway and shoulder of I-5 and the adjacent ditches and mixture of vegetation types represented by annual grasslands, rice fields, and perennial and emergent hydrologic features.

The BSA is in the Sacramento Valley subregion of the California Floristic Province (Baldwin et al. 2012). The topography of the BSA is relatively level, with elevations ranging from approximately 12 to 40 ft. (4 to 12 meters) above mean sea level.

There are no hydrological resources within the BSA. Agricultural drainages are located adjacent to the project area. The agricultural drainages would not be affected by project work as there is no work proposed within the adjacent agricultural drainages. Standard BMPs and ESA fencing would be used during project work to delineate and protect sensitive resources in the BSA.

Non-native dominated annual grassland vegetation type is predominantly represented in the BSA. These grasslands also exhibit various ruderal species. Ruderal species are plants that are first to colonize disturbed lands and generally occur along roadsides.

Dominant ruderal species include the following:

- Filaree (*Erodium botrys*)
- Oats (*Avena barbata*)
- Yellow star thistle (*Centaurea solstitialis*)

Non-native grasses observed within the BSA include the following:

- Bermuda grass (*Cynodon dactylon*)
- Soft brome (*Bromus hordeaceus*)
- Italian rye grass (*Festuca perennis*)
- Johnson grass (*Sorghum halepense*)
- Little quaking grass (*Briza minor*)
- Medusa-head (*Taeniatherum caput-medusae*)
- Ripgut grass (*Bromus diandrus*)
- Silver hair grass (*Aira caryophyllea*)
- Wild oat (*Avena fatua*)

Non-native herbs and forbs observed in the BSA include the following:

- Black mustard (*Brassica nigra*)

- Blessed milk thistle (*Silybum marianum*)
- Cutleaf geranium (*Geranium dissectum*)
- Curly dock (*Rumex crispus*)
- Field bindweed (*Convolvulus arvensis*)
- Field mustard (*Brasica rapa*)
- Field parsley (*Torilis arvensis*)
- Seashore vervain (*Verbena litoralis*)
- Sow thistle (*Sonchus oleraceus*)
- Teasle (*Dipsacus sativus*)
- Vetch (*Vicia* sp.)
- Vineyard onion (*Allium vineale*)
- Wild radish (*Raphanus* sp.)

The agricultural drainages adjacent to the BSA may provide migration for the GGS. However, the drainages would not be impacted by proposed work. No other migration corridors exist within the BSA

Impact Analysis

Discussion of Questions a), b), and c)

For the project sites located at County Road 96, County Road 95, Zamora, and E street, no permits or certifications from the CDFW, U.S. Army Corps of Engineers, or the Regional Water Quality Control Board would be required. These four locations do not contain suitable habitat for any special status species. Consultation is not required with the USFWS and the four locations would have no effect to any federally listed species or critical habitat. No adverse impact would occur to any state listed species.

Focused surveys were conducted for all of the special status plant species listed under various ruderal species, non-native grasses, and non-native herbs and forbs in the section above. No sensitive plant species were observed during the focused surveys and are presumed absent; therefore, no avoidance minimization measures are proposed.

For the Lurline Avenue location, there is potential disturbance to the species and habitat of the Giant Garter Snake (GGS). The GGS is designated as a threatened species pursuant to both the federal Endangered Species Act (ESA) (16 U.S.C. § 1531 et seq.) and the California Endangered Species Act (CESA) (Fish &G. Code, § 2050 et seq.) (See Cal. Code Regs., tit. 14, § 670.5, subd. (b)(2)(D)). GGS is federally and state listed as threatened since 20 October 1993 (FR 58:54053).

The GGS feeds primarily on small fish, tadpoles, and frogs. Their habitat requirements consist the following:

Adequate water during the snake's active season (early-spring through mid-fall) to provide food and cover.

Emergent, herbaceous wetland vegetation, such as cattails and bulrushes for escape cover and foraging habitat during the active season.

Grassy backs and openings in waterside vegetation for basking.

Higher elevation uplands for cover and refuge from flood waters during the snake's dormant season in the winter.

The GGS is endemic to wetlands in the Sacramento and San Joaquin valleys and inhabits agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands in the Central Valley (Caltrans 2020a). The GGS is typically absent from larger rivers because of lack of suitable habitat and vegetative cover, and from wetlands with sand, gravel, or rock substrates. Riparian woodlands typically do not provide a suitable habitat because of excessive shade, lack of basking sites, and absence of prey populations. However, some riparian woodlands do provide good habitat (Caltrans 2020a).

No GGS were found to inhabit the BSA. The area was surveyed for potential GGS habitat quality and the following observations were made at only the Lurline Avenue location: Mammal burrows were found to be occurring next to the concrete slab to be removed. However, sparse emergent vegetation was only observed in one small area within the drainage. Additionally, slopes at the drainage were greater than a 2:1 incline and could impede the GGS' ability to emerge. Lastly, there was a large pumping station at the other end of the drainage. The pumping station makes the water flow due west, through the BSA. It conveys water from a low elevation to the higher elevation of the drainage within the BSA. The pumping station moves water at high velocity through a screen that blocks larger objects and possibly BMPs the GGS from entering. The drainage in question connects to other rice fields, however the proximity of the pumping station to the BSA may act as a heavy barrier to connectivity of the GGS habitat. The canal on the other side of the pumping station exhibits higher habitat quality, as it is connected to many other rice fields, and has fewer steep slopes than the side of the canal within the BSA.

Along the banks of the drainage, there is evidence of vegetation burning, possibly for agricultural purposes, to keep the vegetation from encroaching into the drainage. As there is no in water work to be done, there is no GGS aquatic habitat within the BSA. However, 0.85 acres of potential GGS upland habitat exists within the project limits.

The proposed staging area was surveyed for signs of potential GGS habitat. The area had signs of heavy disturbance from previous staging of farming equipment and implements, and a large tractor and implements were parked along the bank of the drainage at the potential staging area. Additionally, there was no vegetation within the drainage. The slopes of the drainage were as steep as in the area southeast of the overcrossing. No mammal burrows were observed to be present along the drainage near the staging area.

Discussion of Question d)

Swainson's hawk is not listed under the Federal Endangered Species Act (FESA) but is listed as threatened under the California Endangered Species Act (CESA) and is a migratory bird species protected under the Migratory Bird Treaty Act (MBTA).

Swainson's hawk breed in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Its breeding range occurs from southwestern Canada to Northern Mexico. While most of the population winter in Central America, some small populations have been found wintering in the Sacramento-San Joaquin Delta area (Herzog 1996). Foraging habitat for Swainson's hawk consists of relatively open stands of grass dominated vegetation, sparse shrublands, and cropland. Swainson's hawks migrate long distances and tend to build their nest in large sparsely vegetated flatlands characterized by valleys, plateaus, broad floodplains, and large expanses of desert. In California, these birds typically return to nest sites from early March to April and migrate south in late August and September.

Swainson's hawk was not observed during surveys within the project vicinity. At the Lurline Avenue location, the BSA does provide potentially suitable foraging habitat for Swainson's hawk, however no nesting habitat exists within the BSA. Potential indirect project impacts are limited to the possibility of noise from construction disturbing foraging behavior. There would be no tree or vegetation removal as part of the project work. There would be no direct impacts to Swainson's hawk.

Discussion of Questions e) and f)

All project locations do not conflict with any local policies or ordinances protecting biological resources or conflict with the provisions of local, regional, or state habitat conservation plan, therefore, there is a no impact determination.

Conclusion

The results of the filed review determined no permits or certifications from the CDFW, the U.S. Army Corps of Engineers, or the Regional Water Quality Control Board would be required at four locations, County Road 96, County Road 95, Zamora, and E street. The four locations do not involve work within any jurisdictional waters. The four locations were deemed not suitable habitat for any federal special species. There would be no effect to any Federally listed species or designated critical habitat. The project work in the four locations would not alter any habitat for any state species and coordination with the CDFW for state listed species is not necessary.

For the Lurline Avenue location only, all the temporary and permanent impacts on the vegetation types are also considered impact to the GGS habitat. Permanent impacts would result in loss of the GGS habitat. The project does not propose any construction outside of the I-5 Right-of-Way (ROW) or outside the Action Area, therefore, the GGS habitat outside of these areas would not be disturbed.

If the GGS is present in the action area during construction at Lurline Avenue, take of the species could occur. Additionally, the GGS and nests containing hatchlings or eggs could be crushed and killed during the movement of construction equipment in upland habitats. As mentioned previously, the project location is found in an area of low density of the GGS, therefore, potential for mortalities is lowered. Avoidance and minimization measures including biological monitoring during construction would be implemented to decrease the potential mortality of the GGS.

Additionally, expansion of existing fill to accommodate the raising of the Lurline Avenue overcrossing would occur within the GGS upland habitat. This would result in the permanent loss of 0.018 acres (784 sq. ft.) of upland GGS habitat. The temporary removal of the concrete slab along the southeast corner of the Lurline Avenue overcrossing may result in loss of thermal conductivity for the GGS in the surrounding mammal burrows. However, the concrete would be replaced with newer concrete, making these impacts temporary.

Noise, vibrations, artificial light, and other physical disturbances can harass the GGS, disrupt or delay normal activities, or cause injury or mortality. For most activities, the effects on the GGS would be limited to avoidance behavior in response to movements, noises, and shadows caused by construction personnel and equipment operations. However, survival may be altered if disturbance causes snakes to leave protective habitat (e.g., causing increased exposure to predators) or is sufficient duration and magnitude to affect growth and reproductive success. Most snakes would be expected to move upstream or downstream of the immediate project area in response to disturbance. Displacement could affect survival by increasing the exposure of snakes to predators. The likely effects on the GGS would be avoidance of habitat adjacent to the construction area.

As a result of the proposed project, the project would have a less than significant impact to biological resources with mitigation. Caltrans proposes to compensate for adverse effects through the purchase of the GGS mitigation credits at a USFWS/CDFW approved mitigation bank.

Mitigation

Caltrans would implement off-site compensatory mitigation for the permanent loss of the GGS habitat. These mitigation credits would be purchased from a USFWS and CDFW approved GGS mitigation site possessing a conservation easement in perpetuity with available credits located in the Colusa County and Yolo County service area prior to impacts to the species. Caltrans shall purchase these credits and provide a bill of sale acceptable and approved by the USFWS and the CDFW before construction begins. Mitigation for the permanent loss of the GGS habitat is anticipated through the purchasing of GGS mitigation banking credits from a USFWS/CDFW approved bank at a ratio of 3:1 (acre: acre) [0.018 acres x 3 = 0.054 acres]. Additional actions, such as mitigation actions identified and proposed by Caltrans after the issuance of this USFWS

biological opinion (BO), which may affect ESA-listed species or designated critical habitat, would require reinitiating of consultation.

Avoidance and Minimization Measures

Caltrans would implement standard BMPs, general avoidance and minimization measures, and resource-specific avoidance and minimization measures. The following Lurline Avenue site restrictions would be implemented to avoid or minimize effects on listed species and their habitats: Routes and boundaries of roadwork would be clearly marked before initiation of construction or grading. Hazardous materials, such as fuels, oils, and solvents, would be stored in sealable containers in a designated location that is located at least 100 feet from wetlands and aquatic habitats.

