

# **GIANELLA-MUIR SAFETY PROJECT**

**BUTTE COUNTY, CALIFORNIA  
DISTRICT 3 – BUT – 32 (Post Miles 0.3 to 5.0)  
03-4H880 / 0319000071**

## **INITIAL STUDY**

**with Proposed Mitigated Negative Declaration**



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



**April 2021**





## 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 State Route 32 in Chico, 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 are available for review at the following location:
  - Caltrans District 3 Office at 703 B Street, Marysville, CA 95901
  - Butte County Library Chico Branch at 1108 Sherman Avenue, Chico, CA 95926
- We'd like to hear what you think. If you have any comments about the proposed project, please send your written comments to Caltrans by the deadline.
- Please send comments via U.S. mail to:  
California Department of Transportation  
Attention: Laura Loeffler  
North Region Office of Environmental Management M-5 Branch  
703 B Street  
Marysville, CA 95901
- Send comments via e-mail to: [Laura.Loeffler@dot.ca.gov](mailto:Laura.Loeffler@dot.ca.gov)
- Be sure to send comments by the deadline: May 20, 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: Gilbert Mohtes-Chan, North Region Public Information Officer-District 3, 703 B Street Marysville, CA 95901; (530) 741-4571 Voice, or use the California Relay Service TTY number, 711 or 1-800-735-2929.



# **GIANELLA-MUIR SAFETY PROJECT**

Improve safety on State Route 32 in Butte County,  
from post miles 0.3 to 5.0 in Chico.

## **INITIAL STUDY WITH PROPOSED MITIGATED NEGATIVE DECLARATION INITIAL STUDY with Proposed Mitigated Negative Declaration**

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA  
Department of Transportation

4/12/2021  
Date of Approval

*Mike Bartlett*  
\_\_\_\_\_  
Mike Bartlett, Office Chief - Marysville  
North Region Environmental - District 3  
California Department of Transportation  
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# Proposed Mitigated Negative Declaration

Pursuant to: Division 13, California Public Resources Code

SCH Number: Pending

## Project Description

The proposed project is located on State Route 32 (SR 32) in Butte County between Post Mile (PM) 0.3 at Gianella Road and PM 5.0 at Muir Avenue to improve safety of the traveling public. This project has been amended into the 2020 SHOPP, 2021/2022 fiscal year under the 20.XX.201.010, Safety Improvements Program. The project proposes to widen the existing shoulders to eight feet except at the nine (9) existing bridges, increase the left turn deceleration lane lengths, add intersection safety lighting, add shoulder and centerline rumble strips, improve the ride quality of the pavement, address poor condition culverts, install safety lighting, upgrade guardrail at existing bridges. If approved, construction of the project is expected to start in 2023.

## 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, expects to determine from this study that the proposed project would not have a significant impact on the environment for the following reasons:

The project would have no effect with regard to with regard to aesthetics, agricultural and forest resources, air quality, energy, geology and soils, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation and traffic, tribal cultural resources, and wildfire.

The project would have less-than-significant impacts with regard to cultural resources, greenhouse gas emissions, hazards and hazardous materials, and utilities and service systems.

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

- All directly impacted elderberry shrubs would be transplanted to a USFWS-approved mitigation bank.
- Caltrans proposes to mitigate for 0.0574 acres of riparian habitat at a ratio of 3:1, by purchasing 0.172 acres or 4.2 credits as part of the VELB mitigation.

- All permanently impacted elderberry shrubs in non-riparian habitat would be transplanted to a USFWS-approved mitigation bank. Caltrans proposes to mitigate by purchase of 1.0 credit.
- ESA fencing will be used to protect the remaining elderberry shrubs from indirect impacts.

*Mike Bartlett*

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

4/12/2021

Date of Approval

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# List of Abbreviated Terms

Abbreviation	Description
ARB	Air Resources Board
BMPs	Best Management Practices
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGF	California Fish and Game Code
CFR	Code of Federal Regulations
CH <sub>4</sub>	methane
CNPS	California Native Plant Society
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CRHR	California Register of Historical Resources
CRZ	Clear Recovery Zone
CTP	California Transportation Plan
CWA	Clean Water Act
EIR	Environmental Impact Report
EO	Executive Order
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
GHG	greenhouse gas
H <sub>2</sub> S	hydrogen sulfide
IPCC	Intergovernmental Panel on Climate Change
IRRS	Interregional Road System
IS	Initial Study
LSAA	Lake or Streambed Alteration Agreement
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
MS4s	Municipal Separate Storm Sewer Systems
N <sub>2</sub> O	nitrous oxide
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 <sub>2</sub>	nitrogen dioxide

<b>Abbreviation</b>	<b>Description</b>
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
O <sub>3</sub>	ozone
OHWM	Ordinary High Water Mark
PDT	Project Development Team
PM	particulate matter
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
SF <sub>6</sub>	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SLR	Sea Level Rise
SO <sub>2</sub>	sulfur dioxide
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TMP	Traffic Management Plan
U.S. or US	United States
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
VMT	Vehicle Miles Traveled
WDRs	Waste Discharge Requirements
WQOs	Water Quality Objectives

# Chapter 1. Proposed Project

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## 1.1. Project History

The California Department of Transportation (Caltrans) is the lead agency under the California Environmental Quality Act (CEQA). Caltrans proposes to improve safety along State Route 32 between post miles 0.3 to 5.0 in Butte County from Gianella Road to Muir Road. The total length of the project is 4.7 miles. Figure 1 indicates the project location and vicinity maps.

## 1.2. Project Description

The proposed project is located on State Route 32 (SR 32) in Butte County between Post Mile (PM) 0.3 at Gianella Road and PM 5.0 at Muir Avenue to improve safety of the traveling public. This project has been amended into the 2020 SHOPP, 2021/2022 fiscal year under the 20.XX.201.010, Safety Improvements Program. The project proposes to widen the existing shoulders to eight feet except at the nine (9) existing bridges, increase the left turn deceleration lane lengths, add intersection safety lighting, add shoulder and centerline rumble strips, improve the ride quality of the pavement, address poor condition culverts, install safety lighting, upgrade guardrail at existing bridges. If approved, construction of the project is expected to start in 2023.

### *Project Objectives*

The potential need for safety improvements along this section of SR 32 was investigated by the Office of Traffic Safety. The record of traffic collisions indicates a need for safety improvements. A total of forty (40) collisions have been identified within the project limits for the period between January 1, 2015 and December 31, 2017 between PM 0.3 at Gianella Road and PM 5.0 at Muir Avenue. The collision data included three (3) collisions resulting in three (3) fatalities and seventeen (17) collisions resulting in thirty-six (36) injuries.

**Table 1. Collision Summary for Highway 32**

	<i>Actual</i>
<i>Total Accident Rate (acc/mvm)</i>	<i>0.59</i>
<i>Fatal + Injury Accident Rate (acc/mvm)</i>	<i>0.30</i>
<i>Fatal Accident Rate (acc/mvm)</i>	<i>0.045</i>

*\*acc/mvm= accidents/million vehicle miles*

## ***Purpose***

The purpose of the project is to improve safety and reduce the number and severity of collisions, enhance the safety for multiple modes of transportation including vehicles, bicycles, pedestrians and improve the turning movements for motorists. The project will also improve the ride quality of the pavement, and address culverts that are in poor condition.

## ***Need***

The district has recorded a total of forty (40) collisions within a three-year period from January 2015 to December 2017. Three (3) of the collisions resulted in three (3) fatalities and an additional seventeen (17) collisions resulted in thirty-six (36) injuries. Of the forty (40) total collisions, fourteen (14) were single vehicle collisions, and twenty-six (26) were multi vehicle collisions. A number of collisions involve running off the road, hitting a guardrail, or turns entering or exiting SR 32.

This section of SR 32 has substandard shoulder widths, inadequate lengths for the deceleration (turn pocket) lanes, and poor pavement conditions.

A lighting warrant analysis at the intersection of Hamilton Road, Meridian Road, and Muir Avenue with SR 32 indicates inadequate safety lighting.

## ***Proposed Project***

Caltrans proposes to improve safety along State Route 32 post miles 0.3 through 5.0 in Butte County from Gianella Road to Muir Road.

## **Introduction to Project Alternatives**

There is one build alternative and one “No Build” alternative for this project.

### **Alternative 1: Build Alternative**

The build alternative proposes safety improvements to reduce fatal collisions and reduce the severity of collisions. The build alternative proposes to widen shoulders, improve left turn deceleration lanes, construct a shoulder bypass area, improve access road entrances and connection, install safety lighting and signage, improve the ride quality of the pavement, address the poor condition of existing CMP culverts, install shoulder and centerline rumble strips, and upgrade guardrail systems and end treatments at bridge approaches to meet current standards. The build alternative proposes the following improvements:

1. Widen the existing shoulders to eight (8) feet except at the nine (9) existing bridges to improve errant vehicles recovery, reduce vehicle run-off-road accidents, and improve the safety and travel for bicycles.



2. Increase left turn deceleration lane lengths at Meridian Road to separate vehicles traveling at different speeds.
3. Construct a new shoulder bypass area at Pine Creek Unit access road Intersection to reduce backups from vehicles waiting to make a left turn.
4. Replace safety end treatments and construct anchor walls at the existing bridges to improve safety.
5. Install new Midwest Guardrail System at the existing bridges to meet MASH standards. This includes replacing the existing posts and raising the height of the existing Midwest Guardrail System at the Pine Creek Lagoon OC (Br No.120053) and the Pine Creek Overflow (Br No. 120051).
6. Add intersection safety lighting at Hamilton Nord Canal Highway, Meridian Road, and Muir Avenue to improve driver visibility.
7. Extend existing concrete box culverts and CMP pipe culverts to accommodate the eight (8) foot wide shoulders.
8. Install CIPP Lining in CMP pipe culverts that are in poor condition.
9. Cold plane the existing pavement and overlay with 0.2' RHMA-G and 0.1' RHMA-O to increase pavement smoothness and remove pavement roughness and irregularities to benefit the ride quality for all modalities of transportation.
10. Install shoulder and centerline rumble strips along both directions for the entire project to alert inattentive drivers of potential danger and also to improve safety for bicycles.
11. Install safety signage at all narrow bridge approaches.
12. Replace individual barriers with a continuous barrier at PM 2.34/PM 2.41 to improve safety.
13. Improve the levee access road entrances at Mud Creek.
14. Improve the public road connection at Meridian Road, which includes widening of the existing shoulders and increasing the curve radii of the turning movements.
15. Replace existing 18" CMP pipe culverts with new 24" CMP pipe culverts if shoulder widening results in culvert lengths exceeding 100 feet in length.
16. Remove existing trees within the clear recovery zone

While most of the work will be done within the state right of way, right of way acquisition is required to widen access road entrances at Mud Creek. Temporary Construction Easements (TCE) are also proposed to accommodate culvert widening work and for

contouring driveways to State Route 32. Areas with proposed TCEs are shown on the Environmental Study Limit (ESL) layouts in Appendix B. The ESL layouts show the proposed ESLs and the existing ESLs on the map. The proposed ESL was brought in to minimize the area where environmental needed to study and to reduce the impacts to biological resources. The environmental team studied the proposed ESL limits, except for cultural resources where the entire existing ESL was studied where permits to enter were granted.

## **Alternative 2 – No Build Alternative**

This alternative would maintain the facility in its current condition and would have no impacts to environmental resources. The No Build alternative would not improve the safety of the roadway and would not meet the purpose and need to reduce the frequency and severity of collisions at this location

### ***General Plan Description, Zoning, and Surrounding Land Uses***

This segment of Butte-32 connects the City of Orland in Glenn County with the City of Chico in Butte County. The land around the project area is predominantly undeveloped agricultural land with orchards. The area has numerous irrigation channels and ditches used for irrigating the fields.

State Route (SR) 32, is a transitional, non-Interregional Road System (IRRS) route. The route is primarily a two-lane conventional highway connecting Interstate 5 (I-5) at Orland in Glenn County with SR 36 between Chester and Mill Creek in Tehama County. As an east/west highway, the route serves the City of Orland and the community of Hamilton City in Glenn County, and the City of Chico and the communities of Forest Ranch and Butte Meadows in Butte County. SR 32 is 48.6 miles in length and ranges in elevation from 150' at its lowest point in Hamilton City to approximately 3800' at the Tehama County line. SR 32 provides for the only transit connection operating between Glenn and Butte Counties via Glenn Transit Service and Butte Regional Transit.

SR 32 is also classified as a bike accessible route. Bicycling has become an increasingly popular method of travel throughout the region. Many individuals are attracted to the energy savings, environmental benefits, and health advantages, while others who are not able to drive due to age or financial hardship use bicycles as a primary means of transportation. The valley areas of Glenn and Butte counties, including the SR 32 corridor, are particularly attractive to bicyclists and pedestrians due to the flat terrain. Bike Plans are in place in both Glenn and Butte Counties and identify the future enhancement of bike paths and trails within the SR 32 corridor.

### ***Alternatives Considered but Eliminated from Further Consideration***

No other alternatives for the Gianella-Muir Safety Project were considered. The Project Initiation Document (PID) only discusses the build alternative and the no build scenario.



## 1.4. Permits and Approvals Needed

The following approvals are required for project construction:

**Table 1. Agency Approvals**

Agency	Permit/Approval	Status
U.S. Fish and Wildlife Service (USFWS)	Section 7 Formal Consultation for VELB	Biological Assessment (BA) submitted October 27, 2020
State Historic Preservation Office (SHPO)	Cultural resources need SHPO concurrence to complete phase studies for a restricted access property	SHPO concurrence for phased studies received October 21, 2020.
California Transportation Commission (CTC)	CTC Vote for to approve funds	Following the approval of the FED, the California Transportation Commission will be required to vote to approve funding for the project.
U.S. Army Corp of Engineers	408 Permit	The design team is working to complete the permit application.

## 1.5. Standard Measures and Best Management Practices Included in All Alternatives

### *Utilities and Emergency Services*

**UE-1:** All emergency response agencies in the project area would be notified of the project construction schedule and would have access to State Route 32 throughout the construction period.