Before construction activities begin, the contractor, in consultation with a USFWS and CDFW qualified biologist and in accordance with the project plan to develop avoidance measures that would clearly demarcate environmentally sensitive areas, if any, adjacent to the project footprint. Temporary fencing would be installed along the perimeter of all environmentally sensitive areas that are to be avoided so as not to be disturbed by construction activities. They would remain in place throughout the duration of construction and would be fully maintained and inspected daily when project activities are underway. Repairs to the fencing would be made within 24 hours of identifying the need for repair. After construction is completed, the fencing would be completely removed.

All construction equipment would be restricted to operating within the designated work areas, staging areas, and access routes. The limits of designated work areas and staging areas (i.e., project footprint) would be clearly marked before beginning construction.

Conservation measures to reduce potential impacts to the GGS would entail certain avoidance periods as well as other measures, developed in consultation with the USFWS and the CDFW standard specifications, to avoid, minimize, and mitigate potential impacts to this species. Caltrans would implement the following specific avoidance and minimization measures:

Construction activity would be conducted between May 1st and October 1st, which is the active season for the GGS in order to minimize impacts to the species. Snake exclusion fencing would be placed around the action area (fenced area) before construction during the active period for the GGS (May 1st - October 1st) and be maintained through the construction period until the project has been completed. Caltrans would notify the USFWS and the CDFW five days prior to when construction is scheduled to commence.

On site monitoring during ground disturbance activities of the project would be conducted by a USFWS/CDFW approved biologist.

A Worker Environmental Awareness Training Program for construction personnel would be conducted by the USFWS/CDFW approved biologist for all construction workers

including contractors, prior to the start of construction activities. This training instructs workers to recognize the GGS and their habitats.

Twenty-four hours prior to construction activities, the project area shall be surveyed for the GGS by the USFWS/CDFW approved biologist. Surveys of the project area should be repeated if a two-week or greater lapse in construction activity occurs. If the GGS is encountered during construction, activities would cease until appropriate corrective measures have been completed or it has been determined that the GGS would not be harmed. Any sightings and any incidental take would be reported to the USFWS and the CDFW immediately by telephone at (916) 414-6600 or (916) 358-2900, respectively, and by e-mail or a written letter addressed to the Chief, Sacramento Division (USFWS) or North Central Region (CDFW), within one working day of the incident.

The canals and rice fields adjacent to the project area would be flagged and designated as an Environmentally Sensitive Area during the construction period.

Upon completion of the project, all disturbed areas within the action area would be revegetated using native plant species, and post-monitoring work and pictures would be reported to the USFWS and the CDFW showing that temporary impacts have been restored to pre-construction conditions.

At the end of each workday, permittee shall place an escape ramp at each end of the open trench. This would allow any animals that may have been entrapped in the trench overnight to climb out. The escape ramp may be constructed of dirt fill, wood planking, or other suitable material and placed at an angle no greater than 30 degrees. If the GGS is present in the action area during construction, take of the species could occur. Avoidance and minimization measures including biological monitoring during construction would be implemented to decrease the potential GGS mortality when construction equipment is moved in upland habitats. Additionally, the GGS and nests containing hatchlings or eggs could be crushed and killed during movement of construction equipment. As mentioned previously, the project location is found in an area of low density of GGS, therefore, potential for mortalities is low.

2.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	No	No	Yes	No
Would the project: b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	No	No	No	Yes
Would the project: c) Disturb any human remains, including those interred outside of dedicated cemeteries?	No	No	No	Yes

A “Less than Significant Impact” determination for section a) and a “No Impact” determination for sections b) and c) are based on the scope, description, the Historic Property Historic Report (Caltrans 2018d), and the Supplemental Historic Property Report (Caltrans 2020b) and are discussed below.

Regulatory Setting

The primary laws and regulations governing cultural resources include:

Public Resources Code 5024

The January 2014 First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation.

Environmental Setting

The project is located within Caltrans District 3 in Colusa and Yolo Counties, at various post miles on Interstate 5 (I-5). The project limits for all five bridge locations are within Caltrans right-of-way. Only one unevaluated built environment property exists within the area of potential effect (APE) for this project that is located at the Lurline Avenue location. This property consists of lateral canals with associated drainage ditches that are part of the larger linear resource of the Glenn-Colusa Irrigation District (GCID), an irrigation district associated with the expansion of managed agricultural practices to this area of the Sacramento Valley.

The lateral canals at the Lurline Avenue overcrossing are depicted in the 1914 Weber's map of Colusa county and have been recorded as being part of the GCID since 1956. At this location, lateral canals cross under I-5 and Lurline Avenue from southwest to southeast.

The lateral canals are trapezoidal in shape, an average of 40 feet wide and between 8 to 10 feet deep from top of berm, with a water depth of approximately 5 feet. The lateral canal is partially lined in concrete, and with edges bordered with native grass. East of I-5, one of the canals runs along the southern edge of Lurline Avenue to the intersection with Two Mile Road and a narrow drainage ditch borders the northern edge of Lurline Avenue until the intersection with Lurline road. The drainage ditch is vegetated with plants and grasses common to drains and ditches in this area that include Saltgrass, Bermuda grass, and common reed. Drain outflow sites and recapture pumps, pumping the underground drainage, are situated near the Lurline Overcrossing and along the northern edge of Delphas road.

Impact Analysis

Discussion of Question a)

No historical resources were found at the bridge overcrossings located at County Road 96, County Road 95, Zamora, and E Street. At the Lurline Avenue location, there is the historical resource, Glenn-Colusa Irrigation District (GCID) canal and drainage ditches, located off the slope of the eastern embankment. The work would include the placement of falsework and jacking supports under the existing structure of the overcrossing (in the median and shoulder), and the removal of any existing concrete paving, the forming and pouring of new concrete piers and would not cause a substantial adverse change to the historical resource.

Discussion of Questions b) and c)

The Native American Heritage Commission (NAHC) was contacted via email on June 5, 2018 to request a search of the Sacred Lands File (SLF) and an updated list of Native American contacts for the project area. The NAHC replied to the request on June 14, 2018. The NAHC reported that the search of the SLF was negative for cultural resources. No archaeological resources or human remains were identified at all five project site locations; therefore, proposed project work would not cause a substantial change in the significance of any archaeological resources or any human remains.

Conclusion

There are no significant impacts to cultural resources and mitigation measures have not been proposed for the project. Caltrans would delineate an Environmentally Sensitive Area (ESA) to protect the GCID lateral canal and drainage ditches during construction at the Lurline Avenue location, which can be found in Appendix D of this document.

Avoidance and Minimization Measures

Selected portions of the ESA's perimeter would be physically marked using the following methods:

Temporary Fencing (type ESA) would be installed at critical locations in areas adjacent to construction. Laminated "Keep Out" signs would be posted along with ESA fencing, at 20-meter intervals, to explicitly show areas that are off-limits.

Less critical areas (i.e., areas further away from construction activities) would be marked with wood stakes positioned 10 feet apart. Laminated "Keep Out" signs would be also attached to the stakes.

Surface areas corresponding with underground canals would be marked with temporary (spray) paint and labeled as ESAs.

Before the beginning of construction activities, the Caltrans Architectural Historian would discuss the ESA with all responsible parties (Resident Engineer, Contractor, etc.), and would explain all relevant historic preservation laws.

2.6 Energy

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	No	No	No	Yes
Would the project: b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	No	No	No	Yes

A “No Impact” determination for sections a) and b) are based on the scope, description, and the Energy Impact Evaluation Memo (Caltrans 2020c).

For direct energy related to construction, the build alternative would result in short-term energy consumption related to the manufacture of construction materials, the use of construction equipment that requires petroleum fuels, and the use of construction workers’ motor vehicles as they travel to and from the site. Construction-related energy consumption anticipated under the build alternative would be finite and limited and would have an incremental impact on area energy supplies. With the inclusion of project features, no adverse temporary impacts are anticipated.

For direct energy related to long-term impacts (mobile source), the build alternative does not increase capacity, and thus does not add traffic, so a net increase in energy consumption is not anticipated. Therefore, no adverse long-term impacts are anticipated, and the project would not impact energy.

2.7 Geology and Soils

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	No	No	No	Yes
ii) Strong seismic ground shaking?	No	No	No	Yes
iii) Seismic-related ground failure, including liquefaction?	No	No	No	Yes
iv) Landslides?	No	No	No	Yes
Would the project: b) Result in substantial soil erosion or the loss of topsoil?	No	No	No	Yes
Would the project: c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	No	No	No	Yes
Would the project: d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	No	No	No	Yes
Would the project: e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	No	No	No	Yes

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	No	No	No	Yes

A “No Impact” determination in for sections a) through f) are based on the scope, description, and field reviews conducted. No faults, unstable geologic units or soil, or expansive soil was identified within the project limits, therefore, the project would not impact geology and soils.

2.8 Greenhouse Gas Emissions

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	No	No	Yes	No
Would the project: b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	No	No	Yes	No

A “Less Than Significant Impact” determination for sections a) and b) are based on the scope, description, and all locations of the proposed project and are discussed below.

Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), and various hydrofluorocarbons (HFCs). CO₂ is the most abundant GHG; while it is a naturally occurring component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO₂.

Two terms are typically used when discussing how we address the impacts of climate change: “greenhouse gas mitigation” and “adaptation.” Greenhouse gas mitigation covers the activities and policies aimed at reducing GHG emissions to limit or “mitigate” the impacts of climate change. Adaptation, on the other hand, is concerned with planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels). This analysis would include a discussion of both.

Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce greenhouse gas emissions from transportation sources.

FEDERAL

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2019). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values— “the triple bottom line of sustainability” (FHWA n.d.). Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel Economy (CAFE) Standards. This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the CAFE program based on each manufacturer’s average fuel economy for the portion of its vehicles produced for sale in the United States.

Energy Policy Act of 2005, 109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) the establishment of the Office of Indian Energy Policy and Programs within the Department of Energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

The U.S. EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) is responsible for setting GHG emission standards for new cars and light-duty

vehicles to significantly increase the fuel economy of all new passenger cars and light trucks sold in the United States. Fuel efficiency standards directly influence GHG emissions.

STATE

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders (EOs) including, but not limited to, the following:

EO S-3-05 (June 1, 2005): The goal of this EO is to reduce California's GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill (AB) 32 in 2006 and Senate Bill (SB) 32 in 2016.

Assembly Bill (AB) 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals outlined in EO S-3-05, while further mandating that the California Air Resources Board (ARB) create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code [H&SC] Section 38551(b)). The law requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

EO S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. ARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the governor's 2030 and 2050 GHG reduction goals.

Senate Bill (SB) 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires ARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan how it would achieve the emissions target for its region.

SB 391, Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to identify strategies to address California's climate change goals under AB 32.

EO B-16-12 (March 2012) orders State entities under the direction of the Governor, including ARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

EO B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO₂e). Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, Safeguarding California, every 3 years, and to ensure that its provisions are fully implemented.

SB 32, Chapter 249, 2016, codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

SB 1386, Chapter 545, 2016, declared "it to be the policy of the state that the protection and management of natural and working lands ... is an important strategy in meeting the state's greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands."

AB 134, Chapter 254, 2017, allocates Greenhouse Gas Reduction Funds and other sources to various clean vehicle programs, demonstration/pilot projects, clean vehicle rebates and projects, and other emissions-reduction programs statewide.

SB 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on vehicle miles traveled, to promote the state's goals of reducing greenhouse gas emissions and traffic related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.

SB 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires ARB to prepare a report that assesses progress made by each metropolitan planning organization in meeting their established regional greenhouse gas emission reduction targets.

EO B-55-18 (September 2018) sets a new statewide goal to achieve and maintain carbon neutrality no later than 2045. This goal is in addition to existing statewide targets of reducing GHG emissions.

EO N-19-19 (September 2019) advances California's climate goals in part by directing the California State Transportation Agency to leverage annual transportation spending to reverse the trend of increased fuel consumption and reduce GHG emissions from the transportation sector. It orders a focus on transportation investments near housing, managing congestion, and encouraging alternatives to driving. This EO also directs ARB to encourage automakers to produce more clean vehicles, formulate ways to help

Californians purchase them and propose strategies to increase demand for zero-emission vehicles.

Environmental Setting

The proposed project is along Interstate 5, with a primarily natural resources based agricultural and tourism economy. Interstate 5 is the main transportation route to and through the area for both passenger and commercial vehicles. The nearest alternate route is SR-45, fifteen miles to the east. The Colusa County Regional Transportation Plan guides transportation development in Colusa County. Yolo County is a member of the Sacramento Area Council of Governments (SACOG). SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) guides transportation development in Yolo County. The Colusa and Yolo County General Plan Circulation, Safety, and Traffic elements address GHGs in the project area.

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period, such as a calendar year. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the ARB does so for the state, as required by H&SC Section 39607.4.

NATIONAL GHG INVENTORY

The U.S. EPA prepares a national GHG inventory every year and submits it to the United Nations in accordance with the Framework Convention on Climate Change (see figure 2). The inventory provides a comprehensive accounting of all human-produced sources of GHGs in the United States, reporting emissions of CO₂, CH₄, N₂O, HFCs, perfluorocarbons, SF₆, and nitrogen trifluoride. It also accounts for emissions of CO₂ that are removed from the atmosphere by "sinks" such as forests, vegetation, and soils that uptake and store CO₂ (carbon sequestration). The 1990–2016 inventory found that of 6,511 MMTCO₂e GHG emissions in 2016, 81% consist of CO₂, 10% are CH₄, and 6% are N₂O; the balance consists of fluorinated gases (EPA 2018a). In 2016, GHG emissions from the transportation sector accounted for nearly 28.5% of U.S. GHG emissions.

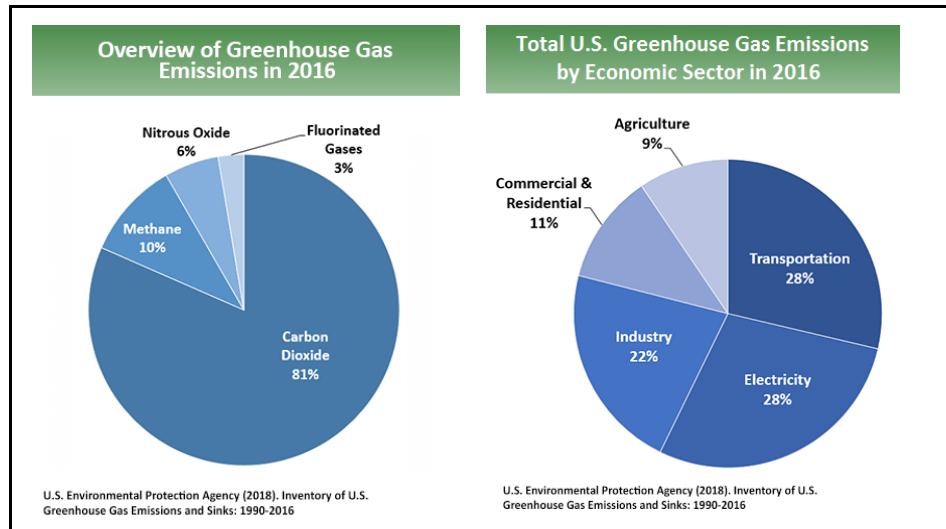


FIGURE 2. U.S. 2016 GHG Gas Emissions

STATE GHG INVENTORY

ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2019 edition of the GHG emissions inventory found total California emissions of 424.1 MMTCO₂e for 2017, with the transportation sector responsible for 41% of total GHGs. It also found that overall statewide GHG emissions declined from 2000 to 2017 despite growth in population and state economic output (see Figure 4) (ARB 2019a).

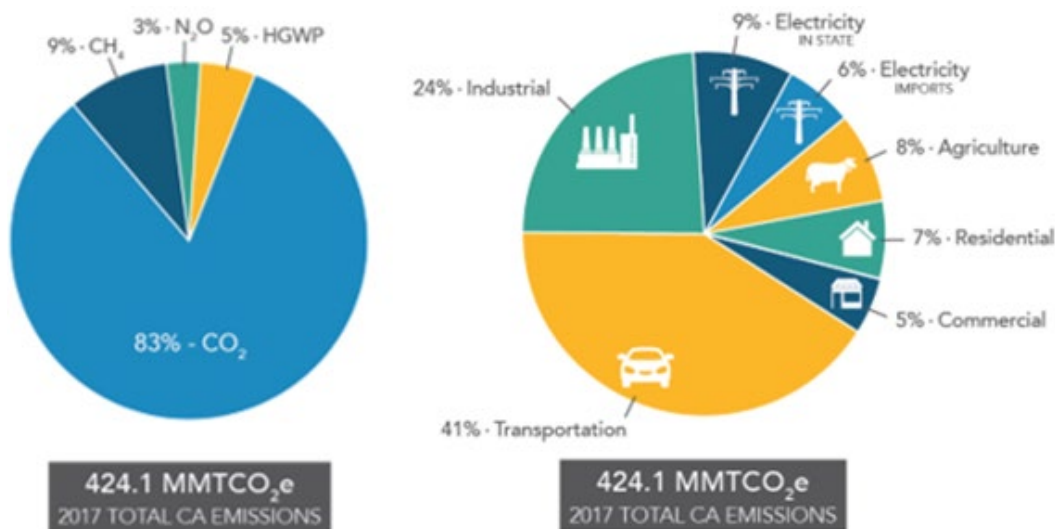


FIGURE 3. California 2017 Greenhouse Gas Emissions

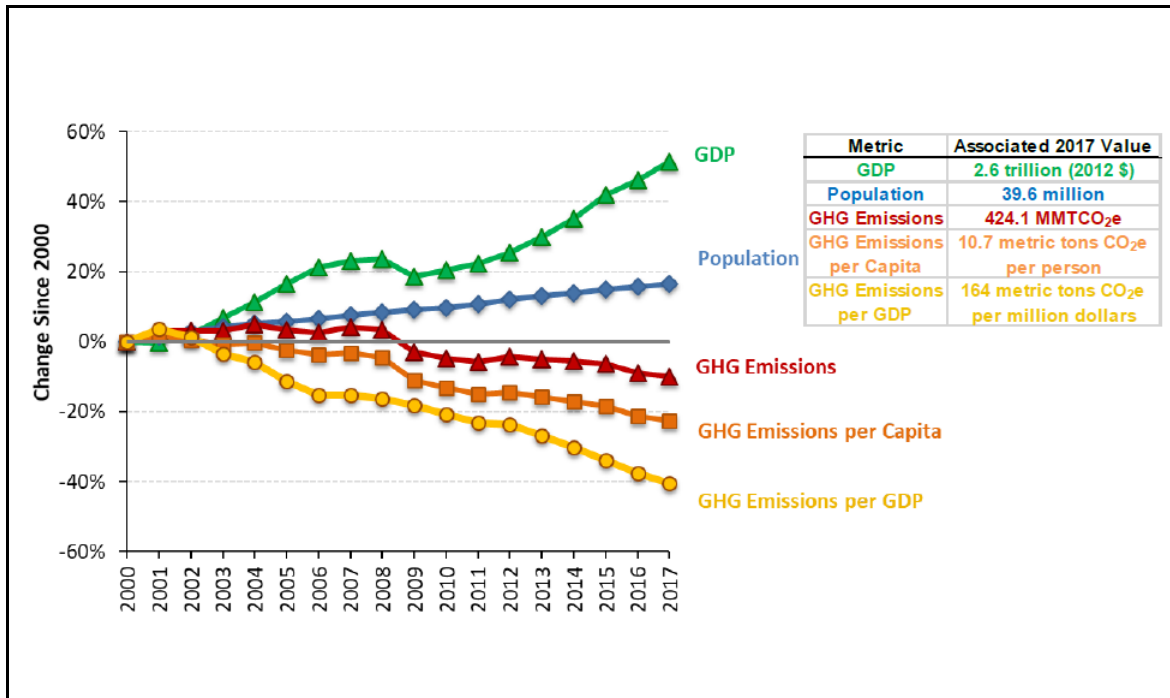


FIGURE 4. Change in California GDP, Population, and GHG Emissions Since 2000
(Source: ARB 2019b)

AB 32 required ARB to develop a Scoping Plan that describes the approach California would take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. ARB adopted the first scoping plan in 2008. The second updated plan, California's 2017 Climate Change Scoping Plan, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California would use to reduce GHG emissions.

REGIONAL PLANS

ARB sets regional targets for California's 18 MPOs to use in their Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) to plan future projects that will cumulatively achieve GHG reduction goals. Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed project is included in the MTP/SCS for SACOG, which includes Yolo County. The regional reduction target for SACOG is 7% by 2020 and 19% by 2035.

SACOG's MTP/SCS GHG reduction measures include Policy 25: Prioritize investments in transportation improvements that reduce greenhouse gas emissions and vehicle miles traveled (SACOG 2019). In addition, Yolo County published a climate action plan (CAP) in 2011 with strategies to reduce GHGs and adapt to global climate change. It established GHG emissions reduction targets for the County of 27% below 1990 levels by 2030 and 53% below 1990 levels by 2040. Yolo County's rural nature and relatively small dispersed communities, however, limit the strategies available to it to reduce

transportation GHG emissions. GHG reduction strategies in the CAP therefore focus primarily on the building energy sector and agricultural practices (Yolo 2011).

The proposed project is also within the jurisdiction of the Colusa County Transportation Commission, the regional transportation planning agency (RTPA) for Colusa County. The Commission adopted its 2018 regional transportation plan (RTP) update on June 25, 2019. The 2018 RTP promotes policies and action to help reduce GHG emissions from transportation sources, consistent with RTP guidelines, the California Transportation Plan, and other statewide plans. The RTP addresses statewide strategies such as considering transportation projects that increase connectivity or provide other means to reduce VMT. RTP Goal 8.1 is to increase the efficiency of the transportation system. The RTP also supports County General Plan goals to prioritize road improvements to areas most in need of improvement and to limit the intrusion of agricultural vehicles and heavy trucks on residential streets (Colusa 2019).

Impact Analysis

Discussion of Questions a) and b)

GHG emissions from transportation projects can be divided into those produced during operation of the SHS and those produced during construction. The primary GHGs produced by the transportation sector are CO₂, CH₄, N₂O, and HFCs. CO₂ emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of CH₄ and N₂O are emitted during fuel combustion. In addition, a small amount of HFC emissions are included in the transportation sector.

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, “because of the global scale of climate change, any one project’s contribution is unlikely to be significant by itself.” (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130).

To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

The purpose of the proposed project is to increase the vertical clearance at five locations off Interstate 5. The project would not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the project would not increase the number of travel lanes on

Interstate 5, no increase in vehicle miles traveled (VMT) would occur as result of project implementation. In fact, VMT should decrease because oversized trucks will no longer need to detour around the structures once vertical clearance is increased. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

Construction Emissions

Construction GHG emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

CO₂ emissions generated from construction equipment were estimated using the Caltrans Construction Emissions Tool (CAL-CET). The estimated emissions would be 240 tons of CO₂ over a period of 220 working days (Caltrans 2020f).