**UE-2:** Caltrans would coordinate with the utility providers before relocation of any utilities to ensure potentially affected utility customers would be notified of potential service disruptions before relocations.

### *Traffic and Transportation*

**TT-1:** Pedestrian and bicycle access would be maintained during construction.

**TT-2:** The Contractor would be required to reduce any access delays to driveways or public roadways within or near the work zones.

**TT-3:** A Traffic Management Plan (TMP) would be applied to project.

### ***Cultural Resources***

**CR-1:** If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find in consultation with the State Historic Preservation Officer.

**CR-2:** If human remains were discovered, State Health and Safety Code § 7050.5 states that further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA Public Resources Code (PRC) § 5097.98, if the remains were thought to be Native American, the coroner would notify the Native American Heritage Commission (NAHC) who would then notify the Most Likely Descendent (MLD).

At this time, the person who discovered the remains would contact the Environmental Senior and Professionally Qualified Staff so they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC § 5097.98 would be followed as applicable.

### ***Water Quality and Stormwater Runoff***

**WQ-1:** The project would comply with the Provisions of the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) Permit (Order 2012-0011-DWQ), which became effective July 1, 2013, and the Construction General Permit (Order 2009-0009-DWQ).

Before any ground-disturbing activities, the contractor would prepare a Stormwater Pollution Prevention Plan (SWPPP) (per the Construction General Permit Order 2009-0009-DWQ) that includes erosion control measures and construction waste containment measures so that waters of the State are protected during and after project construction.

The SWPPP would identify the sources of pollutants that may affect the quality of stormwater; include construction site Best Management Practices (BMPs) to control sedimentation, erosion, and potential chemical pollutants; provide for construction materials management; include non-stormwater BMPs; and include routine inspections and a monitoring and reporting plan. All construction site BMPs would follow the latest edition of the *Storm Water Quality Handbooks: Construction Site BMPs Manual* to control and reduce the impacts of construction-related activities, materials, and pollutants on the watershed.

The project SWPPP would be continuously updated to adapt to changing site conditions during the construction phase.

Construction would likely require the following temporary construction site BMPs:

- Any spills or leaks from construction equipment (i.e., fuel, oil, hydraulic fluid, and grease) shall be cleaned up in accordance with applicable local, state, and/or federal regulations.
- Water would be removed by means of dewatering the individual pipe piles or cofferdams.
- Water generated from the dewatering operations would be trucked off-site to an appropriate facility, or treated and used on-site for dust control and/or discharged to an infiltration basin, or used to irrigate agricultural lands.
- Fiber rolls or silt fences would be installed.
- Existing vegetated areas would be maintained to the maximum extent practicable.
- Clearing, grubbing, and excavation would be limited to specific locations, as delineated on the plans, to maximize the preservation of existing vegetation.
- Vegetation reestablishment or other stabilization measures would be implemented on disturbed soil areas, per the Erosion Control Plan.
- Soil disturbing work would be limited during the rainy season.

**WQ-2:** The project would incorporate pollution prevention and design measures consistent with the 2003 Caltrans Storm Water Management Plan to meet Water Quality Objectives (WQOs). This plan complies with the requirements of the Caltrans Statewide NPDES Permit (Order 2012-0011-DWQ).

The project design would likely include the following permanent stormwater treatment BMPs:

- Vegetated surfaces would feature native plants and revegetation would use the seed mixture, mulch, tackifier, and fertilizer recommended in the Erosion Control Plan prepared for the project.
- Existing roadway and bridge drainage systems currently discharge stormwater to receiving waters through bridge deck drains and/or discharge to vegetated slopes adjacent to the highway facility. The current design for stormwater management, post construction, is to perpetuate existing drainage patterns. Stormwater will continue to sheet flow to vegetated slopes providing stormwater treatment in accordance with Caltrans NPDES Permit.

### ***Hazardous Waste and Material***

**HW-1:** Per Caltrans requirements, the contractor(s) would prepare a project-specific Lead Compliance Plan (CCR Title 8, § 1532.1, the “Lead in Construction” standard) to reduce worker exposure to lead-impacted soil. The plan would include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of lead-impacted soil.

**HW-2:** Low levels of aerially deposited lead from the historic use of leaded gasoline exist along roadways throughout California. The project would adhere to Caltrans' Standard Special Provision (SSP) Section 7-1.02K(6)(j)(iii) "Earth Material Containing Lead."

**HW-3:** 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' SSP Section 36-4 "Residue Containing Lead from Paint and Thermoplastic".

**HW-4:** Treated Wood Waste may be generated from sign post and guardrail removal/reconstruction. This can be addressed with SSP 14-11.14 TREATED WOOD WASTE management in the construction contract.

### *Geology and Seismic/Topography*

**GS-1:** The project would be designed to minimize slope failure, settlement, and erosion using recommended construction techniques and BMPS. New slopes should be revegetated to reduce erosion potential.

### *Biological Resources*

**B-1:** 14-6.02 Species Protection: Valley Elderberry Longhorn Beetle (VELB) and all other birds and mammals.

**B-2:** 14-6.03 Bird Protection: Protect migratory and nongame birds, their occupied nests, and their eggs.

**B-3:** 14-6.05 Contractor-Supplied Biologist: Vegetation removal, Environmentally Sensitive Area (ESA) and silt fencing stability, and any other biological commitments for this project.

**B-4:** 14-6.07 Natural Resource Protection Plan (NRPP): The NRPP requires the use of a Contractor-Supplied Biologist. The Contractor gathers all the requirements from 14-6.02, Species Protection, and from the various PLACs into one document, and describes the implementation measures the Contractor would take to assure that the requirements are met. The Contractor-Supplied-Biologist would be on site in order to survey, monitor, and potentially remove any wildlife species from the project area.

**B-5:** 14-1.02 Environmentally Sensitive Area Fencing: To minimize permanent and temporary impacts to sensitive plant communities, environmentally sensitive areas would be established to prevent unplanned impacts to these resources. A standard special provision would be included in the construction contract to delineate the placement of orange mesh fencing to protect these sensitive resources.



## 1.6. Discussion of the NEPA Categorical Exclusion

This document contains information regarding compliance with the California Environmental Quality Act (CEQA) and other state laws and regulations. Separate environmental documentation to support a Categorical Exclusion determination will be prepared in accordance with the National Environmental Policy Act when federal funds have been applied to the project. When needed for clarity, or as required by CEQA, this document may contain references to federal laws and/or regulations (CEQA, for example, requires consideration of adverse effects on species identified as a candidate, sensitive, or special-status species by the United States National Marine Fisheries Service and the United States Fish and Wildlife Service—in other words, species protected by the Federal Endangered Species Act).

## Chapter 2. CEQA Environmental Checklist

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### 2.1. Environmental Factors Potentially Affected

The environmental factors listed 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
<b>Biological Resources</b>	<b>Yes</b>
<b>Cultural Resources</b>	<b>Yes</b>
Energy	No
Geology/Soils	No
<b>Greenhouse Gas Emissions</b>	<b>Yes</b>
<b>Hazards and Hazardous Materials</b>	<b>Yes</b>
Hydrology/Water Quality	No
Land Use/Planning	No
Mineral Resources	No
Noise	No
Population/Housing	No
Public Services	No
Recreation	No
Transportation/Traffic	No
Tribal Cultural Resources	No
<b>Utilities/Service Systems</b>	<b>Yes</b>
Wildfire	No
<b>Mandatory Findings of Significance</b>	<b>Yes</b>

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 particular 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.

## **2.2. Project Impact Analysis Under CEQA for Initial Study**

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 a particular 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 will consider impacts to be significant, and below which it will 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 as a whole 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 process 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.

## 2.3. Aesthetics

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<b>Would the project:</b> a) Have a substantial adverse effect on a scenic vista?	No	No	No	Yes
<b>Would the project:</b> 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
<b>Would the project:</b> 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
<b>Would the project:</b> 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

The California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state “with...enjoyment of *aesthetic*, natural, scenic and historic environmental qualities” (CA Public Resources Code [PRC] Section 21001[b]).

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Visual Impact Assessment Memorandum dated August 24, 2020. Potential impacts to aesthetic resources are not anticipated. SR 32 in the project area is not a designated scenic highway, nor is it eligible to be listed as a scenic highway. Therefore, there will be no impact to any resources within a scenic state highway. There are also no scenic resources within the project area, so there will be no impact to any scenic vista.

The most visually noticeable aspect of the project will be the minimal loss of mature vegetation within the limit of disturbance, which includes access roads, staging areas and in the immediate vicinity of the project area. The vividness, intactness and unity of the project corridor will not be adversely affected by the proposed project features. In addition,

the project features will not be visually atypical and intrusive to the degree that the intactness and unity of the landscape will be compromised. Overall, the resource change will be low. The result of the road widening, upgrading existing culverts and installing five new culverts will be noticeable but their effects on the visual character and quality of their surroundings will be negligible. Therefore, these proposed elements would not constitute an adverse visual quality change in the environment. The existing visual character of the project site would not substantially change or be degraded.

The proposed project is not anticipated to produce glare, which may adversely affect day or nighttime views in the area. Installation of new lighting is anticipated on three intersections: Hamilton Road, Meridian Road and Muir Avenue. The proposed exterior lighting will be required to conform to the California Department of Transportation's (Caltrans) lighting specification guidelines. Therefore, the glare at the project locations would not substantially alter the existing characteristics of the project corridor.

### ***No Build Alternative***

The existing condition would remain; therefore, per CEQA, "No Impact" would occur.

## 2.4. 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.

<b>Question</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>Would the project:</b> 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
<b>Would the project:</b> b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No	No	No	Yes
<b>Would the project:</b> 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
<b>Would the project:</b> d) Result in the loss of forest land or conversion of forest land to non-forest use?	No	No	No	Yes
<b>Would the project:</b> 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



“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to agricultural and forest resources are not anticipated. The project will be contained to the existing Caltrans right of way where agricultural land is adjacent to the project with the exception of temporary construction easements (TCE) required for the extension of the culverts to accommodate the 8ft shoulders. Additional right-of-way will be acquired to relocate utility poles, however, these areas to be acquired will not convert farmlands. No forest land is in the vicinity of the project. The current layouts of proposed work in Appendix B does show the ESL outside of the Caltrans right of way, however only small TCEs will be needed and the work will otherwise be within Caltrans right of way. These TCEs will not have a permanent impact on agricultural resources. Temporary impacts are not anticipated due to the small area of the TCEs.

### ***No Build Alternative***

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.

## 2.5. 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.

<b>Question</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>Would the project:</b> a) Conflict with or obstruct implementation of the applicable air quality plan?	No	No	No	Yes
<b>Would the project:</b> 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
<b>Would the project:</b> c) Expose sensitive receptors to substantial pollutant concentrations?	No	No	No	Yes
<b>Would the project:</b> d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	No	No	No	Yes

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Air Quality and Energy Analysis Memorandum dated August 18, 2020. Potential impacts to air quality are not anticipated as the 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.

Construction activities are expected to increase traffic congestion in the area, resulting in increases in emissions from traffic during the delays. These emissions would be temporary and limited to the immediate area surrounding the construction site. Fugitive dust would also be generated during grading and construction operations. Construction emissions will be minimized by following Caltrans Standard Specifications that relate to air quality. A dust plan will also be developed by the contractor to reduce fugitive dust emissions.

### *No Build Alternative*

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.

## 2.6. Biological Resources

<b>Question</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>Would the project:</b> 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
<b>Would the project:</b> 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	No	Yes	No
<b>Would the project:</b> 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	No	No	Yes
<b>Would the project:</b> 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
<b>Would the project:</b> e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No	No	No	Yes
<b>Would the project:</b> 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

## *Regulatory Setting*

### *Wetlands and Other Waters*

#### **FEDERAL**

Waters of the United States (including wetlands) are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high water mark (OHWM), in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands. Include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the U.S. Environmental Protection Agency (U.S. EPA).

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (40 Code of Federal Regulations [CFR] 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a "least environmentally damaging practicable alternative" (LEDPA) to the proposed discharge that would have lesser

effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as the Federal Highway Administration (FHWA) and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

## STATE

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCBs), and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved.

Sections 1600–1607 of the California Fish and Game Code (CFGF) require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement (LSAA) will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see the Hydrology and Water Quality section for additional details.

## Plant Species

The U.S. Fish and wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special-status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act

(CESA). Please see the Threatened and Endangered Species Section in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at United States Code 16 (USC), Section 1531, et seq. See also 50 CFR Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Sections 1900–1913, and the California Environmental Quality Act (CEQA), found at California Public Resources Code, Sections 21000–21177.

### *Animal Species*

Many state and federal laws regulate impacts to wildlife. The USFWS, National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service [NMFS]), and CDFW are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Acts. Species listed or proposed for listing as threatened or endangered are discussed in the following section. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NMFS candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- 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 federal law protecting threatened and endangered species is FESA: 16 United States Code (USC) Section 1531, et seq. See also 50 CFR Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as Federal Highway Administration (FHWA) (and Caltrans, as assigned), are required to consult with the USFWS and NMFS to ensure they are not

undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement, a Letter of Concurrence, and/or documentation of a no effect finding. Section 3 of FESA defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (CDFW) is the agency responsible for implementing CESA. Section 2080 of the California Fish and Game Code prohibits “take” of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA allows for take incidental to otherwise lawful development projects; for these actions an Incidental Take Permit is issued by CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

### *Invasive Species*

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration (FHWA) guidance issued August 10, 1999, directs the use of the State’s invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.



## ***Environmental Setting***

The Natural Environmental Study (NES) was completed on October 16, 2020. The purpose of the NES is to assess the environmental effects of the proposed project on natural resources and special-status species which have the potential to occur within the Biological Study Area (BSA).

## ***Natural Communities***

### **RUDERAL**

A ruderal species is a plant species that is first to colonize disturbed lands. Ruderal vegetation within the study area is dominated by introduced grasses including wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), Johnsongrass (*Sorghum halepense*) and Bermuda grass (*Cynodon dactylon*), as well as annual forbs including vetch (*Vicia* sp.). Ruderal species occur along the entire SR 32 corridor except for the riparian areas.