All construction contracts include Caltrans Standard Specifications Sections 7-1.02A and 7-1.02C, Emissions Reduction, which require contractors to comply with all laws applicable to the project and to certify they are aware of and would comply with all ARB emission reduction regulations; and Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.

Conclusion

While the proposed project would result in GHG emissions during construction, it is anticipated that the project would not result in any increase in operational GHG emissions. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. With implementation of construction GHG-reduction measures, the impact would be less than significant.

Greenhouse Gas Reduction Strategies

Statewide Efforts

Major sectors of the California economy, including transportation, will need to reduce emissions to meet the 2030 and 2050 GHG emissions targets. Former Governor Edmund G. Brown promoted GHG reduction goals that involved (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farms and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, *Safeguarding California*.

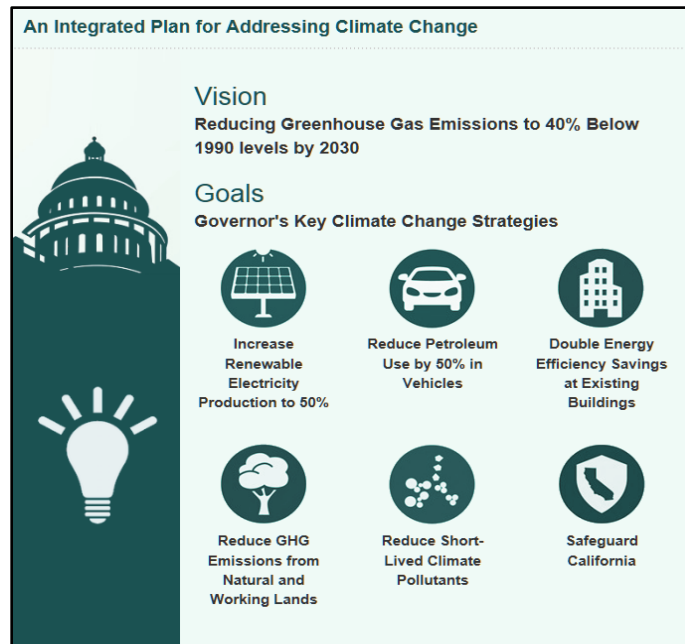


Figure 5. California Climate Strategy

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). A key state goal for reducing GHG emissions is to reduce today's petroleum use in cars and trucks by up to 50 percent by 2030 (State of California 2019).

In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms,

and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the ARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016), set an interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

CALIFORNIA TRANSPORTATION PLAN (CTP 2040)

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. In 2016, Caltrans completed the *California Transportation Plan 2040*, which establishes a new model for developing ground transportation systems, consistent with CO₂ reduction goals. It serves as an umbrella document for all the other statewide transportation planning documents. Over the next 25 years, California will be working to improve transit and reduce long-run repair and maintenance costs of roadways and developing a comprehensive assessment of climate-related transportation demand management and new technologies rather than continuing to expand capacity on existing roadways.

In accordance with SB 391 (Liu 2009), which requires the CTP to meet California's climate change goals under AB 32, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state's transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

CALTRANS STRATEGIC MANAGEMENT PLAN

The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce GHG emissions, among other goals. Specific performance targets in the plan that will help to reduce GHG emissions include:

- Increasing percentage of non-auto mode share
- Reducing VMT
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) GHG emissions

FUNDING AND TECHNICAL ASSISTANCE PROGRAMS

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several sustainable transportation planning grants. These grants encourage local and regional multimodal transportation, housing, and land use planning that furthers the region's RTP/SCS; contribute to the State's GHG reduction targets and advance transportation related GHG emission reduction project types/strategies; and support other climate adaptation goals (e.g., *Safeguarding California*).

CALTRANS POLICY DIRECTIVES AND OTHER INITIATIVES

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. *Caltrans Activities to Address Climate Change* (April 2013) provides a comprehensive overview of Caltrans' statewide activities to reduce GHG emissions resulting from agency operations.

Project-Level Greenhouse Gas Reduction Strategies

The following measures would also be implemented in the project to reduce greenhouse gas emissions and potential climate change impacts from the project.

- The construction contractor must comply with the 2018 Caltrans' Standard Specifications Section 14-9. Section 14-9.02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.
- Compliance with Title 13 of the California Code of Regulations, which includes restricting idling of construction vehicles and equipment to no more than 5 minutes.
- Anticipated traffic control has an estimated maximum delay of 10 minutes during reversing control and 20 minutes during intermittent closure. During k-rail placement and tie-in construction operations, public traffic may be stopped in both directions for periods not to exceed 5 minutes. After each closure, all accumulated traffic must be allowed to pass through the work zone before another closure is made.
- Caltrans' Standard Specification 7-1.02C "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California ARB. Utilize a traffic management plan to minimize vehicle delays and idling emissions.

- Construction traffic would be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.

Adaptation

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

Federal Efforts

Under NEPA assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance. The U.S. Global Change Research Program (USGCRP) delivers a report to Congress and the president every 4 years, in accordance with the Global Change Research Act of 1990 (15 U.S.C. ch. 56A § 2921 et seq). The *Fourth National Climate Assessment*, published in 2018, presents the foundational science and the “human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways.” Chapter 12, “Transportation,” presents a key discussion of vulnerability assessments. It notes that “asset owners and operators have increasingly conducted more focused studies of particular assets that consider multiple climate hazards and scenarios in the context of asset-specific information, such as design lifetime” (USGCRP 2018).

The U.S. DOT Policy Statement on Climate Adaptation in June 2011 committed the federal Department of Transportation to “integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that taxpayer resources are invested wisely, and that transportation infrastructure, services and operations remain effective in current and future climate conditions” (U.S. DOT 2011).

The FHWA Order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*, December 15, 2014) established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance

and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2019).

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. *California's Fourth Climate Change Assessment* (2018) is the state's effort to "translate the state of climate science into useful information for action" in a variety of sectors at both statewide and local scales. It adopts the following key terms used widely in climate change analysis and policy documents:

- *Adaptation* to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
- *Adaptive capacity* is the "combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities."
- *Exposure* is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.
- *Resilience* is the "capacity of any entity – an individual, a community, an organization, or a natural system – to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience". Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.
- *Sensitivity* is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.
- *Vulnerability* is the "susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt." Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factor(s). These factors include, but are not limited to: ethnicity, class, sexual orientation and identification, national origin, and income inequality. Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

Several key state policies have guided climate change adaptation efforts to date. Recent state publications produced in response to these policies draw on these definitions.

EO S-13-08, issued by then-governor Arnold Schwarzenegger in November 2008, focused on sea-level rise and resulted in the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk*

(Safeguarding California Plan). The Safeguarding California Plan offers policy principles and recommendations and continues to be revised and augmented with sector-specific adaptation strategies, ongoing actions, and next steps for agencies.

EO S-13-08 also led to the publication of a series of sea-level rise assessment reports and associated guidance and policies. These reports formed the foundation of an interim *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance) in 2010, with instructions for how state agencies could incorporate “sea-level rise (SLR) projections into planning and decision making for projects in California” in a consistent way across agencies. The guidance was revised and augmented in 2013. *Rising Seas in California – An Update on Sea-Level Rise Science* was published in 2017 and its updated projections of sea-level rise and new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018.

EO B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This EO recognizes that effects of climate change other than sea-level rise also threaten California’s infrastructure. At the direction of EO B-30-15, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies* in 2017, to encourage a uniform and systematic approach. Representatives of Caltrans participated in the multi-agency, multidisciplinary technical advisory group that developed this guidance on how to integrate climate change into planning and investment.

AB 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group, which in 2018 released its report, *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*. The report provides guidance to agencies on how to address the challenges of assessing risk in the face of inherent uncertainties still posed by the best available science on climate change. It also examines how state agencies can use infrastructure planning, design, and implementation processes to address the observed and anticipated climate change impacts.

Caltrans Adaptation Efforts

CALTRANS VULNERABILITY ASSESSMENTS

Caltrans has conducted climate change vulnerability assessments for each district that identify segments of the State Highway System vulnerable to climate change effects including precipitation, temperature, wildfire, storm surge, and sea-level rise. The approach to the vulnerability assessments was tailored to the practices of a transportation agency, and involves the following concepts and actions:

- *Exposure* – Identify Caltrans assets exposed to damage or reduced service life from expected future conditions.
- *Consequence* – Determine what might occur to system assets in terms of loss of use or costs of repair.

- **Prioritization** – Develop a method for making capital programming decisions to address identified risks, including considerations of system use and/or timing of expected exposure.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments will guide analysis of at-risk assets and development of adaptation plans to reduce the likelihood of damage to the State Highway System, allowing Caltrans to both reduce the costs of storm damage and to provide and maintain transportation that meets the needs of all Californians.

Project Adaptation Analysis

SEA-LEVEL RISE

The proposed project is outside the coastal zone and not in an area subject to sea-level rise. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

FLOODPLAINS

The project is located in an area of flat topography in urban and rice development habitats. Irrigation canals and agricultural ditches are present outside the project locations. Shoulder ditches and agricultural drainage likely convey storm water runoff; however, most of the runoff would likely be contained within the agricultural boundaries and may not reach the principal receiving waters in the region.

Average annual precipitation in Woodland, the closest location to the project sites in Yolo County, was 18.5 inches over the period 1906 to 2016. Most rain during that period fell from the months of November through April, with monthly averages ranging from a high of 3.92 inches in January to a low of 1.26 inches in April. Near the project sites in Colusa County, annual average precipitation at Williams was 15.62 inches over the same time span. Most rain fell during November through March and ranged from a high of 3.25 inches in January to a low of 1.95 inches in March. Less than 1 inch fell during each of the remaining months in both locations (WRCC 2021).

The Caltrans District 3 Climate Change Vulnerability Assessment (Caltrans 2019) anticipates the project area (and the District) to receive less precipitation overall in the future but arriving in heavier individual events. Mapping of future potential precipitation changes shows that the five project locations could experience a less than 5% increase in 100-year storm precipitation through 2085 under a conservative (business-as-usual) GHG emissions scenario. (The 100-year flood design standard is commonly considered in the design of transportation assets.) This amount of additional precipitation is unlikely to affect the proposed project improvements or the surrounding environment.

WILDFIRE

According to the CalFire Hazard Severity Zone maps, the project is not in a State Responsibility Area or a very high fire hazard severity zone. The project is within urban and rice development habitats where land cover types include annual grasslands, western hardwoods, and wet grasslands. Topography is relatively flat and low elevation. The Caltrans District 3 Climate Change Vulnerability Assessment mapping of areas of State Highway subject to increase in wildfire exposure shows that the project area along I-5 is not within an area of wildfire concern and the roadway would not be at increased risk of exposure through 2085 (Caltrans 2019). The proposed project would not introduce new structures or features that would be more vulnerable to wildfire than under existing conditions. During construction, Caltrans would implement Caltrans 2018 revised Standard Specification 7-1.02M(2), which mandates fire prevention procedures during construction, including a fire prevention plan. The project is not anticipated to exacerbate the impacts of wildfires intensified by climate change.