### **ANNUAL GRASSLAND**

Annual non-native and invasive grasses have replaced most native grassland in California's Central Valley. Dominant species in these grasslands include, bromes, wild oat, Italian ryegrass (*Lolium perenne*), and many other grasses. Within the general project area, Annual Grassland is limited to a narrow strip within the Caltrans right-of-way and a 228-acre area within the Pine Creek Unit that was restored to native grasses in 2004.

### **RIVERINE**

Riverine habitat in the BSA is defined as all wetlands and deep-water habitats contained within a channel. The sections of streams within the BSA are characterized by being small intermittent to perennial streams with a limited floodplain and narrow bands of riparian vegetation along the banks. Some portions lack true riparian vegetation and have freshwater emergent vegetation along the fringes or even extending across the channel. All the creeks and sloughs within the projects area flow from the north-northeast to the south-southwest across the BSA. Runoff from rainfall and irrigation is the primary source of water for the streams. Mud Creek is bordered by levees on both sides of the creek

### **VALLEY FOOTHILL RIPARIAN**

Cottonwood, California sycamore and valley oak typically comprise the overstory of this habitat, with black walnut the most abundant within the project area. Subcanopy trees are white alder, boxelder and Oregon ash. The understory shrub layer includes wild grape, wild rose, blackberry, elderberry, poison oak, and willows. The herbaceous layer consists primarily of sedges, rushes, and grasses. In addition to the areas associated with the stream crossing, there is a narrow strip of riparian vegetation varying between 35 and 50 feet wide extending from the western bank of Pine Creek, along the north side of SR 32, for approximately 1625 feet.



## DECIDUOUS ORCHARD

Deciduous orchards include trees, such as, almonds, apples, apricots, cherries, figs, nectarines, peaches, pears, pecans, pistachios, plums, pomegranates, prunes and walnuts. Spacing between trees is uniform depending on desired spread of mature trees. The understory is usually composed of low-growing grasses, legumes, and other herbaceous plants, but may be managed to prevent understory growth.

## FARMLAND-CROPLAND

Vegetation in this habitat includes a variety of sizes, shapes, and growing patterns. Most croplands support annuals planted in spring and harvested during summer or fall. In many areas a second “winter” crop is planted after harvesting the first. (e.g. Wheat is planted in fall and harvested in late spring or early summer.)

## Wetlands and Other Waters

A preliminary delineation of wetlands and waters of the U.S was conducted in the ESL by Caltrans biologists. Three jurisdictional waters were delineated within the Biological Study Area (BSA). The jurisdictional waters within the BSA are Pine creek (PM 1.39), Rock Creek (2.08), and Mud Creek (4.38). No in-water work or work within the bed, bank or channel is proposed. However, work is proposed adjacent to Waters of the U.S. Best management practices would be implemented to avoid temporary or permanent impacts to jurisdictional Waters of the U.S and the State.

## Plant Species

The BSA contains a mix of native and invasive species. Cultivated plant species are also present within the BSA and a discussion of these plants can be found under natural communities. The plants present within the BSA include upland species (UPL) which generally occur in non-wetlands, facilitative species (FAC) which occur equally likely in wetlands and non-wetlands, facilitative upland species (FACU) which normally occur in non-wetlands but can be found in wetlands, and facilitative wetland species (FACW) which typically occur in wetlands but can occur in non-wetlands. A list of the plant species observed during field surveys can be found below on Table 2.

Table 3: Plant Species Observed

Scientific Name	Common Name	Wetland Status	Native/ Not Native/ Invasive
<b>Adoxaceae-Elderberry Family</b>			
<i>Sambucus sp.</i>	black elderberry	FAC	Na
<b>Anacardiaceae- Cashew Family</b>			
<i>Toxicodendron diversilobum</i>	poison oak	UPL	Na
<b>Asteraceae-Sunflower Family</b>			
<i>Artemisia douglasiana</i>	mugwort	FAC	Na
<i>Baccharis pilularis</i>	coyote brush	UPL	Na
<b>Fagaceae- Beech Family</b>			
<i>Quercus lobata</i>	valley oak	FACU	Na
<b>Juglandaceae-Walnut Family</b>			
<i>Juglans californica</i>	black walnut	FAC	Na
<b>Polygonaceae-Buckwheat Family</b>			
<i>Rumex crispus</i>	curly dock	FAC	I
<b>Rosaceae-Rose Family</b>			
<i>Rubus ameniacus</i>	Himalayan blackberry	FACU	I
<i>Rubus ursinus</i>	native blackberry	FAC	Na
<b>Salicaceae-Willow Family</b>			
<i>Salix sp.</i>	Willow sp.	FACW	Na
<b>Sapindaceae-Soap Berry Family</b>			

Scientific Name	Common Name	Wetland Status	Native/ Not Native/ Invasive
<i>Acer negundo</i>	box elder	FACW	Na
<b><u>Urticaceae-Nettle Family</u></b>			
<i>Urtica dioica</i>	stinging nettle	FAC	Na

\*Na= Native, I=Invasive

### **Animal and Threatened/Endangered Species**

The proposed project will have no impacts to any state-listed species as rare or endangered under the California Endangered Species Act. The proposed project will have an effect on a federally listed species.

#### **VALLEY ELDERBERRY LONGHORN BEETLE**

The Valley elderberry longhorn beetle (VELB) was federally listed as a threatened species with critical habitat on August 8, 1980 (USFWS 1980). VELB is a moderately sized beetle that inhabits elderberry plants, which is the host plant for the beetle larvae (Barr 1991). VELB are known to occur throughout the Central Valley from southern Shasta County to Fresno County (Barr 1991). It is endemic to riparian systems along margins of rivers, streams, and adjacent grassy savannas where its host plant commonly occurs.

VELB are known to occur in Butte County. The closest documented occurrence of VELB in the CNDDDB is approximately 1 mile from the BSA within the Ord Ferry quad from 2014. As elderberry shrubs are the obligate host plant for this species and the adult VELB are difficult to detect, removal of elderberry shrubs requires consultation with the U.S. Fish and Wildlife Service (USFWS). Within the BSA there are 23 elderberry shrubs. Of the 23 elderberry shrubs, 2 elderberry shrubs would be removed prior to construction. The 2 shrubs would be transplanted at a USFWS-approved mitigation bank.

The Biological Assessment (BA) for VELB was sent to the USFWS on approximately October 27, 2020 which initiated section 7 consultation.

#### **GIANT GARTER SNAKE**

The giant garter snake (GGS) (*Thamnophis gigas*) is a federal and State threatened species. GGS inhabits marshes, sloughs, ponds, small lakes, low gradient streams, and other waterways. This species also frequents agricultural wetlands such as irrigation and drainage canals and rice fields, and their adjacent uplands.

An analysis of the suitability of the project site as GGS habitat is included in the Biological Assessment because occurrences have been documented within 5.4 miles of the BSA. The wastewater treatment plant 5.4 miles from the project BSA has GGS, there is little or no connection to Pine Creek. Also, the lack of low gradient slough characteristics, emergent vegetation and wetlands further implicates that there would be no expectation of GGS occupying the project's reach of Pine Creek. For these reasons there would be no effect on GGS by the proposed project.

#### **YELLOW-BILLED CUCKOO**

In 2014 the western distinct population segment (DPS) of Yellow-Billed Cuckoo (YBCU) was listed as threatened under the Federal Endangered Species Act (FESA). Critical habitat for the YBCU was also proposed in 2014 and includes approximately 546,335 acres across the western US from Colorado to California. Preferred habitat is open woodlands with low, dense, scrubby vegetation, and is often found near watercourses and oxbows of rivers. In more arid parts of California, they nest in willows (*Salix* sp.), Fremont cottonwood (*Populus fremontii*), oak (*Quercus* sp.) and cultivated fruit trees.

The BSA falls within the proposed critical habitat unit CA-1 Sacramento River. This unit follows the Sacramento River for 69 mi from Colusa to just south of Red Bluff and covers 35,406 ac. This unit has been a major nesting area for YBCU and is considered an important area to maintain for the species recovery. Any impacts associated with the project would only be temporary due to construction presence and noise and will be limited to roadside foraging habitat. High quality nesting and foraging habitat is located in the mixed riparian habitat just south of the Pine Creek Lagoon bridge.

Minor roadside vegetation removal will occur within a riparian strip located on the northwest side of the Pine Creek Lagoon Bridge; however, the entire riparian strip is only 50 feet wide and is not likely to be used by YBCU, not even for foraging due to the persistent traffic noise. No direct or indirect permanent impacts to YBCU are expected to occur as a result of the project.

#### **SWALLOWS AND BATS**

The existing bridge over the Pine Creek Lagoon provides suitable habitat for a nesting colony of cliff swallows (*Petrochelidon pyrrhonota*). The cliff swallow is a common migratory bird species that forms large nesting colonies on box culverts and bridges. When access to suitable habitat is prevented at one colony, cliff swallows leave the area and join nesting colonies elsewhere. The typical nesting season for birds is February 1 to September 30th. Swallows in the Central Valley tend to arrive and begin nesting in mid-March to April.

Approximately 60-100 Mexican free-tailed bats (*Tadarida brasiliensis*) were observed in a hinge joint of the Pine Creek Lagoon Bridge. Monitoring has demonstrated that the roost is a day and night roost, possibly a maternity or hibernation roost.

### *Invasive Species*

The BSA was evaluated for the presence of invasive species based on the California Noxious Weed List (CDFA 2010), the California Invasive Plant Council List (California Invasive Plant Council 2010), and the USDA Federal Weed List (USDA 2010). Some invasive plant species present on the project site include: Pokeweed (*Phytolacca* sp.) and Himalayan blackberry (*Rubus armeniacus*).

### *Discussion of Environmental Evaluation Question 2.6—Biological Resources*

a) Will the project 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 Game or U.S. Fish and Wildlife Service?

#### *Valley Elderberry Longhorn Beetle*

Due to the historic occurrence of VELB, a species listed as federally threaten under the Endangered Species Act, along the Sacramento River and the presence of elderberry shrubs, VELB are inferred to be present within the BSA. The direct effects of this project would be the relocation of 2 elderberry shrubs, including stems which may contain larvae, resulting in potential direct "take" of VELB. "Take" is defined by Section 3(18) of the Federal Endangered Species Act. "The term 'take' means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The project may affect, and is likely to adversely affect VELB; therefore, compensatory mitigation is required under the federal Endangered Species Act. The proposed project work window also includes three months of the adult flight period, increasing the chances of adult mortality. Project impacts would be assessed as indirect impacts, temporary direct impacts, and permanent direct impacts.

Indirect Impacts that would result from the proximity to construction may include impacts from construction dust, changes in hydrology, shading, soil compaction, and removal of associated riparian woodland species. There will be indirect impacts to 13 elderberry shrubs. An additional elderberry not within riparian habitat could be indirectly impacted, but the impacts would be temporary in nature.

Temporary Direct Impacts include the transplanting of the elderberry, and the temporary disturbance of the elderberry's original habitat for 1 year or less.

Permanent Direct Impacts includes the transplanting of the elderberry onsite, and the temporary disturbance of the elderberry's original habitat for more than 1 year. Two elderberry shrubs would be permanently impacted.

Shoulder widening "may affect, and likely to adversely effect" VELB within the BSA. ESA fencing installed around the elderberry shrubs will prevent the contractor from staging near or within VELB habitat. Formal consultation is required with USFWS.

### Giant Garter Snake

There is no suitable habitat for GGS in the project area. The lack of low gradient slough characteristics, emergent vegetation and wetlands further implicates that there would be no expectation of GGS occupying the project's reach of Pine Creek. Therefore, there would be no effect on GGS.

### Yellow Billed Cuckoo

The following avoidance measures will be in place to avoid impacts to YBCU.

- All trees will be removed outside of the migratory bird nesting season (October 1-January 29), when YBCU are not present in California
- If feasible, construction will begin before May 1, prior to YBCU migration to California, to prevent birds from nesting in areas affected by construction noise.
- If YBCU are detected within the construction zone, USFWS will be notified.

There will be "no effect" to YBCU and "no effect" to YBCU designated critical habitat.

### Swallows

No avoidance and minimization measures including exclusionary measures are proposed. Proposed work will not impact nesting swallows. However, the contractor must adhere to Section 14-6.03B of the 2018 Standard Specifications to cover potential issues with any active nests near the project area.

### Bats

Guard rail, posts, and end treatments at bridge approaches will be upgraded to meet current standards, however the work proposed around the bridge where the bats are located will not affect the bats utilizing the bridge. No exclusion measures will be necessary.

**b)** The riparian vegetation extending from the western bank of Pine Creek, along the north side of SR 32 would be removed, starting approximately 125 feet west of Pine Creek to the western edge of the riparian vegetation. Approximately 0.75 acres of riparian habitat within the ESL, west of the Pine Creek Lagoon Bridge would be permanently impacted. No riparian vegetation would be temporarily impacted.

**c-f)** No work is proposed within Waters of the U.S. and there will be no impact to wetlands or vernal pools. Therefore, there will be no impact to state for federally protected wetlands.

The proposed project will not interfere 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. Therefore, there will be no impact.

The proposed project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Therefore, there will be no impact.

The proposed project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Butte county does have a Habitat Conservation Plan submitted to the USFWS, NMFS and CDFW, however it has yet to be adopted.

### ***Mitigation Measures***

Caltrans proposes to compensate for adverse effects to VELB through the purchase of VELB mitigation credits at a USFWS approved mitigation bank. Elderberry shrubs present in the BSA were divided into three groups depending on the impacts, habitat types, and mitigation needs.

Group 1 consists of 1 elderberry shrub within non-riparian habitat. No exit holes were identified; however, exit holes are difficult to detect so it is conceivable that exit holes may have been present and not detected. This elderberry shrub is located between a power pole and the edge of the right-of-way, outside the area of soil disturbance and will not be directly impacted. The plant could be indirectly impacted due to the proximity of the work but any impact would be temporary. ESA fencing will be used, but no mitigation is proposed.