2.9 Hazards and Hazardous Materials

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	No	No	Yes	No
Would the project: b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	No	No	Yes	No
Would the project: c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No	No	No	Yes
Would the project: d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No	No	No	Yes
Would the project: e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No	No	No	Yes
Would the project: f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No	No	No	Yes
Would the project: g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	No	No	No	Yes

A “less than Significant Impact” determination for sections a) and b) and a “No Impact” determination for sections c) through g) are based on the scope, description, and the Hazardous Waste Initial Site Assessment (Caltrans 2020d) and are discussed below.

Regulatory Setting

California regulates hazardous materials, waste, and substances under the authority of the California Health and Safety Code and is also authorized by the federal government to implement the Resource Conservation and Recovery Act (RCRA) in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and clean up contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection. Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during project construction.

Environmental Setting

The project is not located within or impacting any sites on the Cortese list. This project includes work on existing structures which may contain low levels of aerially deposited lead, thermoplastic paint containing lead, and treated wood.

Impact Analysis

Discussion of Questions a) and b)

The proposed project would not create a significant hazard to the public. Minor hazardous waste issues that may be confirmed at the project location are aerially deposited lead, thermoplastic paint, and treated wood waste. Low level of aerially deposited lead from the historic use of leaded gasoline exist along roadways throughout California. Prior to construction a site investigation would be conducted to determine if hazardous soils exist and what actions, if any, would need to occur during construction. Thermoplastic paint may contain lead of varying concentrations depending upon color, type, and year of manufacture. Traffic stripes would be removed and disposed of in accordance with Caltrans’ Standard Specification and Provision Section 36-4 “Residue Containing High Lead Concentration Paints”, which would also require a Lead Compliance Plan.

Hazardous chemicals are known to exist in treated wood posts associated with metal beam guardrail. If treated wood posts are removed, they would be disposed of in accordance with Standard Special Provision 14-11.14. The proposed project would have a less than significant impact on public exposure to hazards. The project features

mentioned above would be implemented if appropriate, and impacts would be further reduced.

Discussion of Question c)

No existing or proposed schools are present within one-quarter mile of the project area; therefore, there would be no impact to schools from hazardous emissions or hazardous or acutely hazardous materials.

Discussion of Question d)

The project sites are not located on a site that is included on a list of hazardous material sites pursuant to Government Code Section 65962.5, so there would be no impact from such sites.

Discussion of Question e)

This project sites are not located within an airport land use plan, within 2 miles of a public airport, or within the vicinity of a private airstrip. The project would not result in a safety hazard for people residing or working in the project area due to airport hazards, so there would be no impact.

Discussion of Question f)

The project sites would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, there is no impact.

Discussion of Question g)

The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. SR 70 would remain open during construction and in the event of a wildlife, emergency services and traveling public would be able to drive during construction. Therefore, there is no impact.

Conclusion

During the one phase of the project, Caltrans would perform an ADL site investigation to determine the lead concentrations in shallow soils that may be disturbed if project conditions warrant grinding or cold planing of the existing pavement and the traffic stripe. This standard special provision (SSP) requires a lead compliance plan for non-hazardous levels of lead in the pavement waste. Caltrans would conduct a structure survey if project conditions warrant portions of structures that would be demolished to be evaluated for asbestos and lead paint. A SSP may be required for a lead compliance plan covering non-hazardous levels of lead found in the grindings of existing pavement and for the removal of any lead containing traffic striping. If conditions warrant the removal or disposal of existing treated wood such as wood posts for metal beam guard

rail or roadside signs, an SSP may also be necessary for the disposal of wood post from removed signs and metal beam guardrail. If project conditions warrant, Caltrans would adhere to the all the above SSPs, therefore the project would have a less than significant impact to hazards and hazardous materials.

2.10 Hydrology and Water Quality

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	No	No	No	Yes
Would the project: b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	No	No	No	Yes
Would the project: c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site;	No	No	No	Yes
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	No	No	No	Yes
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	No	No	No	Yes
(iv) impede or redirect flood flows?	No	No	No	Yes
Would the project: d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No	No	No	Yes
Would the project: e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No	No	No	Yes

A “No Impact” determination for sections a) through e) are determined by the scope, description, and the water Quality Assessment (Caltrans 2018e).

The project passes through one Hydrologic Sub-Area (HSA). The major receiving waters closest to the project PM limits are the Colusa Basin Drain, Cache Creek, and Spring Creek. Other water bodies in the general area but outside the project limits include the following: Zamora Creek, Smith Creek, Salt Creek, Lurline Creek, and various unnamed agricultural water bodies. Topographic features for the project area indicate a flat terrain and agricultural uses. Shoulder ditches and agricultural drainage likely convey storm water runoff; however, most of the runoff would likely be contained within the agricultural boundaries and may not reach the principal receiving waters referenced above. The project does not fall within a High-Risk Receiving Watershed nor does it violate any water quality standards or waste discharge requirements, therefore, the project would not impact hydrology and water quality.

2.11 Land Use and Planning

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Physically divide an established community?	No	No	No	Yes
Would the project: b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	No	No	No	Yes

A “No Impact” determination for sections a) and b) are based on the scope, description, and the review of the Colusa County General Plan (Colusa 2012b) and the Yolo County General Plan (Yolo 2009b). The proposed project would not divide an established community, conflict with any applicable land use plan, policy, or regulation, or conflict with any habitat conservation plan or natural community conservation plan, therefore the project would not impact land use and planning

2.12 Mineral Resources

Question:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	No	No	No	Yes
Would the project: b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	No	No	No	Yes

A “No Impact” determination for sections a) and b) are based on the scope, description, and the review of the California Department of Conservation mineral resource map (CDC 2015). No mineral resources were identified within the project limits; therefore, the project would not impact mineral resources.

2.13 Noise

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project result in? a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	No	No	Yes	No
Would the project result in? b) Generation of excessive ground borne vibration or ground borne noise levels?	No	No	No	Yes
Would the project result in? c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No	No	No	Yes

A “Less than Significant Impact” for section a) and a “No Impact” for sections b) and c) are based on the scope, description, and the Noise Analysis Memo (Caltrans 2018f), and are discussed below

Regulatory Setting

The primary laws governing noise are CEQA and NEPA.

Title 23, Part 772 of the Code of Federal Regulations (23CFR772) provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for Federal and Federal-aid highway projects.

The Federal Highway Administration (FHWA) defines a Type I project as a proposed Federal or Federal-aid project for the construction of a highway on a new location; the physical alteration of an existing highway where there is either substantial horizontal or substantial vertical alteration; the addition of through lane; the addition of auxiliary lanes except when the auxiliary lane is a turn lane; the additional or relocation of interchange lands or ramps added to a quadrant to complete an existing partial interchange; restriping existing pavement for the purpose of adding through-traffic land or an auxiliary

lane; or the addition of a new or substantial alteration of a weight station, rest stop, rife-share lot, or toll plaza. A Type II project involves construction of noise abatement on an existing highway with no changes to highway capacity or alignment. A Type III project is a project that does not meet the classifications of a Type I or Type II project. Type III projects do not require a noise analysis.

23CFR772 defines substantial vertical alignment alteration as a project that removes shielding thereby exposing the line of sight between the receptor and the traffic noise source. This is done by altering either the vertical alignment of the highway or the topography between the highway traffic noise source and the receptor. 23CFR772 defines substantial horizontal alignment alteration as a project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition.

Environmental Setting

The project is located along I-5 at five different bridge overcrossings in Yolo and Colusa County. The overcrossings in Yolo county are located at County Road 96 post mile (PM) R14.27, County Road 95 Yolo County PM R15.85, and Zamora Yolo County PM R17.62. The bridge overcrossings in Colusa County are located at E Street Colusa County PM R22.74 and Lurline Avenue Colusa County PM R22.74. The community around the project is classified as urban and rice development.

Impact Analysis

Discussion of Question a)

The project does not construct a new highway in a new location or substantially change the vertical or horizontal alignments and does not include any other activities discussed in the definition of a Type I project. This project meets the criteria for a Type III project as defined in 23CFR772. Traffic volumes, composition and speeds would remain the same in the build and no build condition. Noise impacts are not anticipated, and abatement was not considered.

During Construction, noise from construction activities may increase in the immediate area of construction. Noise generated by construction activities would be a function of the noise generated by individual pieces of construction equipment, the type of amount of equipment operating at any given time, the timing and duration of construction activities, and the proximity of nearby sensitive receptors. Construction noise would primarily result from the operation of heavy construction equipment and arrival and departure of heavy-duty trucks. Construction noise levels would vary on a day-to-day basis during each phase of construction depending on the specific task being completed.

The project site locations are not in close proximity to residential subdivisions, schools, daycare centers, places of worship, or hospitals. The noise levels of the project construction would not exceed the standards established in the Yolo and Colusa County general plans. No night work is planned or necessary to complete the project.

Discussion of b) and c)

The project would not generate excess ground bourn vibration or noise levels. Also, the project is not located in the vicinity of an airport or with two miles of a public airport and would have no impact.

Conclusion

The project does not include any activities that meet the definition of a Type I project. This project meets the criteria for a Type III project as defined in 23CFR§772. Traffic noise impacts are not anticipated, and a detailed noise study report is not required. Noise abatement was not considered on this project. Short term Effects of construction noise levels would vary on a day-to-day basis during each phase of construction depending on the specific task being completed. Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

Caltrans would adhere to Caltrans Standard Specification Section 14-8.02, "Noise Control," by controlling and monitoring noise resulting from work activities and not exceed 86 dBA Lmax at 50 feet from the job site activities from 9 p.m. to 6 a.m. for construction noise. The project would have a less than significant impact on noise.

Avoidance and Minimization Measures

In addition to the Standard Specifications, construction noise would be minimized through the following measures:

- Limit operation of pile driver, jackhammer, concrete saw, pneumatic tools and demolition equipment to daytime hours.
- Unnecessary idling of internal combustion engines should be prohibited.
- Stationary equipment, such as compressors and generators, would be shielded and located as far away from residential and park uses as practical.
- Equipment and materials storage sites shall be located as far away from residential and park uses as practicable.

2.14 Population and Housing

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	No	No	No	Yes
Would the project: b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No	No	No	Yes

A “No Impact” determination for sections a) and b) are based on the scope and description of the project. Potential impacts to population and housing are not anticipated because the project would not increase capacity or access; therefore, the project would not directly or indirectly induce population growth. The project would not add new homes or businesses and would not extend any roads or other infrastructure. There are no residences within the project area, and no replacement housing would be necessary. The project would have no impact the population and housing.

2.15 Public Services

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	No	No	Yes	No
Fire protection?				
Police protection?	No	No	No	Yes
Schools?	No	No	No	Yes
Parks?	No	No	No	Yes
Other public facilities?	No	No	No	No

A “Less than Significant Impact” determination for section a) is based on the scope, description, and the Traffic Management Plan Data Sheet (Caltrans 2020e) and is discussed below.

Regulatory Setting

The primary law governing public services is CEQA.

Environmental Setting

The bridges at the project site locations carry local county roads over the north and south bound lanes of Interstate 5 (I-5). At the project sites, these bridges are 4-lanes and 2-lane roadways. For location, type of roadway, combined peak hour traffic volume, and the average annual daily traffic refer to Table 3 below. Truck traffic on I-5 within the project limits averages 27.88% of the total annual average daily traffic (AADT).