Group 2 consists of 12 elderberries within a riparian area. No exit holes were identified in any of these elderberry shrubs; however, exit holes are difficult to detect so it is conceivable that exit holes may have been present and not detected. They are all located within riparian habitat. Two elderberry shrubs would be directly impacted and 10 would be indirectly impacted. All directly impacted elderberry shrubs would be transplanted to a USFWS-approved mitigation bank between November 2021 and February 2022. Caltrans proposes to mitigate for 0.0574 acres of riparian habitat at a ratio of 3:1, by purchase of 0.172 acres or 4.2 credits.

Group 3 consists of 10 elderberries within a riparian area. No exit holes were identified; however, exit holes are difficult to detect so it is conceivable that exit holes may have been present and not detected. Three of the 10 elderberries could be indirectly impacted due to proximity to the work but any impact would be temporary. ESA fencing will be used, but no mitigation is proposed.

**Table 4 Summary of Effects on VELB**

<b>Group Number</b>	<b>Number of Shrubs</b>	<b>Type of Habitat</b>	<b>Direct or Indirect Effects</b>	<b>ESA Fencing</b>	<b>Mitigation required</b>
Group 1	1	Non-riparian	1 shrub indirect	Yes	No
Group 2	12	Riparian	2 shrubs Direct, 10 shrubs Indirect	Yes	Yes
Group 3	10	Riparian	3 shrubs indirect, 0 shrubs direct	Yes	No

***No Build Alternative***

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.



## 2.7. Cultural Resources

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

### *Regulatory Setting*

The term “cultural resources,” as used in this document, refers to the “built environment” (e.g., structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including “historic properties,” “historic sites,” “historical resources,” and “tribal cultural resources.” Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 Code of Federal Regulations [CFR] 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement (PA) among the Federal Highway Administration (FHWA), the ACHP, the California State Historic Preservation Officer (SHPO), and the Department went into effect for Department projects, both state and local, with FHWA involvement. The PA implements the ACHP’s regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to the Department. The FHWA’s responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327).

The California Environmental Quality Act (CEQA) requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as “unique”

archaeological resources. California Public Resources Code (PRC) Section 5024.1 established the California Register of Historical Resources (CRHR) and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR and, therefore, a historical resource. Historical resources are defined in PRC Section 5020.1(j). In 2014, Assembly Bill 52 (AB 52) added the term “tribal cultural resources” to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

PRC Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the NRHP listing criteria. It further requires the Department to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with PRC Section 5024 are outlined in a Memorandum of Understanding (MOU)<sup>1</sup> between the Department and SHPO, effective January 1, 2015. For most Federal-aid projects on the State Highway System, compliance with the Section 106 PA will satisfy the requirements of PRC Section 5024.

### *Environmental Setting*

A Historic Property Survey Report (HPSR) was completed for Gianella-Muir Safety Project on August 13, 2020. In addition to the HPSR, an Archaeological Survey Report (ASR) was completed on August 10, 2020, an Extended Phase One Report (XPI) complete August 7, 2020, and a Finding of Effect (FOE) completed on August 13, 2020.

The APE was established to encompass the maximum limits of potential ground disturbing activity that would be expected from the proposed project. This includes all proposed right of way shown on the ESL Layouts in Appendix B represented by the existing ESL limit line, temporary construction easements, utility relocations and any borrow, disposal, access, or staging areas. The APE includes 120.09 acres surrounding the project. Portions of 26 private parcels are included in the APE. Permits to Enter (PTEs) were sent to property owners whose properties were within the APE on May 4, 2020. If no response was received, a second request was sent to the property owners by certified mail. Follow up phone calls were made if there was still no response. PTEs were obtained for 25 of the 26 of parcels partially included in the APE.

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<sup>1</sup> The MOU is located on the SER at [http://www.dot.ca.gov/ser/vol2/5024mou\\_15.pdf](http://www.dot.ca.gov/ser/vol2/5024mou_15.pdf)

These parcels and the Caltrans right of way within the APE were completely surveyed for cultural resources. A record search was conducted with the Northeast Information Center on January 17, 2020. No archaeological sites within the study area were identified. Five state bridges were identified within the study area. The record search also identified one prehistoric archaeological resource within 0.25 miles of the APE.

The project's APE intersects the large built-environment-linear resource of the Sycamore Mud Creek Levee Flood Control System, which is considered a historical resource under CEQA. The Sycamore Mud Creek Levee System has not been formally evaluated but was assumed eligible for inclusion in the National Register of Historic Places (NRHP) and for the California Register of Historic Resources (CRHR) for the purposes of the current project, under Criterion A/1.

Caltrans found a Finding of No Adverse Effect without Standard Condition appropriate for the current project since it will not affect the overall integrity of the Sycamore Mud Creek Flood Control System, nor its ability to convey historical significance. The project will not destroy any section of the large linear resource of the Sycamore Mud Creek Flood Control Levee System and will not alter the resource's integrity or ability to convey its historical significance. Additionally, Caltrans District 3 will prepare all supplemental studies for the phased archeological efforts, for which consultation will continue with CSO, pursuant to X.B.2 of the Section 106 of the Programmatic Agreement (PA).

#### ***Discussion of Environmental Evaluation Question 2.7—Cultural Resources***

a) The project would not diminish the character of the Sycamore Mud Creek Levee Flood Control System and would not adversely affect the resource's ability to convey its significance. The scope of work does not include any alteration to the resource and/or to its settings that could change its character, use, or physical features.

Additionally, the resource will continue to be under the shared responsibility of the State and federal governments. The Department of Water Resources (DWR) will continue to regulate the levees system according to State Plan of Flood Control as appointed by the 1953 Memorandum of Understanding (MOU). There will be no transfer, lease, or sale of the resource out of federal ownership or control as a result of this project. Therefore, the impact would be less than significant.

b) Caltrans received concurrence with the finding of effect "No Adverse Effect without Standard Conditions" from the State Historic preservation Officer (SHPO) on October 21, 2020.

Due to restricted access, surveys could not be completed of the entire APE. Seven (7) acres of the 120-acre APE could not be surveyed on one private property parcel. As such, in accordance with Stipulation XII.B, Caltrans District 3 requested and received approval for Minor Phasing to complete studies from CSO once access was granted. Caltrans District 3 will continue consultation with CSO and SHPO on the reporting of these findings per Stipulation X.B.2 of the Section 106 PA. Within Caltrans ROW, no potential state-owned historical resources were identified as a result of studies.

Therefore no state-owned historical resources qualifying under Public Resources Code (PRC) 5024 will be impacted as a result of the project.

c) There will be no disturbance to human remains including those interred outside of dedicated cemeteries.

### ***Mitigation Measures***

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

### ***No Build Alternative***

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.

## 2.8. Energy

<b>Question</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>Would the project:</b> 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
<b>Would the project:</b> b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	No	No	No	Yes

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Energy Analysis dated August 18, 2020. Potential impacts to Energy are not anticipated as this project will not increase capacity or provide congestion relief compared to the no build alternative. The project is not likely to directly increase long-term energy consumption. Energy impacts from construction would be short term and would not result in inefficient, wasteful, and unnecessary consumption of energy.

### *No Build Alternative*

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.

## 2.9. Geology and Soils

<b>Question</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>Would the project:</b> 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
<b>Would the project:</b> a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: ii) Strong seismic ground shaking?	No	No	No	Yes
<b>Would the project:</b> a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: iii) Seismic-related ground failure, including liquefaction?	No	No	No	Yes
<b>Would the project:</b> a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: iv) Landslides?	No	No	No	Yes
<b>Would the project:</b> b) Result in substantial soil erosion or the loss of topsoil?	No	No	No	Yes
<b>Would the project:</b> 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

<b>Question</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>Would the project:</b> 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
<b>Would the project:</b> e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No	No	No	Yes
<b>Would the project:</b> f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	No	No	No	Yes

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to geology and soils are not anticipated as the soils within the project area are lacking the characteristics that would cause earthquake related hazards if an earthquake were to occur. In addition, paleontological resources are unlikely to be impacted by this project.

### ***No Build Alternative—Geology and Soils, Paleontological Resources***

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.

## 2.10. Greenhouse Gas Emissions

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

### *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 (also referred to as 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 (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF<sub>6</sub>), and various hydrofluorocarbons (HFCs). CO<sub>2</sub> 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 CO<sub>2</sub>.

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 will 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.<sup>2</sup> This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability.”<sup>3</sup> 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 on the basis of 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.

<sup>2</sup> Federal Highway Administration (FHWA). 2019. *Sustainability*. <https://www.fhwa.dot.gov/environment/sustainability/resilience/>. Last updated February 7, 2019. Accessed: August 21, 2019.

<sup>3</sup> Federal Highway Administration (FHWA). No date. *Sustainable Highways Initiative*. <https://www.sustainablehighways.dot.gov/overview.aspx>. Accessed: August 21, 2019.

The U.S. EPA<sup>4</sup>, 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. The current standards require vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. EPA and NHTSA are currently considering appropriate mileage and GHG emissions standards for 2022–2025 light-duty vehicles for future rulemaking.

NHTSA and EPA issued a Final Rule for “Phase 2” for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards will save up to 2 billion barrels of oil and reduce CO<sub>2</sub> emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018–2027 vehicles.

## 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.

*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.

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<sup>4</sup> U.S. EPA’s authority to regulate GHG emissions stems from the U.S. Supreme Court decision in Massachusetts v. EPA (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court’s ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs constitute a threat to public health and welfare. Thus, it is the Supreme Court’s interpretation of the existing Act and EPA’s assessment of the scientific evidence that form the basis for EPA’s regulatory actions.

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.

*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 will 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 (MMTCO<sub>2e</sub>).<sup>5</sup> 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."

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<sup>5</sup> GHGs differ in how much heat each trap in the atmosphere (global warming potential, or GWP). CO<sub>2</sub> is the most important GHG, so amounts of other gases are expressed relative to CO<sub>2</sub>, using a metric called "carbon dioxide equivalent" (CO<sub>2e</sub>). The GWP of CO<sub>2</sub> is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO<sub>2</sub>.

*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.

### ***Environmental Setting***

The proposed project is in a rural area, with a primarily natural-resource based agricultural and tourism economy. SR 32 is the main transportation route between Orland and Chico in the area for both passenger and commercial vehicles, and is also popular with bicyclists. The nearest alternate route is SR- 162, 15.7 miles to the south. Traffic counts are low and SR-32 is rarely congested. The Butte County Association of Governments (BCAG) guides transportation development. The Butte County General Plan and RTP/SCS Circulation, Safety, and Traffic elements address GHGs in the project area.

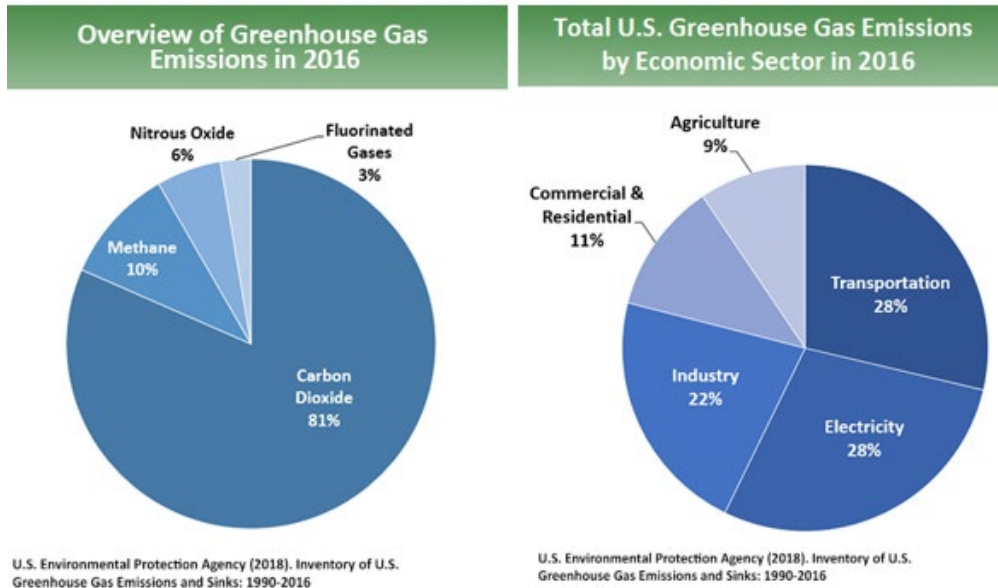
A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be 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 CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, perfluorocarbons, SF<sub>6</sub>, and nitrogen trifluoride. It also accounts for emissions of CO<sub>2</sub> that are removed from the atmosphere by “sinks” such as forests, vegetation, and soils that uptake and store CO<sub>2</sub> (carbon sequestration). The 1990–2016 inventory found that of 6,511 MMTCO<sub>2</sub>e GHG emissions in 2016, 81% consist of CO<sub>2</sub>, 10% are CH<sub>4</sub>, and 6% are N<sub>2</sub>O; the balance consists of fluorinated gases (U.S. EPA 2018).<sup>6</sup> In 2016, GHG emissions from the transportation sector accounted for nearly 28.5% of U.S. GHG emissions.