Table 3: Traffic Volumes (2018 Traffic Volumes of California State Highways) (vph) vehicles per hour (vpd) vehicles per day

Location Description	Road Type	Peak-Hour Combined (vph)	ADDT Combined (vpd)
03-YOL-005 PM R12.342 County Road 17	4-Lane, 2-way	2,100	23,200
03-YOL-005 PM R17.616 Zamora, County Road 13	4-Lane, 2-way	2,300	25,000
03-COL-005 PM R17.975 Williams, E Street	4-Lane, 2-way	3,400	30,800
03-COL-005 PM R18.722 Jct. Rte. 20	4-Lane, 2-way	3,050	28,700

Impact Analysis

Discussion of Question a)

The proposed project may be performed without lane closures if it does not impact the travel way at the four locations listed in Table 3. When k-rail is used as a separation barrier between the work zone and the travel way, there is no closure time restriction. A shoulder closure would be allowed only with the closure of an adjacent lane. Lane and shoulder closures would be allowed during daytime hours on weekdays but may be restricted during peak commute hours and around designated holidays. A minimum of one paved traffic lane, not less than 11 feet wide would be required in each direction.

For the fifth location, the raising of the Lurline OC would require Lurline Avenue to be closed to through traffic for the duration of the bridge raising operation. Detour routes for agricultural or emergency access are available using Old Highway 99, Maxwell Road and 2 Mile Road. Freeway closures required for bridge raising would be limited to eight hours in duration. Detours are available on Old Highway 99 or Highway 20, 45 and 162. All other times during the construction at Lurline Avenue, lanes of I-5 would be reduced to one lane in each direction. Lane closures would be limited to one mile in length.

Conclusion

Detour routes would be reviewed to ensure they meet Highway Design Manual requirements to minimize any impacts to emergency services due to construction or lane closures. Portable changeable message signs and a portable speed radar feedback sign system would be required for each lane or shoulder closure. Coordination with adjacent projects and local public agencies would be done to avoid conflicts during construction. A Construction Zone Enhanced Enforcement Program (COZEPP) would also be used, but a full time COZEPP presence is not anticipated. Lane closure charts would be developed for the final TMP prior to phase one of the project. Interchange ramp access at the E Street and Zamora interchanges would be maintained during freeway mainline profile lowering operations, therefore, the project would have a less than significant impact to public services.

2.16 Recreation

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	No	No	No	Yes
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	No	No	No	Yes

A “No Impact” determination for sections a) and b) are based on the scope and description, of the project. The project would not increase the use of existing neighborhood parks, regional parks, or other recreational facilities or require the construction or expansion of these recreational facilities. The project would not impact recreation.

2.17 Transportation/Traffic

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	No	No	No	Yes
Would the project: b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	No	No	No	Yes
Would the project: c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No	No	No	Yes
Would the project: d) Result in inadequate emergency access?	No	No	No	Yes

A “No Impact” determinations for sections a) through d) are based on the scope, description, and the Traffic Management Plan Data Sheet (Caltrans 2020e). The project would not conflict with transit ordinance or policy. The project results would not increase hazards due to design features or negatively affect emergency services. The project would have no impact to transportation and traffic.

2.18 Tribal Cultural Resources

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<p>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</p> <p>a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or</p>	No	No	No	Yes
<p>b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</p>	No	No	No	Yes

A “No Impact” determination for sections a) and b) are based on the scope, description, the Historic Property Survey Report (Caltrans 2018d), and the Supplemental Historic Property Report (Caltrans 2020b). No tribal cultural resources were identified within the project limits; therefore, the project would have no impact to tribal cultural resources.

2.19 Utilities and Service Systems

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities—the construction or relocation of which could cause significant environmental effects?	No	No	No	Yes
Would the project: b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	No	No	No	Yes
Would the project: c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	No	No	No	Yes
Would the project: d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	No	No	No	Yes
Would the project: e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No	No	No	Yes

A “No Impact” determination for sections a) through e) are based on the scope and description of the project. There would be no relocation or newly constructed utilities with this project, therefore the project would have no impact to utilities and service systems.

2.20 Wildfire

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project: a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	No	No	No	Yes
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	No	No	No	Yes
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	No	No	No	Yes
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	No	No	No	Yes

A “No Impact” determination for section a) through d) are based on the scope and description of the project and the CalFire Hazard Severity Zone Map (CalFire 2020). According to the CalFire Hazard Severity Zone Maps, the project is located in a local responsibility area. The project would not substantially impair this area as the existing structures and roadway would remain open to one-way traffic during construction except for the closure at the Lurline Avenue location that is discussed in the Public Services section of this document where emergency services access is addressed. The project does not require the installation or maintenance of associated infrastructure that may exacerbate fire risk and the project is not located in an area that has a high landslide risk. The project would not impact wildfires.

2.21 Mandatory Findings of Significance

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	No	No	Yes	No
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	No	No	No	Yes
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	No	No	No	Yes

A "Less Than Significant Impact" determination for section a) and a "No Impact" determination for sections b) and c) are based on the scope and description of the project and are discussed below.

Impact Analysis

Discussion of Question a)

The project does not have the potential to degrade the quality of the environment, but the Giant Garter Snake (GGS) is a federally listed animal species and potential GGS habitat exists within the biological study area (BSA) at the Lurline Avenue location. Expansion of existing fill to accommodate the raising of the Lurline Avenue bridge overcrossing would occur within the GGS upland habitat and there would be a loss of 0.018 acres of the GGS upland habitat. The project would incorporate mitigation, avoidance, and minimization measures to reduce impacts to the GGS. A Biological

Assessment would be prepared, and Caltrans would initiate formal Section 7 Consultation with U.S. Fish and Wildlife Service (USFWS). In compliance with Federal Endangered Species Act (FESA), measures resulting from this consultation process shall be incorporated into the project design.

Discussion of question b) and c)

The project does not have incremental effects or environmental effects which would cause substantial adverse effects to human beings.

Conclusion

Caltrans has determined that this project may affect and is likely to adversely affect the GGS at the Lurline Avenue location. Caltrans proposes to compensate for adverse effects through the purchase of GGS mitigation credits at a USFWS/CDFW approved mitigation bank, therefore reduce the impact for this project to less than significant.

Chapter 3. List of Preparers

To assist in the identification and assessment of potential environmental impacts of the proposed project, Caltrans Environmental staff prepared the following technical reports.

California Department of Transportation, District 3

Bria Miller – Environmental Planner. Contribution: Document Writer.

Kristen Stubblefield - Associate Environmental Planner. Contribution: Document Reviewer.

Stephen Umbertis – Senior Environmental Planner. Contribution: Document Reviewer.

Mike Bartlett - Environmental Branch Chief. Contribution: Document Reviewer and Approval.

William Larson - Associate Environmental Planner (Archeologist). Contribution: Historic Property Survey Report and Archaeological Survey Report.

Johnathon Edwards – Associate Environmental Planner (Natural Sciences)/Project Biologist. Contribution: Natural Environmental Study.

Sonia Miller – Senior Environmental Planner/Principal Architectural Historian. Contribution: Historic Property Survey Report, Finding of Effects report

Alice Brown - Landscape Architect. Contribution: Visual Impact Assessment.

Jason Lee - Air and Noise Specialist. Contribution: Traffic Noise and Air Quality Impact Assessment, Energy Analysis, and Greenhouse Gas Construction Emission Analysis.

Arron Rambach - Hazardous Waste Specialist. Contribution: Initial Site Assessment for Hazardous Waste and Water Quality Assessment.

Sean Cross – Transportation Engineer. Contribution: Water Quality Assessment

Kathryn Lugo – Landscape Architect. Contribution: Visual Impact Assessment

Jeff Hale - Project Engineer. Contribution: Project Design.

Chapter 4. References

- California Air Resources Board (ARB). 2019a. *California Greenhouse Gas Emissions Inventory–2019 Edition*. Available: <https://ww3.arb.ca.gov/cc/inventory/data/data.htm>. Accessed: August 21, 2020.
- California Air Resources Board (ARB). 2019b. *California Greenhouse Gas Emissions for 2000 to 2017. Trends of Emissions and Other Indicators*. Available: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf. Accessed: August 21, 2020.
- California Air Resources Board (ARB). 2019c. *SB 375 Regional Plan Climate Targets*. Available: <https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets>. Accessed: August 21, 2020.
- California Department of Conservation (CDC). 2015. Mineral Resource Map. Available: <https://maps.conservation.ca.gov/mineralresources/>. Accessed: August 21, 2020.
- California Department of Forestry and Fire Protection (CalFire). 2020. CalFire Hazard Severity Zone Maps. Available: <https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414>. Accessed: August 21, 2020.
- California Department of Transportation (Caltrans). 2018a. *Scenic Resource Evaluation and Visual Impact Assessment*. Dated November 1, 2018. Accessed: August 21, 2020.
- California Department of Transportation (Caltrans). 2018b. *Air Quality Analysis Report*. Dated September 10, 2018. Accessed: August 21, 2020.
- California Department of Transportation (Caltrans). 2018c. *Biological Resources Evaluation Memo*. Dated August 28, 2018. Accessed: August 21, 2020.
- California Department of Transportation (Caltrans). 2018d. *Historic Property Historic Report*. Dated October 2018. Accessed: August 21, 2020.
- California Department of Transportation (Caltrans). 2018e. *Water Quality Assessment memo*. Dated September 21, 2018. Accessed: August 21, 2020.
- California Department of Transportation (Caltrans). 2018f. *Noise Analysis Memo*. Dated September 10, 2018. Accessed: August 21, 2020.
- California Department of Transportation (Caltrans). 2019. *Caltrans Climate Change Vulnerability Assessments. District 3 Technical Report*. Prepared by WSP.

- <https://dot.ca.gov/programs/transportation-planning/2019-climate-change-vulnerability-assessments>. Accessed: January 27, 2021.
- California Department of Transportation (Caltrans). 2020a. *Natural Environment Study*. Dated September 2020. Accessed: November 1, 2020.
- California Department of Transportation (Caltrans). 2020b. *Supplemental Historic Property Report*. Dated August 2020. Accessed: August 21, 2020.
- California Department of Transportation (Caltrans). 2020c. *Energy Impact Evaluation Memo*. Dated October 8, 2020. Accessed: October 21, 2020.
- California Department of Transportation (Caltrans). 2020d. *Hazardous Waste Initial Site Assessment*. Dated May 6, 2020. Accessed: August 21, 2020.
- California Department of Transportation (Caltrans). 2020e *Traffic Management Plan Data sheet*. Dated September 30, 2020. Accessed: October 21, 2020.
- California Department of Transportation (Caltrans). 2020f. *Greenhouse Gas Construction Emission Analysis*. Dated October 12, 2020. Accessed: October 12, 2020.
- California Department of Transportation (Caltrans). 2015. *Standard Specifications*. Available: <http://www.dot.ca.gov/des/oe/construction-contract-standards.html>. Accessed: August 21, 2020.
- County of Colusa (Colusa). 2012a. Colusa County General Plan Land Use Map. Available: https://www.countyofcolusa.org/DocumentCenter/View/2725/Land-Use-Element_Colusa_Final?bidId=. Accessed: August 21, 2020.
- County of Colusa (Colusa). 2012b. Colusa County General Land use plan. Available: https://www.countyofcolusa.org/DocumentCenter/View/2725/Land-Use-Element_Colusa_Final?bidId=. Accessed: August 21, 2020.
- County of Colusa (Colusa). 2019. *2018 Colusa County Regional Transportation Plan Update*. Prepared for Colusa County Local Transportation Commission. <https://www.countyofcolusa.org/DocumentCenter/View/11093/Adopted-2018-Colusa-County-RTP?bidId=>. Accessed: January 27, 2021.
- County of Yolo (Yolo). 2009a. Yolo County General Plan Land Use Map. Available: <https://www.yolocounty.org/home/showdocument?id=14468>. Accessed: August 21, 2020.
- County of Yolo (Yolo). 2009b. Yolo County general plan. Available: <https://www.yolocounty.org/general-government/general-government->

[departments/county-administrator/general-plan/about-the-general-plan.](#)

Accessed: August 21, 2020.

County of Yolo (Yolo). 2011. *Yolo County Climate Action Plan: A Strategy for Smart Growth Implementation, Greenhouse Gas Reduction, and Adaptation to Global Climate Change*. Prepared by AECOM, Fehr & Peers, and CTG. Adopted March 15, 2011. <https://www.yolocounty.org/home/showpublisheddocument?id=18005>. Accessed: January 27, 2021.

Federal Highway Administration (FHWA). 2019. *Sustainability*. <https://www.fhwa.dot.gov/environment/sustainability/resilience/>. Last updated February 7, 2019. Accessed: August 21, 2020.

Federal Highway Administration (FHWA). No date. *Sustainable Highways Initiative*. Available: <https://www.sustainablehighways.dot.gov/overview.aspx>. Accessed: August 21, 2020.

Sacramento Area Council of Governments (SACOG). 2019. *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy*. Adopted November 18, 2019. <https://www.sacog.org/post/adopted-2020-mtpscs>. Accessed: January 27, 2021.

State of California. 2018. *California's Fourth Climate Change Assessment*. Available: <http://www.climateassessment.ca.gov/>. Accessed: August 21, 2020.

State of California. 2019. *California Climate Strategy*. Available: <https://www.climatechange.ca.gov/>. Accessed: August 21, 2020.

U.S. Department of Transportation (U.S. DOT). 2011. *Policy Statement on Climate Change Adaptation*. June. Available: https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm. Accessed: August 21, 2020.

U.S. Environmental Protection Agency (U.S. EPA). 2009. *Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act*. Available: <https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean>. Accessed: August 21, 2020.

U.S. Environmental Protection Agency (U.S. EPA). 2018. *Inventory of U.S. Greenhouse Gas Emissions and Sinks*. Available: <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>. Accessed: August 21, 2020.

U.S. Global Change Research Program (USGCRP). 2018. *Fourth National Climate Assessment*. Available: <https://nca2018.globalchange.gov/>. Accessed: August 21, 2020.

Western Regional Climate Center (WRCC). 2021. Climate Summaries for Woodland and Williams, California. <https://wrcc.dri.edu/summary/Climsmcca.html>. Accessed: January 27, 2021.

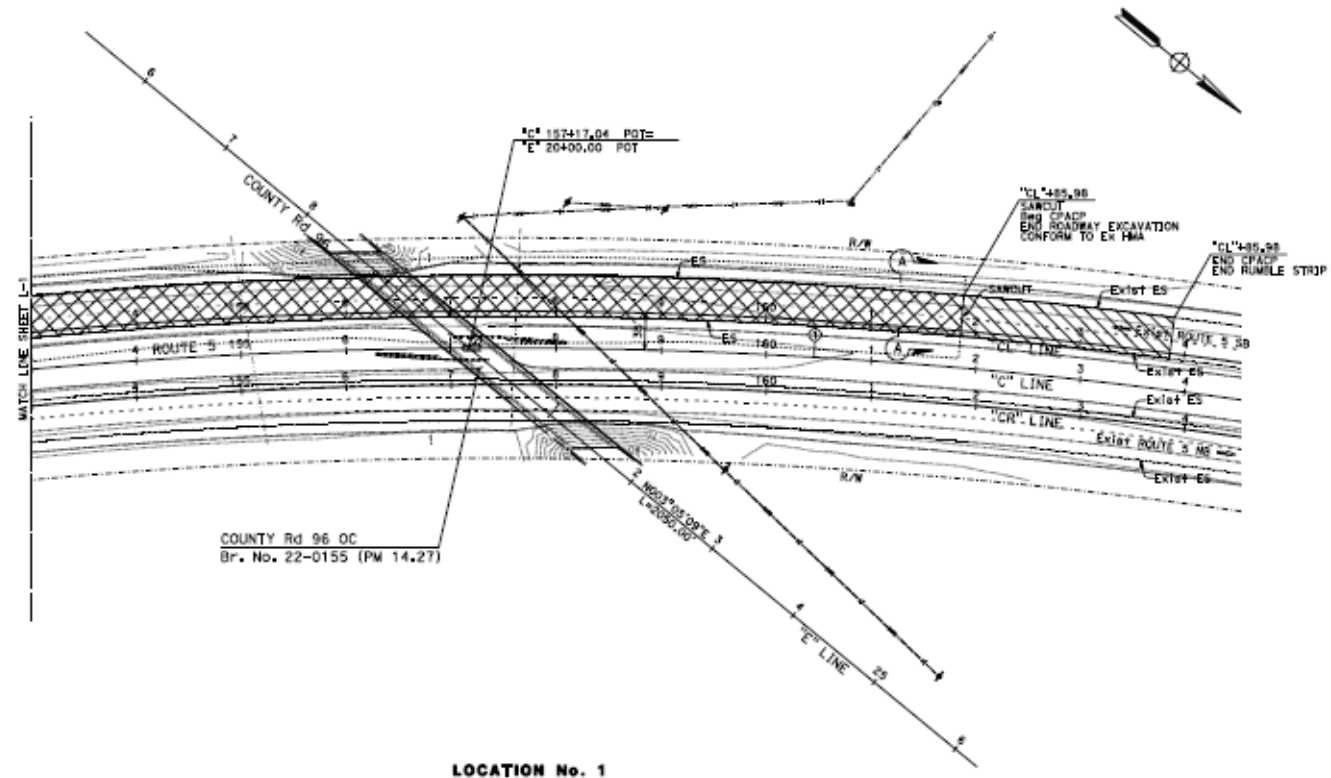


CURVE DATA (THIS SHEET)				
No. ⑧	R	Δ	T	L
(1)	5000.00'	24°00'00"	1062.78'	2094.40'

REGISTERED CIVIL ENGINEER DATE _____

THE STATE OF CALIFORNIA OR ITS OFFICERS
OR AGENTS SHALL NOT BE RESPONSIBLE FOR
THE ACCURACY OR COMPLETENESS OF SCANNED
COPIES OF THIS PLAN SHEET.