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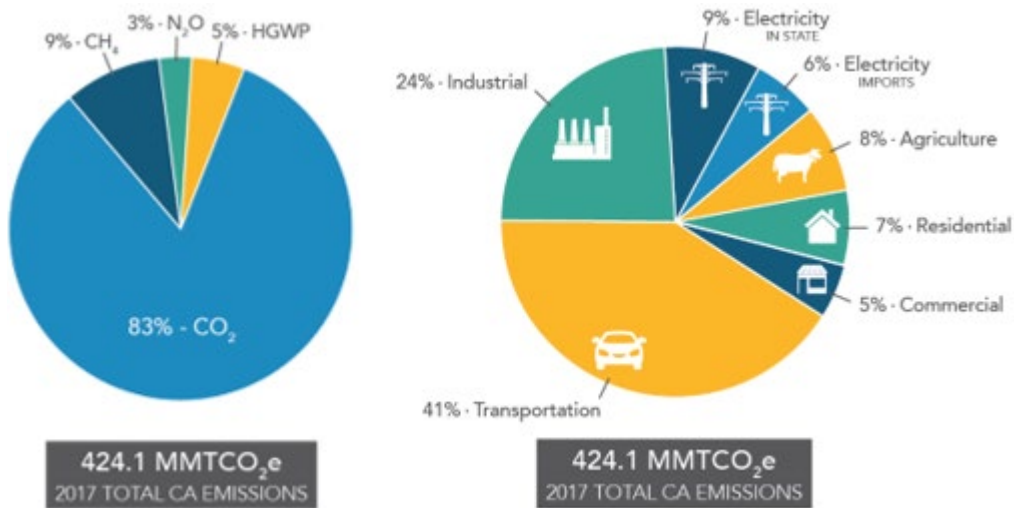
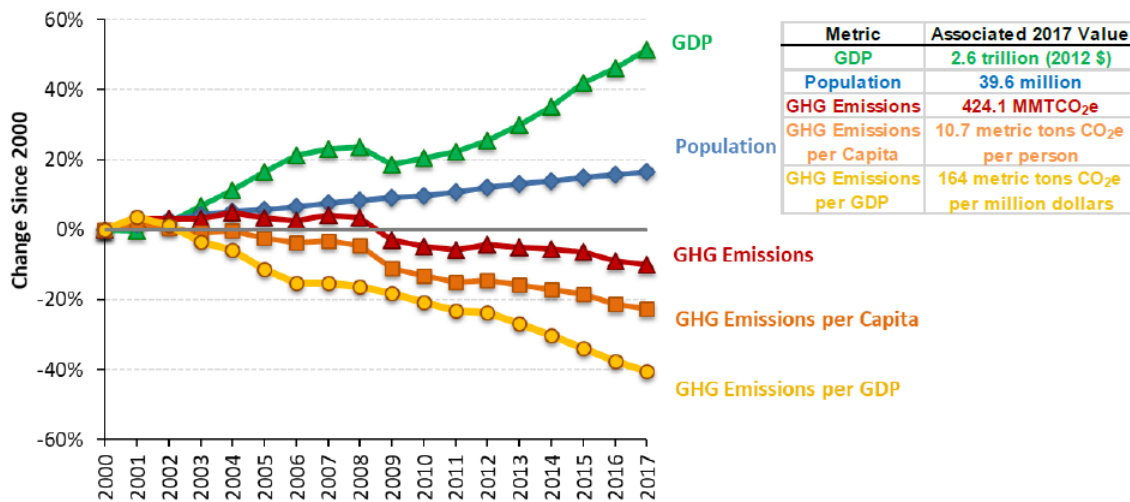
<sup>6</sup> U.S. Environmental Protection Agency. 2018. *Inventory of U.S. Greenhouse Gas Emissions and Sinks*. <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>

**Figure 2. U.S. 2016 Greenhouse 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 2018 edition of the GHG emissions inventory found total California emissions of 429 MMTCO<sub>2</sub>e for 2016, with the transportation sector responsible for 41% of total GHGs. It also found that GHG emissions have declined from 2000 to 2016 despite growth in population and state economic output.<sup>7</sup>

<sup>7</sup> California Air Resources Board (ARB). 2019a. *California Greenhouse Gas Emissions Inventory—2019 Edition*. <https://ww3.arb.ca.gov/cc/inventory/data/data.htm>. Accessed: August 21, 2019.

**FIGURE 3. CALIFORNIA 2017 GREENHOUSE GAS EMISSIONS****FIGURE 4. CHANGE IN CALIFORNIA GDP, POPULATION, AND GHG EMISSIONS SINCE 2000 (ARB 2019b)<sup>8</sup>**

<sup>8</sup> California Air Resources Board (ARB). 2019b. *California Greenhouse Gas Emissions for 2000 to 2017. Trends of Emissions and Other Indicators.*

[https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000\\_2017/ghg\\_inventory\\_trends\\_00-17.pdf](https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf). Accessed: August 21, 2019.



AB 32 required ARB to develop a Scoping Plan that describes the approach California will 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 will use to reduce GHG emissions.

## REGIONAL PLANS

ARB sets regional targets for California's 18 MPOs to use in their RTP/SCSs 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 RTP/SCS for BCAG. The regional reduction target for BCAG is 1 percent for 2020 and 2035.

The proposed project is within the jurisdiction of BCAG which is the Regional Transportation Planning Agency (RTPA) for Butte County. The Butte County 2016 RTP identifies a 1% increase in GHG levels from 2005 emissions levels by 2020 and a 1% increase in GHG levels from 2005 emissions levels by 2035 for GHG emissions from on-road light duty trucks and passenger vehicles. The targets apply to the BCAG region as a whole for all on-road light-duty trucks and passenger vehicles emissions, and not to individual cities or sub-regions.

**TABLE 5. REGIONAL PLANS AIR QUALITY GOALS**

Title	GHG Reduction Policies or Strategies
<i>Butte County Association of Governments (BCAG) Regional Transportation Plan and Sustainable Community Strategy 2040 (adopted December 2016)</i>	<ul style="list-style-type: none"> <li>• Improve bicycling and pedestrian routes</li> <li>• Expand the public transit network</li> <li>• Develop land use scenarios for the purposes of illustrating travel effects on the regional transportation system to help meet the region GHG reduction targets</li> </ul>
<i>Butte County Climate Action Plan (Adopted February 2014)</i>	<ul style="list-style-type: none"> <li>• Inventory and analyze community and government GHG emissions for the county and Implement programs that lead to less GHG production such as installing solar panel arrays, switching to less GHG intensive crops, methane collection from the landfill, and complete streets.</li> </ul>

<sup>8</sup> California Air Resources Board (ARB). 2019c. *SB 375 Regional Plan Climate Targets*. <https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets>. Accessed: August 21, 2019..

<i>City of Chico Climate Action Plan (2020)</i>	<ul style="list-style-type: none"> <li>• Expand and enhance bicycling and pedestrian infrastructure to decrease the use of vehicles and GHG production</li> <li>• Corridor management measures and traffic calming to lower traffic speeds to reduce GHG emissions</li> <li>• Expand the use of alternative fuels to reduce the use of GHG producing fuels</li> </ul>
<i>BCAG Transit and Non-Motorized Plan (May 2015)</i>	<ul style="list-style-type: none"> <li>• Focuses on improving the transportation network for people who walk, bike, or take transit in Butte County</li> <li>• The plan projects an additional per capita greenhouse gas emission reduction of 0.25%0.27% based on the implementation of the transit services alone</li> </ul>

### ***Project Analysis***

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 CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and HFCs. CO<sub>2</sub> emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of CH<sub>4</sub> and N<sub>2</sub>O 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 (Public 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 reduce the number and severity of collisions on SR 32 and will not increase the 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 SR 32, no increase in vehicle miles traveled (VMT) would occur as result of project implementation. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected. It is likely that there will be long term GHG



benefits from smoother pavement surfaces as this project will overlay the existing pavement. Widening the shoulders would make the roadway safer for bicyclists and pedestrians, supporting alternative modes of travel.

### ***Construction Emissions***

Construction GHG emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions will 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.

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 will 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.

Construction is expected to begin in 2022 and last approximately 120 working days. The CAL-CET2018 was used to estimate average carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and hydrofluorocarbons (HFCs) emissions from construction activities. A quantity of GHG is expressed as carbon dioxide equivalent (CO<sub>2</sub>e) that can be estimated by the sum after multiplying each amount of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and HFCs by its global warming potential (GWP). The GWPs of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and HFCs are 1, 25, 298, and 14,800, respectively. The average CO<sub>2</sub>e produced during construction is estimated to be approximately 478 metric tons.

Certain Standard Specifications and laws that the contractor is required to follow will reduce GHG during construction. All construction contracts include Caltrans Standard Specifications Section 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 will comply with all ARB emission reduction regulations. Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. The contractor would also have to comply with Title 13 of the California Code of Regulations, which restricts idling of construction vehicles and equipment to no more than 5 minutes. This would further reduce GHG emissions during construction. A traffic management plan would also be utilized to minimize vehicle delays, which in turn reduces unnecessary GHG production due to vehicle idling.

To further reduce GHG emissions, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times as much as feasible. Reduced idling by vehicles will reduce unnecessary GHG emissions. Scheduling truck trips outside of peak morning and evening commute hours will also serve to reduce congestion and GHG emissions. Reducing construction waste and maximizing the use of recycled materials reduces consumption of raw materials, reduces landfill waste, and encourages cost savings. Not only does this reduce GHG emissions from the waste in the landfill, but also avoids emissions that would be produced taking the construction waste to the landfill.

The way construction equipment is used can also reduce GHG emissions. Maintaining equipment in proper tune and working condition and using right size equipment for the job can help prevent additional GHG emissions. Also, encouraging improved fuel efficiency from construction equipment can help reduce GHG emissions.

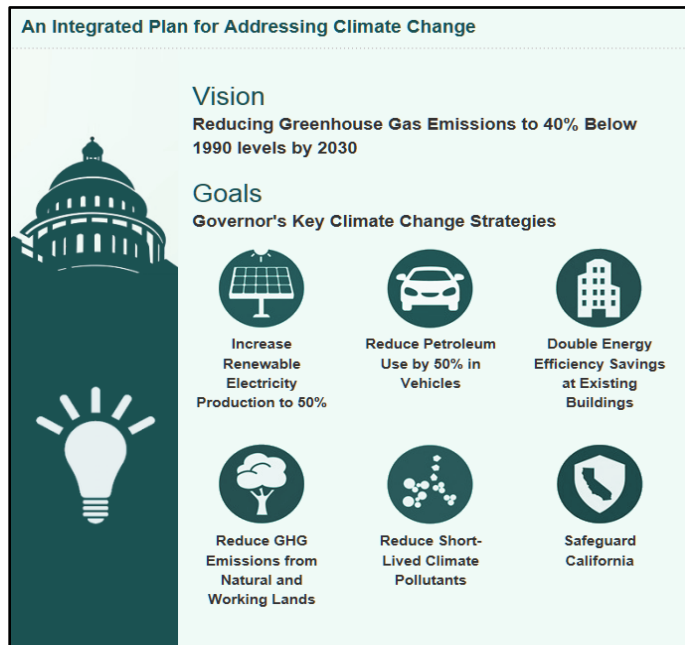
### ***CEQA Conclusion***

As this project is a safety project that is not capacity increasing, there will be no change in operational emissions. Furthermore, the proposed roadway improvements would lead to smoother pavement and may provide long-term GHG benefits. There will be construction GHG emissions, but standard specifications and regulations will reduce these emissions. The project would not conflict with any GHG-reduction plan, policy or regulation. Accordingly, this project will have a “less than significant impact” on GHG emissions.

### ***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 (see Figure 5) 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 greenhouse gas emissions is to reduce today's petroleum use in cars and trucks by up to 50 percent by 2030.<sup>9</sup>

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.

<sup>9</sup> State of California. 2019. *California Climate Strategy*. <https://www.climatechange.ca.gov/>. Accessed: August 21, 2019.

### 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 CO<sub>2</sub> 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.

*SB 391 (Liu 2009)* requires the CTP to meet California's climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible greenhouse gas emission reductions while meeting the state's transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce greenhouse gas 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 will 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 in Section 14-9. Section 14-9.02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including the Butte County Air Quality Management District regulations and local ordinances.
- Compliance with Title 13 of the California Code of Regulations, which restricts idling of construction vehicles and equipment to no more than 5 minutes.
- Caltrans 2018 Standard Specification 7-1.02C "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resource Board.
- Utilize a traffic management plan to minimize vehicle delays.
- Reduce construction waste and maximize the use of recycled materials (reduces consumption of raw materials, reduces landfill waste, and encourages cost savings).

### **Adaptation Strategies**

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 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 (USGRCP) 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.”<sup>10</sup>

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.”<sup>11</sup>

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.<sup>12</sup>

## 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 latest 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.

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<sup>10</sup> U.S. Global Change Research Program (USGCRP). 2018. *Fourth National Climate Assessment*. <https://nca2018.globalchange.gov/>. Accessed: August 21, 2019.

<sup>11</sup> Federal Highway Administration (FHWA). 2019. *Sustainability*. <https://www.fhwa.dot.gov/environment/sustainability/resilience/>. Last updated February 7, 2019. Accessed: August 21, 2019.

- *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 factors. 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 is conducting climate change vulnerability assessments to 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.



According to the Caltrans District 3 Climate Change Vulnerability Assessment (2019),<sup>13</sup> the climate change stressors present in District 3 are increased precipitation volatility, increasing temperatures, and increased wildfire extent and severity.

### 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

Future climate conditions are expected to alter rainfall patterns in California, with less precipitation overall but falling in heavier individual rain events. The Caltrans Climate Change Vulnerability Assessment for District 3 (Caltrans 2019) assessed and mapped potential changes to the 100-year flood event, a design standard used in highway design. In the project area, mapping shows that the 100-year storm rainfall event is likely to change by less than 5 percent through 2085.

The proposed project to widen shoulders and add dedicated turn lanes. The widening of the shoulders would add impervious surfaces along the length of the project. The proposed project crosses over Pine Creek and Mud creek in addition to irrigation channels used for farming. The west end of the project is also near, but does not cross, the Sacramento River. Most of the project is within the 1% annual chance flood hazard zone. A portion of the project on the east side of the project is within the 0.2% floodplain hazard zone, and the very east end of the project is not within any flood hazard zone.

Existing roadway and bridge drainage systems currently discharge stormwater to receiving waters through bridge deck drains and/or discharge to vegetated slopes adjacent to the highway facility. The current design for stormwater management, post construction, is to perpetuate existing drainage patterns. Stormwater will continue to sheet flow to vegetated slopes. The project area is fairly flat, and the project would include extending existing box culverts and lining poor condition culverts where required. These modifications would accommodate the relatively small potential increase in a 100-year-storm rainfall event.

### WILDFIRE

The proposed project is located in a Local Responsibility Area that is designated by CalFire as a non-very-high fire hazard severity zone.<sup>14</sup> Google Maps satellite imagery shows SR 32 in the project area is surrounded by agricultural fields and orchards. Mapping in the Caltrans Climate Change Vulnerability Assessment for District 3 shows

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<sup>13</sup> California Department of Transportation. 2019. *Caltrans Climate Change Vulnerability Assessments. District 3 Technical Report*. Prepared by WSP.