Wood Rodgers Inc. 3301 C Street, Suite 100-B Sacramento, CA 95816	
---	--

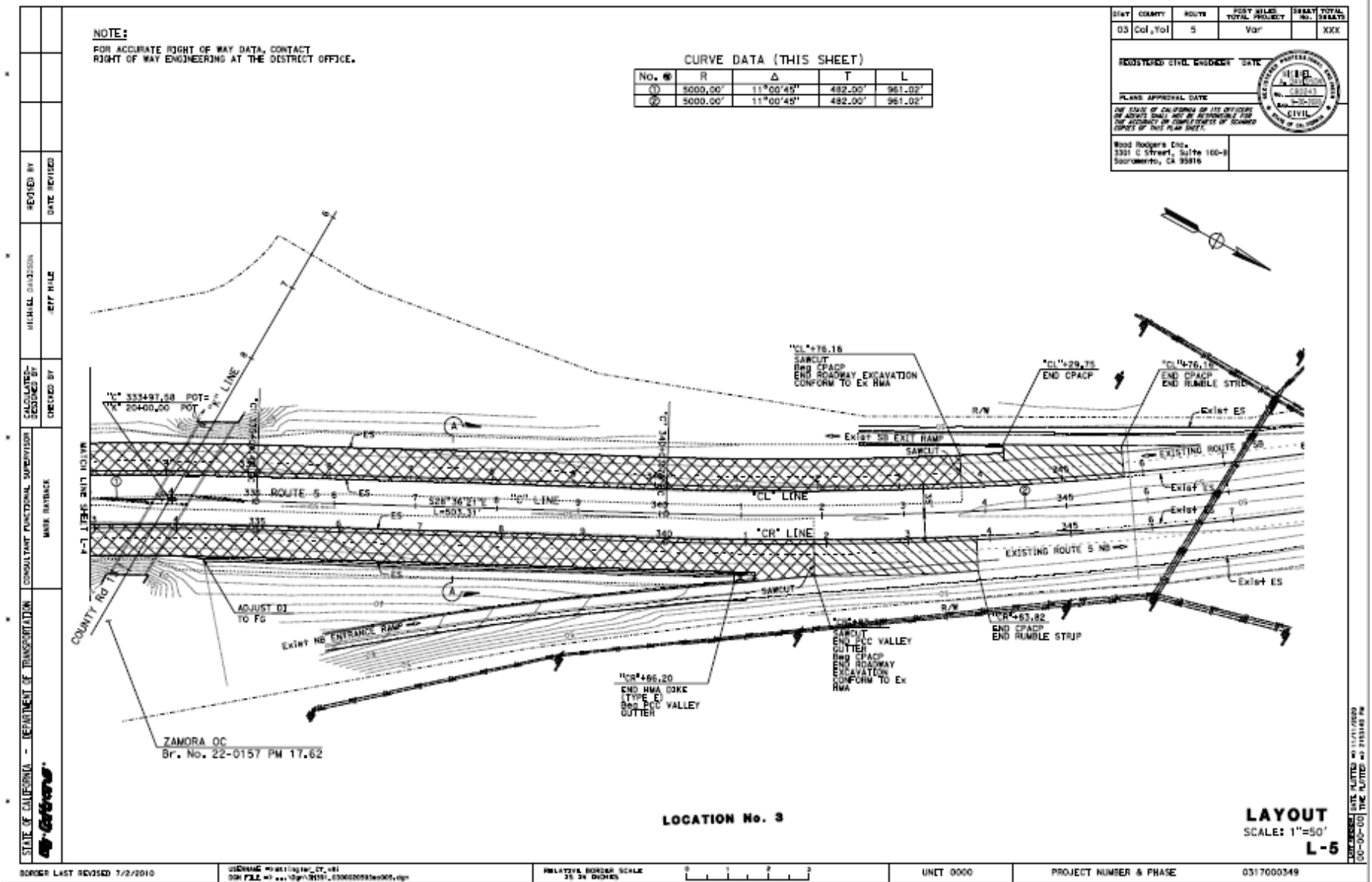


LOCATION No. 1

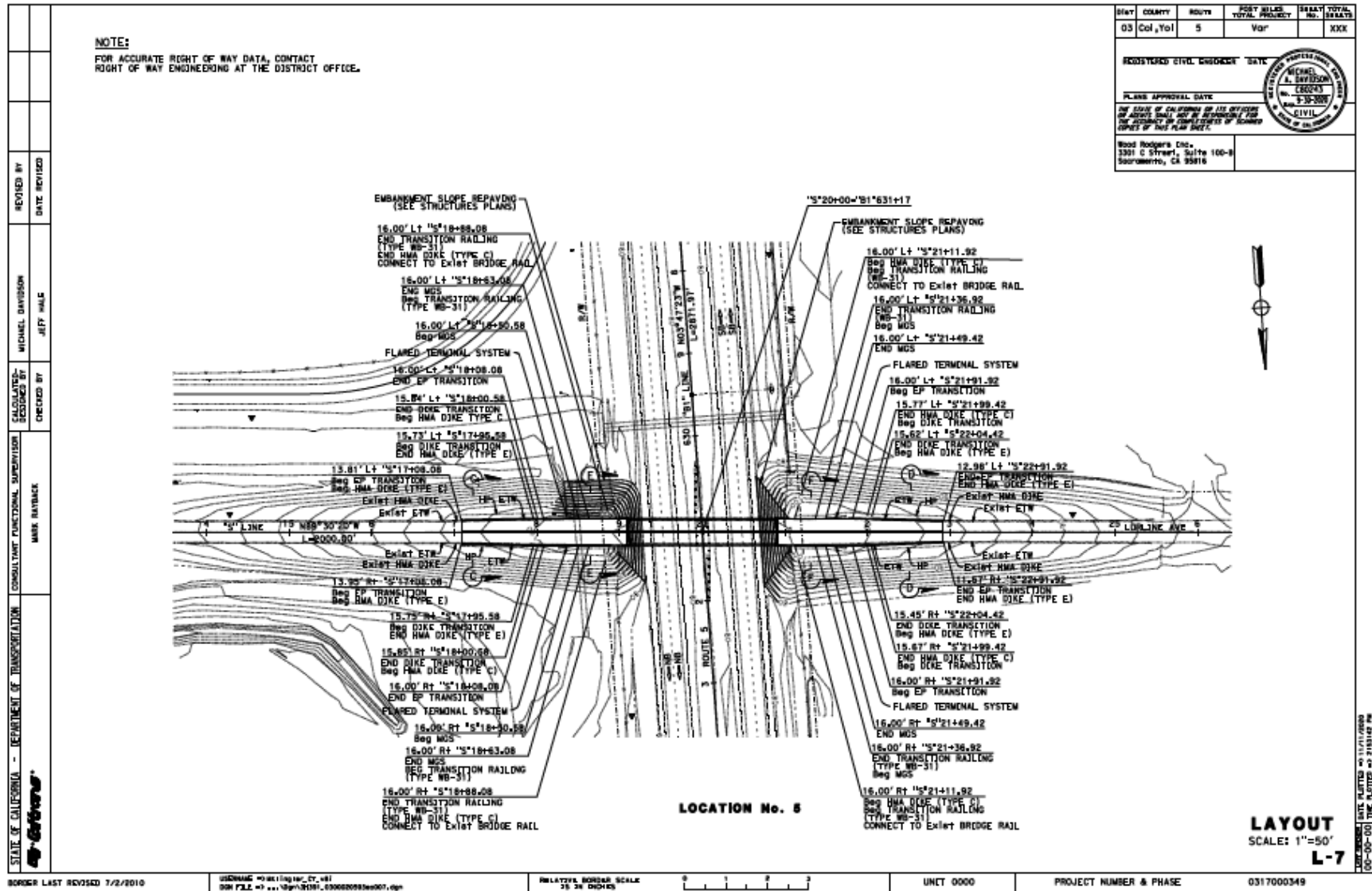
LAYOUT
SCALE: 1"=50'
L-2

DATE PLOTTED => 01/11/2009
TIME PLOTTED => 21:53:35 PM

.....







Appendix B. Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION

OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-6130
FAX (916) 653-5776
TTY 711
www.dot.ca.gov



*Making Conservation
a California Way of Life.*

April 2018

**NON-DISCRIMINATION
POLICY STATEMENT**

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Related federal statutes and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, please visit the following web page:
http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone (916) 324-8379, TTY 711, email Title.VI@dot.ca.gov, or visit the website www.dot.ca.gov.

A handwritten signature in blue ink, appearing to read "Laurie Berman".

LAURIE BERMAN
Director

*"Provide a safe, sustainable, integrated and efficient transportation system
to enhance California's economy and livability"*

Appendix C. USFWS and Species List



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713



In Reply Refer To:
Consultation Code: 08ESMF00-2020-SLI-2610
Event Code: 08ESMF00-2020-E-08013
Project Name: 03-3H391 Lurline Over crossing

August 11, 2020

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

08/11/2020

Event Code: 08ESMF00-2020-E-08013

2

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2020-SLI-2610

Event Code: 08ESMF00-2020-E-08013

Project Name: 03-3H391 Lurline Over crossing

Project Type: TRANSPORTATION

Project Description: raising the existing structure 9". Additional fill will be required to accommodate the localized profile increase of Lurline Avenue and are outlined on the attachment in yellow. These areas of fill will vary in depth from 0' to 0.75'. The median and shoulder areas of I-5 as well as the Lurline Avenue roadway would be utilized for contractor staging and storage of materials. Falsework and jacking supports would be placed under the existing structure in the median and shoulder areas. Related soil disturbances in the areas directly under the existing structure could vary between 6" to 1' in depth. Concrete slope paving on the eastern Lurline Avenue embankment may also be replaced resulting in concrete removal, forming and concrete pouring on the slopes around the irrigation canal and around the eastern bridge abutment.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/39.218469972132254N122.18115545272842W>



Counties: Colusa, CA

Endangered Species Act Species

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Northern Spotted Owl <i>Strix occidentalis caurina</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened

Reptiles

NAME	STATUS
Giant Garter Snake <i>Thamnophis gigas</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf	Threatened
California Tiger Salamander <i>Ambystoma californiense</i> Population: U.S.A. (Central CA DPS) There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850 Habitat assessment guidelines: https://ecos.fws.gov/ipac/guideline/assessment/population/436/office/11420.pdf	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp <i>Branchinecta conservatio</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Critical Habitats

There are no critical Habitats with your project area under this offices jurisdiction.



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Query Criteria: IS (Williams (3912222))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Threatened	G2G3	S1S2	SSC
<i>Buteo swainsoni</i> Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
<i>Extriplex joaquinana</i> San Joaquin spearscale	POCHED041F3	None	None	G2	S2	1B.2
<i>Heteranthera dubia</i> water star-grass	PMPON03010	None	None	G5	S2	2B.2
<i>Lepidurus packardii</i> vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3S4	
<i>Puccinellia simplex</i> California alkali grass	PMPOA53110	None	None	G3	S2	1B.2
<i>Taxidea taxus</i> American badger	AMAJF04010	None	None	G5	S3	SSC
<i>Thamnophis gigas</i> giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	

Record Count: 8

National Marine Fisheries Service Species List

From: [Edwards, Jonathan@DOT](mailto:Edwards_Jonathan@DOT)
To: nmfsowcra.specieslist@noaa.gov
Subject: Project 03-3H391 needs NMFS species list
Date: Tuesday, August 11, 2020 1:24:00 PM

Quad Name **Williams**

Quad Number **39122-B2**

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) -

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) - **X**

SRWR Chinook Salmon ESU (E) - **X**

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) -

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) -

CCV Steelhead DPS (T) - **X**

Eulachon (T) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat -

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat -

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)


ESA and MMPA Cetaceans/Pinnipeds

**See list at left and consult the NMFS Long Beach office
562-980-4000**


MMPA Cetaceans -
MMPA Pinnipeds -

Jonathan (John) Edwards
Associate Environmental Planner, N.S.
Jonathan.Edwards@dot.ca.gov
Caltrans Environmental M5
703 B Street
Marysville, CA 95901
(530) 741-4582

CNPS Inventory Results



[Home](#)
[About the Inventory](#)
[CNPS Home](#)
[Join CNPS](#)
[Simple Search](#)
[Advanced Search](#)



*The database used to provide updates to the Online Inventory is under construction. [View updates and changes made since May 2019 here.](#)

Plant List

4 matches found. [Click on scientific name for details](#)

Search Criteria

Found in Quad [3912222](#)

[Modify Search Criteria](#)
[Export to Excel](#)
[Modify Columns](#)
[Modify Sort](#)
[Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Centromadia parryi ssp. rudis	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	4.2	S3	G3T3
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G2
Heteranthera dubia	water star-grass	Pontederiaceae	perennial herb (aquatic)	Jul-Oct	2B.2	S2	G5
Puccinellia simplex	California alkali grass	Poaceae	annual herb	Mar-May	1B.2	S2	G3

Suggested Citation

California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 11 August 2020].

Search the Inventory

[Simple Search](#)

[Advanced Search](#)

[Glossary](#)

Information

[About the Inventory](#)

[About the Rare Plant Program](#)

[CNPS Home Page](#)

[About CNPS](#)

[Join CNPS](#)

Contributors

[The Calflora Database](#)

[The California Lichen Society](#)

[California Natural Diversity Database](#)

[The Jepson Flora Project](#)

[The Consortium of California Herbaria](#)

[CalPhotos](#)

Questions and Comments

<http://www.rareplants.cnps.org/result.html?adv=t&quad=3912222> [8/11/2020 1:23:06 PM]

Appendix D. ESA Action Plan

ESA Action Plan: Tasks and Responsibilities Parties

Stage	Task	Responsible party ¹	Task completed (date and initial)
Prior to Construction	The ESA surrounding areas of the CGID canal and drainage ditches will be depicted on construction plans and described in the specifications. An outline will also be prepared to guide all construction activities in the proximity of the historic property (see Attachment 8).	Caltrans PQS Architectural Historian (AH)*, and Resident Engineer (RE)	
	The Environmental Branch Chief will sign an Environmental Certification before the release of any construction contract to ensure that all environmental obligations of this PS&E are met.	Environmental Branch Chief*	
	This ESA Action Plan will be included in the RE Pending File.	Project Coordinator*, Caltrans PQS AH, Environmental Construction Liaison (ECL), and RE.	
	The ESA Action Plan will be explained (and discussed) at pre-construction meetings. The ESA Action Plan will be explained to construction crews, placing an emphasis on the fact that no construction activity must take place within its boundaries. Excluded activities include the storage of materials and the staging of equipment. Historic preservation laws that protect cultural sites against disturbances will be explained to all members of the construction crew before the beginning of the project.	Caltrans PQS AH,* ECL, RE, and Contractor(s)	
	The RE will notify the ECL and Caltrans PQS AH the start date of the project to ensure their availability for field reviews and for monitoring the installation of ESA fences.	Caltrans PQS AH, ECL, and RE*	

Stage	Task	Responsible party ¹	Task completed (date and initial)
	<p>The contractor shall, under the supervision of Caltrans PQS AH, ECL, and RE:</p> <ol style="list-style-type: none"> 1. Install temporary plastic fencing and/or stakes along the ESA boundaries as depicted on the ESA Plan, at least one week before the beginning of construction work (see Attachment 8). Laminated "Keep Out" signs will be attached along all ESA fencing and stakes to show areas off-limit. 2. Spray-paint surface areas corresponding with underground canals and label these areas as ESAs. 	Caltrans PQS AH, ECL, and RE, and Contractor*	
During Construction	Caltrans PQS AH shall conduct a bi-weekly inspection of the ESA to verify that no unauthorized activity has taken place within its boundaries.	Caltrans PQS AH*, ECL, and RE	
	Caltrans PQS AH shall notify the Cultural Studies Office (CSO) and SHPO within 48 hours of any breach to the ESA, and in such case shall consult to resolve the issue.	Caltrans PQS AH*	
After Construction	The ECL shall communicate the completion of construction activities to the Caltrans PQS AH.	Caltrans PQS AH and ECL *	
	<p>Upon the end of construction, the Contractor will remove all temporary fencing and stakes under the supervision of the ECL and/or Caltrans PQS AH.</p> <p>The RE shall notify the Caltrans PQS AH at least three working days before the removal of the fences and stakes (which shall occur exclusively during daylight hours).</p>	Caltrans PQS AH, ECL*, and Contractor, RE	

Appendix E. Response to Comments