<sup>14</sup> California Department of Forestry and Fire Protection (CalFire). 2008. *Very High Fire Hazard Severity Zones in LRA*. [https://osfm.fire.ca.gov/media/6650/fhszl\\_map4.pdf](https://osfm.fire.ca.gov/media/6650/fhszl_map4.pdf). Accessed: September 10, 2020.

that this segment of roadway is not considered to be potentially exposed to wildfire and is not rated at any level of wildfire concern. Caltrans 2018 revised Standard Specification 7-1.02M(2) is required on all projects; it mandates fire prevention procedures during construction, including a fire prevention plan, to avoid accidental ignitions.

## 2.11. Hazards and Hazardous Materials

<b>Question</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>Would the project:</b> 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
<b>Would the project:</b> 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	No	Yes
<b>Would the project:</b> 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
<b>Would the project:</b> 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
<b>Would the project:</b> 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
<b>Would the project:</b> f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No	No	No	Yes
<b>Would the project:</b> 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

California regulates hazardous materials, waste, and substances under the authority of the CA Health and Safety Code and is also authorized by the federal government to implement 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 clean-up 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***

An Initial Site Assessment (ISA) was completed for the Gianella-Muir Safety Project on March 24, 2020. The review for potentially hazardous waste within the project limits included a review of project plans, a review of Naturally Occurring Asbestos maps, and a review of the Geotracker database which contains information on hazardous waste sites. Since construction of the proposed project cannot avoid disturbing soils, a Site Investigation (SI) is required. The SI involves sampling soils for Aerially Deposited Lead (ADL) and will determine if hazardous soils exist and what actions, if any, will need to occur during construction. In addition to ADL, treated wood waste (TWW) will be encountered during construction of this project. This project is not located on the Cortese list.

### ***Discussion of Environmental Evaluation Question 2.9 – Hazards and Hazardous Materials***

Question a of the CEQA Checklist for Hazards and Hazardous materials was marked “Less Than Significant Impact.” The reason for this is that ADL, lead and chromium in yellow traffic striping, TWW, and the potential for Styrene in culvert liners are all present within the Gianella-Muir Safety Project.

Lead-contaminated soil may exist within and near our R/W due to the historical use of leaded gasoline, leaded airline fuels, waste incineration, and et-cetera. The areas of primary concern in relation to highway facilities are soils along routes with historically high vehicle emissions due to large traffic volumes, congestion, or stop and go situations. Since soil disturbance will occur and excess soils will be generated, a site investigation for Aerially Deposited Lead (ADL) is required. This site investigation will determine if hazardous soils exist and what actions, if any, will need to occur during construction.

In the event that cured in place pipe (CIPP) will be used to rehabilitate/replace drainage facilities, the potential for hazardous waste may exist with styrene (a highly volatile chemical used in the main liner). If groundwater is known to be present in the vicinity of a culvert or perched/spring water permeates to the inside of the culvert, NROEE recommends the use of a pre-liner instead of patching the deteriorated culvert.

Hazardous chemicals are known to exist in the wood posts associated with sign posts. As such, if wood posts are removed, they shall be disposed of in accordance with Standard Special Provision 14-11.14 (Treated Wood Waste).

Hazardous levels of lead and chromium are known to exist in the yellow color traffic stripes. Since these traffic stripes will be cold planned along with the roadway, the levels of lead and chromium will become non-hazardous. These grindings (which consist of the roadway material and the yellow color traffic stripes) shall be removed and disposed of in accordance with Standard Special Provision 36-4 (Residue Containing High Lead Concentration Paints) which requires a Lead Compliance Plan (LCP). Non-hazardous levels of lead are known to exist in the white traffic striping. As such, these grindings shall be removed and disposed of in accordance with the same specification.

Since construction of the proposed project cannot avoid disturbing soils, a Site Investigation (SI) is required. The site investigation involves sampling soils for ADL. A SI needs to be requested by the PE or PM and takes 2 to 5 months to complete since a task order has to be prepared, approved, and issued to a contractor. The contractor is then required to prepare work plans, health and safety plans, conduct site investigations, and prepare site investigation reports for Caltrans review and approval.

All of the hazardous or potentially hazardous materials present within this project will be accounted for with SSPs and applicable laws. The SI will help determine which actions, if any, need to occur during construction to protect the public and the environmental from lead found in soils. Therefore a "Less Than Significant Impact" is expected through the routine transport and disposal of the mentioned materials. A "Less Than Significant Impact" is also expected for a reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment as the appropriate protections will be in place during construction.

"No Impact" determinations in sections c through g of the CEQA Checklist are based on the scope, description, and location of the proposed project, as well as the ISA dated March 24, 2020. No impacts to these sections are anticipated due to the project being located farther than 0.25 miles from a school, no cortese list sites within the project area, the project is not within 2 miles of an airport, the project will not impact an emergency response plan, or have an impact on wildland fires.

### ***Mitigation Measures***

No mitigation measures are necessary for hazards and hazardous materials.

### ***No Build Alternative***

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.

## 2.12. Hydrology and Water Quality

<b>Question</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>Would the project:</b> a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	No	No	No	Yes
<b>Would the project:</b> 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
<b>Would the project:</b> 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
<b>Would the project:</b> d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No	No	No	Yes
<b>Would the project:</b> e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No	No	No	Yes

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Water Quality Assessment dated August 13, 2020. Potential impacts to water resources are not anticipated due to expected compliance with Caltrans' MS4 Permit (Permit), the implementation of Best Management Practices (BMPs) to the maximum extent practicable, and regular field inspections to evaluate BMP effectiveness and Permit adherence for the duration of project activities. The Construction General Permit and the need for a Storm Water Pollution Prevention Plan will be required if the soil disturbance reaches or exceeds one acre.

### ***No Build Alternative***

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.



### 2.13. Land Use and Planning

<b>Question</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>Would the project:</b> a) Physically divide an established community?	No	No	No	Yes
<b>Would the project:</b> 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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Potential conflicts to any local land use and planning are not anticipated. The majority of the proposed project will occur along the State Highway within the existing Caltrans right of way. Work outside of the right of way will mainly be accomplished with TCEs. The TCEs are small and will not interfere with activities in the surrounding parcels in a temporary or permanent way. Right of way acquisition will be required at mud creek to improve roadway entrances and at Muir Avenue to extend a deceleration lane. These permanent right of way acquisitions will not have an impact on land use and planning. The scope of work for this project will not change the physical location of the highway, therefore the proposed project will not cause division of the local community.

The proposed project does not conflict with local plans. The local or regional plans that pertain to the project area are the Butte County General Plan, Butte County Draft Habitat Conservation Plan (HCP), and the Butte County Transit and Non-Motorized Transportation Plan. This project is not within the city limits of Chico, but the far eastern portion of the project is within the Chico of Chico Sphere of Influence. The project ends at the Muir Avenue, SR 32 intersection. The City of Chico Sphere of influence is the potential future city limits of the City of Chico.

The Butte County General Plan shows that the parcels that abut the project are zoned as agricultural land and will remain that way as there is no planned residential or commercial development surrounding this section of SR 32. The project does not conflict with the agricultural zoning along SR 32, as there will be no acquisition of agricultural property adjacent to the project.

The Butte County Transit and Non-Motorized Transportation Plan listed State Route 32 in Butte county as the future location of a Class II Bike Lane. The proposed project is in accord with the Butte County Transit and Non-Motorized Transportation Plan as the wider shoulders will provide more space for pedestrians and bicyclists along this section

of SR 32. Signs warning vehicles of bicyclists before narrow bridges will make this section of SR 32 safer for bicyclists, which is also in accordance with the Butte County Transit and Non-Motorized Transportation Plan. The Butte County Draft HCP has not yet been adopted.

### ***No Build Alternative***

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.

## 2.14. Mineral Resources

<b>Question:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>Would the project:</b> 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
<b>Would the project:</b> 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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to mineral resources are not anticipated due to there being no known mineral resources located within the environmental study area. The closest known mineral resource, classified as concrete grade aggregate, is located about 0.3 miles from the western edge of the project along State Route 32 in Glenn county.

### *No Build Alternative*

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.

## 2.15. Noise

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<b>Would the project result in:</b> 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	No	Yes
<b>Would the project result in:</b> b) Generation of excessive groundborne vibration or groundborne noise levels?	No	No	No	Yes
<b>Would the project result in:</b> 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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Noise Analysis dated August 19, 2020. Potential impacts to Noise are not anticipated as 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. Traffic noise impacts are not anticipated, and a detailed noise study report is not required.

During construction, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Noise associated with construction is controlled by 2018 Caltrans Standard Specification Section 14-8.02, “Noise Control,” which states the following:

1. Control and monitor noise resulting from work activities.
2. Do not exceed 86 dBA Lmax at 50 feet from the job site activities from 9 p.m. to 6 a.m.

### **No Build Alternative**

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.

## 2.16. Population and Housing

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<b>Would the project:</b> 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
<b>Would the project:</b> b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No	No	No	Yes

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to population and housing are not anticipated as the proposed project would not increase capacity or access; therefore, the proposed project would not directly or indirectly induce population growth in the area. The project would not add new homes or businesses and would not extend any roads or other infrastructure. There would be no impact to unplanned population growth. Although some of the areas surrounding the project are rural residential communities, there are no residences within the project area, and no replacement housing would be necessary. Conforming of driveways along the proposed project will be required, but this will not displace any people or induce growth. There would be no impact to existing people or housing.

### *No Build Alternative*

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.

## 2.17. 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:  Fire protection?	No	No	No	Yes
Police protection?	No	No	No	Yes
Schools?	No	No	No	Yes
Parks?	No	No	No	Yes
Other public facilities?	No	No	No	Yes

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to public resources are not anticipated. During construction any emergency service agency whose ability to respond to incidents may be affected by traffic control would be notified prior to any closure. All emergency vehicles would be accommodated through the work area. There would be no impact to emergency services resulting from the project.

### *No Build Alternative*

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.

## 2.18. 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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to recreation are not anticipated. The project would not increase the use of existing neighborhood parks, regional parks, or other recreational facilities. No neighborhood parks, regional parks, or other recreational facilities are present within the project limits. There would be no impact to neighborhood or regional parks.

The project does not include recreational facilities or require the construction or expansion of recreational facilities. No neighborhood parks, regional parks, or other recreational facilities are present within the project limits. There would be no impact from the construction of recreational facilities.

### *No Build Alternative*

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.

## 2.19. Transportation/Traffic

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<b>Would the project:</b> a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	No	No	No	Yes
<b>Would the project:</b> b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?  NOTE: While public agencies may immediately apply Section 15064.3 of the updated Guidelines, statewide application is not required until July 1, 2020. In addition, uniform statewide guidance for Caltrans projects is still under development. The PDT may determine the appropriate metric to use to analyze traffic impacts pursuant to section 15064.3(b). Projects for which an NOP will be issued any time after December 28, 2018, should consider including an analysis of VMT/induced demand if the project has the potential to increase VMT (see page 20 of OPR's updated SB 743 Technical Advisory), particularly if the project will be approved after July 2020.	No	No	No	Yes
<b>Would the project:</b> 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
<b>Would the project:</b> d) Result in inadequate emergency access?	No	No	No	Yes

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Traffic data that was provided in the Project Initiation Report dated August 23, 2019. Potential impacts to traffic are not anticipated due to this project being a safety project, where the project scope does not change traffic flow on SR 32. There is no conflict with bicycle or pedestrian facilities as this project will widen the shoulders of SR 32 which will provide more space for bicyclists to avoid vehicles. In addition, this project will further enhance bicycle and pedestrian facilities along SR 32 by installing bicycle warning signs near narrow bridges for vehicles. There are no other conflicts with local plans or ordinances as discussed in section 2.13 Land Use and Planning that are applicable to traffic within the project area.

This project will not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). Concurrence from Caltrans Head Quarters that a VMT CEQA analysis for this project is not required was received on August 13, 2020.



No hazards will be created by this project. This project will make SR 32 safer by increasing sight distance, adding clear recover zones, and wider shoulders. Intersections that have been found to have inadequate lighting will be addressed with improved safety lighting.

Emergency access will not be impeded by this project. During construction any emergency service agency whose ability to respond to incidents may be affected by traffic control would be notified prior to any closure. All emergency vehicles would be accommodated through the work area. After construction is complete, emergency access will be unchanged from existing conditions.

### ***No Build Alternative***

The existing condition would remain; therefore, per CEQA “No Impact” would occur.

## 2.20. Tribal Cultural Resources

<b>Question</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<p><b>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:</b></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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the HSPR dated August 13, 2020. Potential impacts to Tribal Cultural Resources are not anticipated. There are no listed or eligible to list historic resources within the APE.

### *No Build Alternative*

The existing condition would remain; therefore, per CEQA “No Impact” would occur.

## 2.21. Utilities and Service Systems

<b>Question</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>Would the project:</b> 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	Yes	No
<b>Would the project:</b> 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
<b>Would the project:</b> 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
<b>Would the project:</b> 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
<b>Would the project:</b> e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No	No	No	Yes

There are numerous overhead utility poles as well as underground utilities within the project limits. This includes a Kinder Morgan pipeline crossing near PM 3.0 which was revealed based on utility investigation and review of As-builts. The project proposes to relocate 5 utility poles to outside the Clear Recovery Zone (CRZ).

### *Environmental Setting*

There are no expected long term impacts to utilities. Temporary impacts will be due to relocation efforts by utility providers. Only a minor disruption for homeowners is expected during the relocation. It is anticipated that the overhead utility relocations will be minor in nature and short term.

### ***Discussion of Environmental Evaluation Question 2.21—Utilities and Service Systems***

a) Minor relocation of overhead utilities would result in the slight expansion of the utility facilities. However, the relocation of utilities would not result in new or major expansion of the existing facilities. Therefore the impact would be less than significant.

“No Impact” determinations for questions b) through e) are based on the scope, description, and location of the proposed project. Any utility relocations resulting from the work that will occur from this project will comply with all applicable laws and will not cause a permanent increased use of utilities.

### ***Mitigation Measures***

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

### ***No Build Alternative***

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.

## 2.22. Wildfire

<b>Question</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:</b> a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	No	No	No	Yes
<b>If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:</b> 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
<b>If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:</b> 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
<b>If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:</b> 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

“No Impact” determinations in this section are based on the scope, description, location, and CalFire Fire Hazard Severity Zone Maps of the proposed project. Potential impacts to wildfire are not anticipated. The project is not within or near a State Responsibility Area and would not have any impact on wildlife.

### **No Build Alternative**

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.

### 2.23. Mandatory Findings of Significance

<b>Question</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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	Yes	No	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

#### *Discussion of Environmental Evaluation Question 2.23—Mandatory Findings of Significance*

a) The Gianella-Muir Safety project has the possibility of adverse effects on the USFWS listed VELB. Elderberry shrubs, the host plant for VELB larvae, in the project area were grouped so that each of the three groups could have different mitigation strategies. Mitigation for VELB include transplanting directly impacted shrubs to a USFWS-approved mitigation bank, purchasing credits to off-set the indirect impacts to riparian habitat, and by using ESA fencing to protect shrubs that would have temporary, indirect impacts. Discussion of the mitigation strategies for VELB are discussed further in section 2.6 Biological Resources. Impacts to VELB are less-than-significant with mitigation incorporated.

Therefore, with the implementation of mitigation measures, the impacts would be less than significant to federally-listed as threatened or endangered animal species. The proposed project will have no impacts to any state-listed species as rare or endangered

under the California Endangered Species Act.. This project will not have an impact on reducing 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, or eliminate important examples of the major periods of California history or prehistory.

b) This project does not have any cumulatively considerable impacts. Therefore, there is no impact.

c) This project does not have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly. Therefore, there is no impact.

## **2.24. Cumulative Impacts**

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under the National Environmental Policy Act (NEPA) can be found in 40 Code of Federal Regulations, Section 1508.7 of the Council on Environmental Quality (CEQ) Regulations.

### **Aesthetics**

The Gianella-Muir Safety project will not cause direct or indirect impacts on Aesthetics. It will not contribute to a cumulative impact on Aesthetics and need not be further evaluated.

### **Agriculture and Forest Resources**

The Gianella-Muir Safety project will not cause direct or indirect impacts on Agriculture and Forest Resources. It will not contribute to a cumulative impact on Agriculture and Forest Resources and need not be further evaluated.

### **Air Quality**

The Gianella-Muir Safety project will not cause direct or indirect impacts on Air Quality. It will not contribute to a cumulative impact on Air Quality and need not be further evaluated.

### **Biological Resources**

Routine Caltrans maintenances activities would continue in the project area, but these activities should not contribute to the cumulative effects to wildlife and their habitat in



the area since maintenance activities are kept to the roadways and shoulders. Therefore, the Gianella-Muir Safety project will not cause direct or indirect impacts on Biological Resources. It will not contribute to a cumulative impact on Biological Resources and need not be further evaluated

### **Cultural Resources**

The Gianella-Muir Safety project will not cause direct or indirect impacts on Cultural Resources. It will not contribute to a cumulative impact on Cultural Resources and need not be further evaluated.

### **Energy**

The Gianella-Muir Safety project will not cause direct or indirect impacts on Energy. It will not contribute to a cumulative impact on Energy and need not be further evaluated.

### **Geology and Soils**

The Gianella-Muir Safety project will not cause direct or indirect impacts on Geology and Soils. It will not contribute to a cumulative impact on Geology and Soils and need not be further evaluated.

### **Greenhouse Gas Emissions**

To determine the potential cumulative impacts of GHG emissions of the Gianella-Muir Safety Project, Butte county was selected to be the Resource Study Area.

The Butte County Climate Action Plan, adopted in 2014, inventoried GHG emission sources within the county. More than three-quarters of Butte County emissions result from agriculture, on-road transportation, and residential energy use.

In 2006, agriculture produced 43% of Butte Counties GHG emissions. This is due in part to Butte County having over 500,000 acres of agricultural land. These agricultural practices emitted, on average, less than 1 metric ton of carbon dioxide equivalents (MTCO<sub>2</sub>e) per acre of agricultural land. Since the inventory was taken, Butte County has continued to work to reduce the GHG produced from agricultural activities, which were already relatively efficient. In 2006 the total existing residential and nonresidential acreage in Butte county was producing over 6 MTCO<sub>2</sub>e per acre. One reason residential emissions are high is that many of the buildings in Butte County were constructed before efficiency was considered in building design.

If the Butte County Climate Action Plan is completely implemented, CO<sub>2</sub> emissions could be reduced by up to 16.2% below baseline 2006 levels by 2020. This would exceed the state guidance for reductions for the county. The majority of GHG emission reduction will occur through solar projects and by continuing to optimize agricultural practices in the county.

The Gianella-Muir Safety project will not cause any direct or indirect impacts on operational GHG emission in Butte county. This safety project will not add additional

lanes or increase vehicle miles traveled. GHG emissions from construction will have a small but direct impact on GHG in Butte County. These impacts will be temporary and will not be cumulatively considerable. When GHG emissions were inventoried in Butte County in 2006, off-road emissions only accounted for 2% of the total GHG emissions. Off-road emissions include emissions from construction, but also any emissions given off from yard equipment used by the public and off-road vehicles. Construction GHG emissions are not a significant source of GHG in Butte County.

Reasonably foreseeable future actions in Butte County and the cities within Butte county include many GHG reducing projects. The City of Chico will be implementing projects that will provide traffic calming and complete streets elements, improve transit options, and increase alternative fuel use for government vehicles and plug in stations for the public. Non-motorized transportation facilities will be constructed and improved upon throughout Butte County as a way of encouraging the public to use alternative modes of transportation for daily travel and to reduce GHG emissions. The county is also working to reduce GHG intensive agriculture and residential energy usage.

Caltrans is completing multiple projects in Butte County that will have an impact on GHG emissions. There are many foreseeable projects within the county that aim to improve ride quality and road service life. These projects create a smoother road surface which may provide long term benefits to GHG emissions. In addition, ramp metering projects have been initiated throughout the county. Ramp metering is installed to reduce overall congestion on the State Highway System, which may lead to lower GHG emissions in the future. Caltrans also has projects in Chico and Oroville that will create or improve on bike and pedestrian facilities along the State Highway System. These projects will reduce GHG emissions by encouraging the public to use these facilities instead of personal vehicles.

Caltrans is also working on creating passing lanes as part of larger projects on the State Route 70 corridor South of Oroville, partially within Butte County. These projects may have the potential to directly or indirectly impact GHG emissions, depending on the length of the passing lanes.

Cumulative impacts from GHG, both direct and indirect, exist in Butte County. The main sources of GHG emissions in Butte county come from agriculture, residential energy use, and on-road transportation. The Gianella- Muir Safety Project will have a less than significant impact on cumulative GHG emissions due to the temporary emissions that will occur during construction. No foreseeable direct or indirect impact to cumulative operational emissions will occur from this project. Butte county and the cities within the county limits are actively working to reduce GHG emissions. The major sources of GHG emissions in the county are being addressed pro-actively so the county can remain in compliance with the regional reduction target set by ARB for GHG. Many reasonably foreseeable actions that will occur in Butte county will reduce GHG emissions by increasing the use of non-motorized transportation or mass transit, providing smoother pavement, and by adding complete streets elements which is increase pedestrian and bicycle use while also providing the benefit of traffic calming.

Mitigation for cumulative impacts from GHG emissions for the Gianella-Muir Safety Project is not necessary. Measures to reduce construction emissions have been discussed in 2.10 Greenhouse Gas Emissions.

### **Hazards and Hazardous Materials**

The Gianella-Muir Safety project will not cause direct or indirect impacts to Hazards and Hazardous Materials. It will not contribute to a cumulative impact on Hazards and Hazardous Materials and need not be further evaluated.

### **Hydrology and Water Quality**

The Gianella-Muir Safety project will not cause direct or indirect impacts on Hydrology and Water Quality. It will not contribute to a cumulative impact on Hydrology and Water Quality and need not be further evaluated.

### **Land Use and Planning**

The Gianella-Muir Safety project will not cause direct or indirect impacts on Land Use and Planning. It will not contribute to a cumulative impact on Land Use and Planning and need not be further evaluated.

### **Mineral Resources**

The Gianella-Muir Safety project will not cause direct or indirect impacts on Mineral Resources. It will not contribute to a cumulative impact on Mineral Resources and need not be further evaluated.

### **Noise**

The Gianella-Muir Safety project will not cause direct or indirect impacts on Noise. It will not contribute to a cumulative impact on Noise and need not be further evaluated.

### **Population and Housing**

The Gianella-Muir Safety project will not cause direct or indirect impacts on Population and Housing. It will not contribute to a cumulative impact on Population and Housing and need not be further evaluated.

### **Public Services**

The Gianella-Muir Safety project will not cause direct or indirect impacts on Public Services. It will not contribute to a cumulative impact on Public Services and need not be further evaluated.

## **Recreation**

The Gianella-Muir Safety project will not cause direct or indirect impacts on Recreation. It will not contribute to a cumulative impact on Recreation and need not be further evaluated.

## **Transportation/Traffic**

The Gianella-Muir Safety project will not cause direct or indirect impacts to Transportation or Traffic. It will not contribute to a cumulative impact on Transportation or Traffic and need not be further evaluated.

## **Tribal Cultural Resources**

The Gianella-Muir Safety project will not cause direct or indirect impacts on Tribal Cultural Resources. It will not contribute to a cumulative impact on Tribal Cultural Resources and need not be further evaluated.

## **Utilities and Service Systems**

The Gianella-Muir Safety project will not cause direct or indirect impacts to Utilities and Service Systems. It will not contribute to a cumulative impact on Utilities and Service Systems and need not be further evaluated.

## **Wildfire**

The Gianella-Muir Safety project will not cause direct or indirect impacts to Wildfire. It will not contribute to a cumulative impact on Wildfire and need not be further evaluated.

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## Chapter 3. Coordination and Comments

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Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization and/or mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including Project Development Team (PDT) meetings, permits to enter, and interagency coordination. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination.

The following agencies, organizations, and individuals were consulted in the preparation of this environmental document.

### Coordination with Resource Agencies

The Caltrans Headquarters Cultural Studies Office sent the HPSR package to SHPO on August 26, 2020. Concurrence from SHPO was received on October 21, 2020.

Michele Lukkarila, project biologist, first contacted USFW with the draft Biological Assessment on September 14, 2020. The final Biological Assessment was sent to USFW on October 27, 2020.

### Coordination with Property Owners

Property owners whose properties were partially within the APE were first contacted for PTEs for cultural resource field reviews on May 4, 2020. Property owners were mailed a consent form asking if cultural resources could conduct field reviews of the portions of their property covered by the environmental study limits. If no response was received from the initial PTE request, additional PTE forms were sent by certified mail to the unresponsive property owner. If there was still no response, multiple phone calls were made to follow up with the unresponsive property owners.

### Circulation

The Proposed Mitigated Negative Declaration was circulated from April 21, 2021 to May 20, 2021.

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## Chapter 4. List of Preparers

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The following individuals performed the environmental work on the project:

### California Department of Transportation, District 3

Laura Loeffler	Senior Environmental Planner
Caitlin Greenwood	Environmental Planner
Youngil Cho	Air/Noise Specialist
Connor Buitenhuys	Archaeologist
Michele Lukkarila	Biologist
Rebecca Cole	Biologist
Rajive Chadha	Hazardous Waste Specialist
Kathryn Lugo	Landscape Architect
Lisa Bright	Native American Coordinator
Sean Cross	Stormwater Specialist
Andrey Tokmakov	Project Engineer
Cameron Knudson	Project Manager
Hardeep Pannu	Right of Way Project Coordinator

### Wood Rodgers

Brian Krcelic	Project Manager
Arsalan Gharachorloo	Project Engineer



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## Chapter 5. References

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# Appendix A. Title VI Policy Statement

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STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

Gavin Newsom, 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](http://www.dot.ca.gov)



Making Conservation  
a California Way of Life.

August 2020

### 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."

Caltrans will make every effort to ensure nondiscrimination in all of its services, programs and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin. In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a nondiscriminatory manner.

Related federal statutes, remedies, 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, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page:  
<https://dot.ca.gov/programs/civil-rights/title-vi>.

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 Civil Rights, at 1823 14<sup>th</sup> Street, MS-79, Sacramento, CA 95811; (916) 324-8379 (TTY 711); or at <[Title.VI@dot.ca.gov](mailto:Title.VI@dot.ca.gov)>.

Original signed by  
Toks Omishakin  
Director

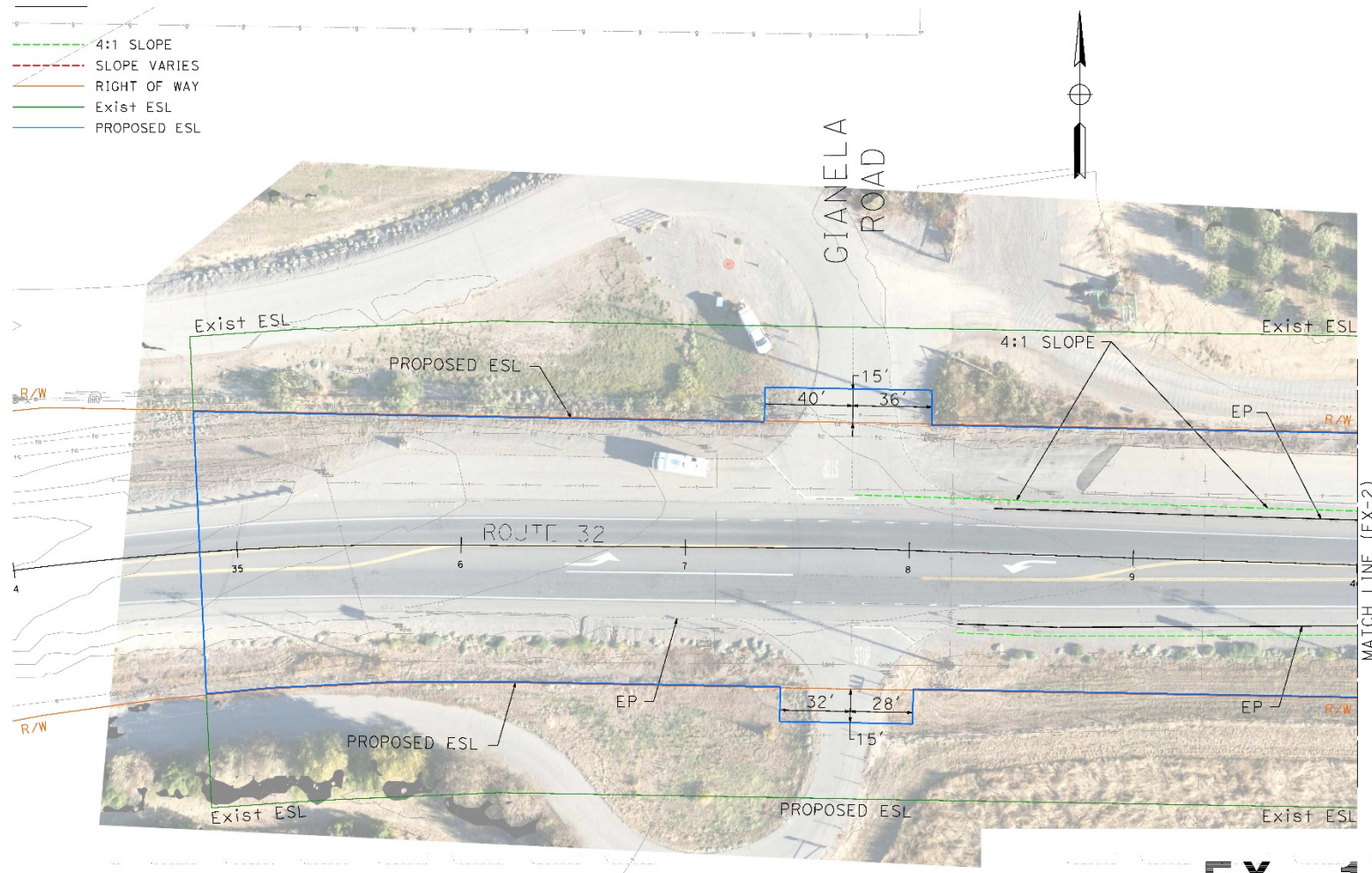
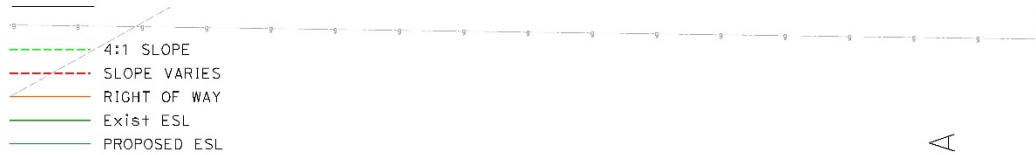
*"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"*



## Appendix B. Layouts of Proposed Work

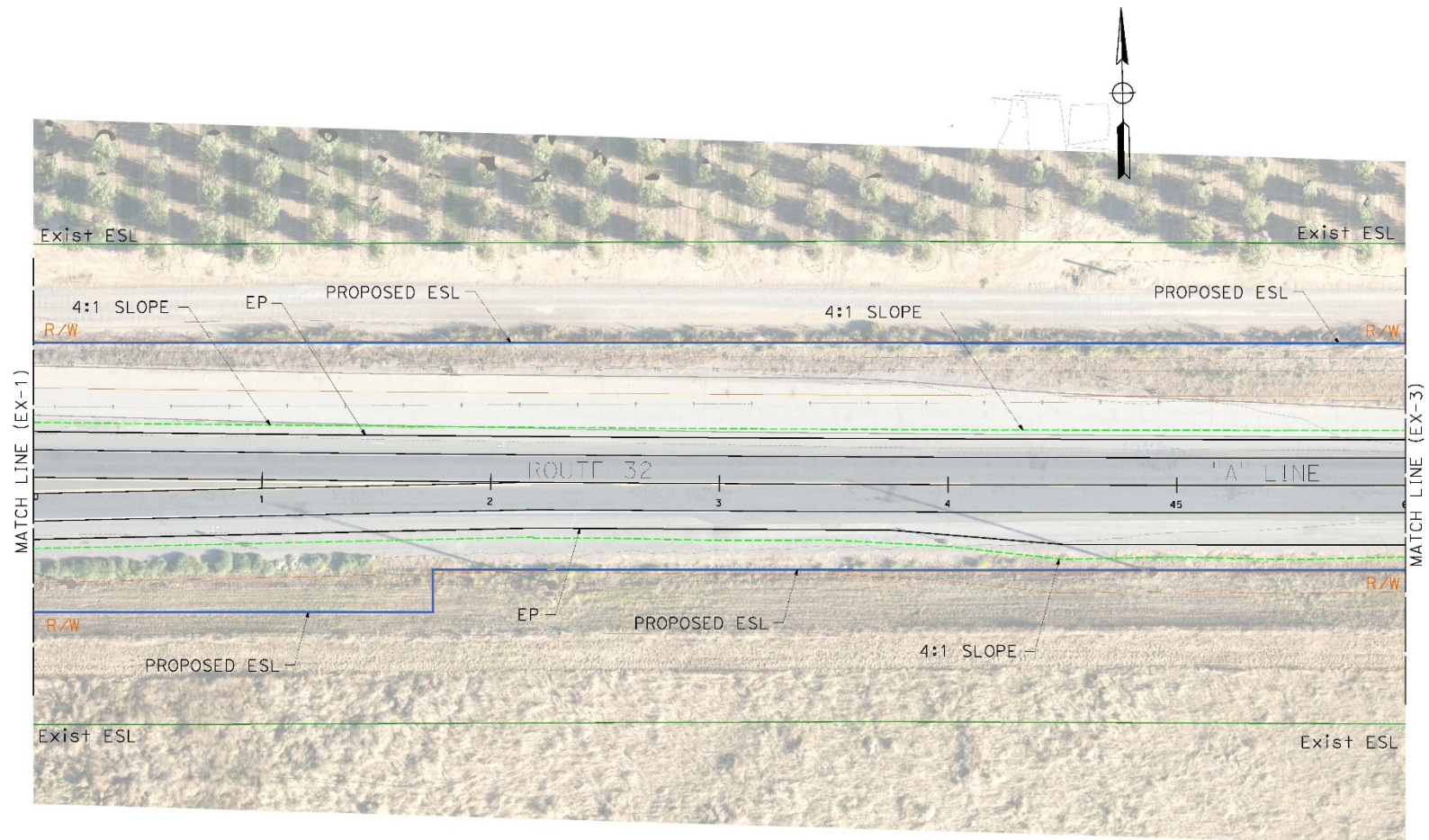
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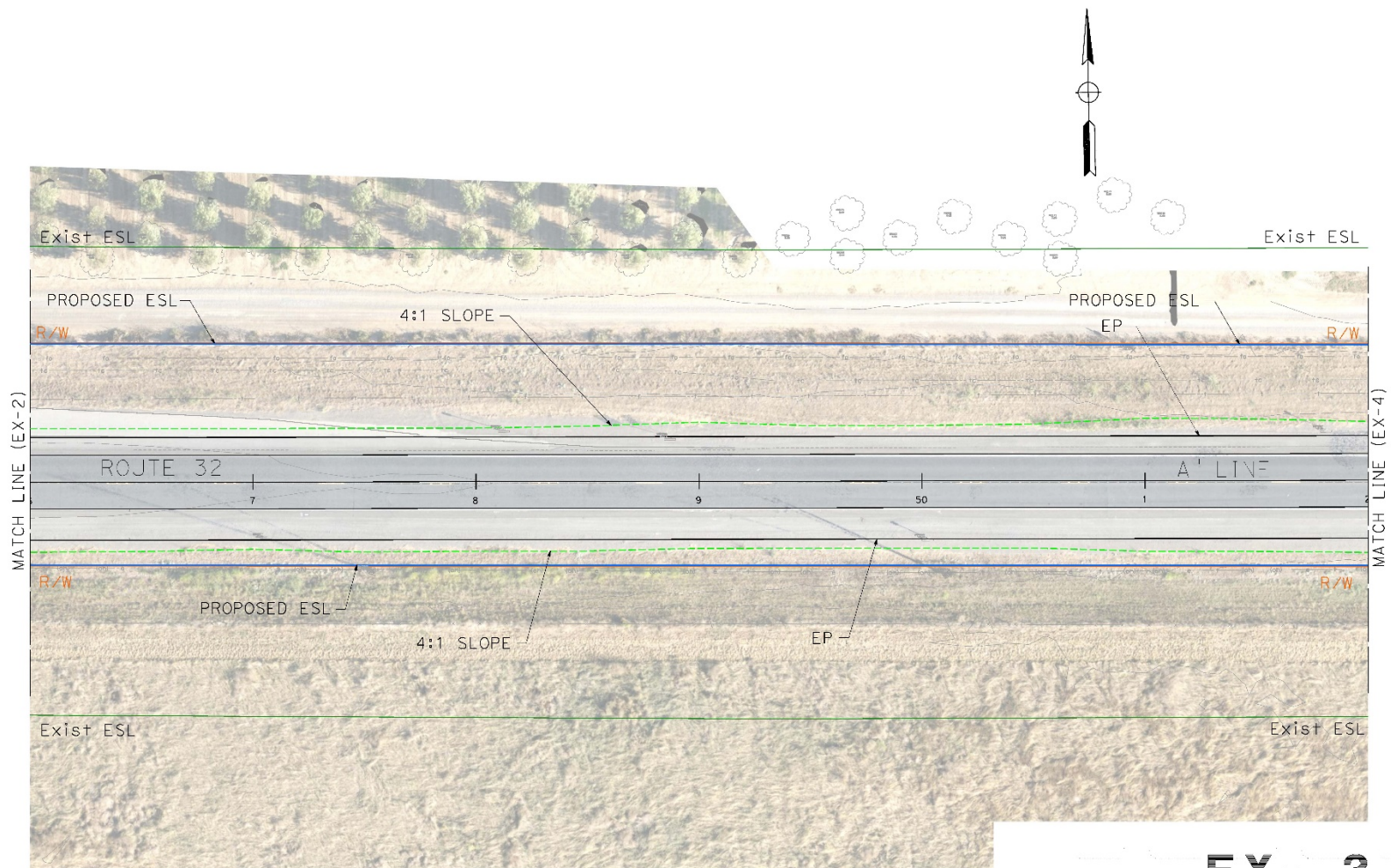


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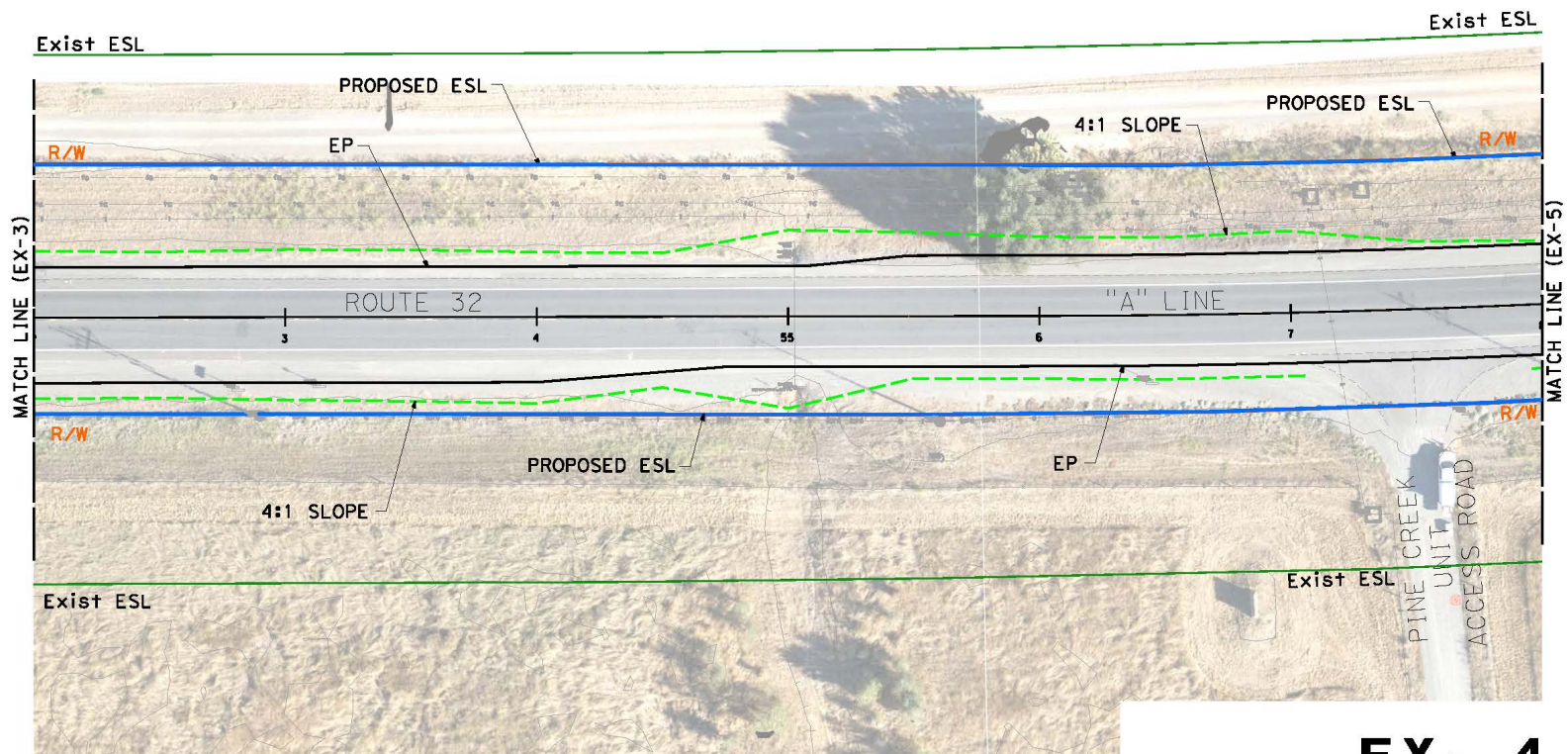


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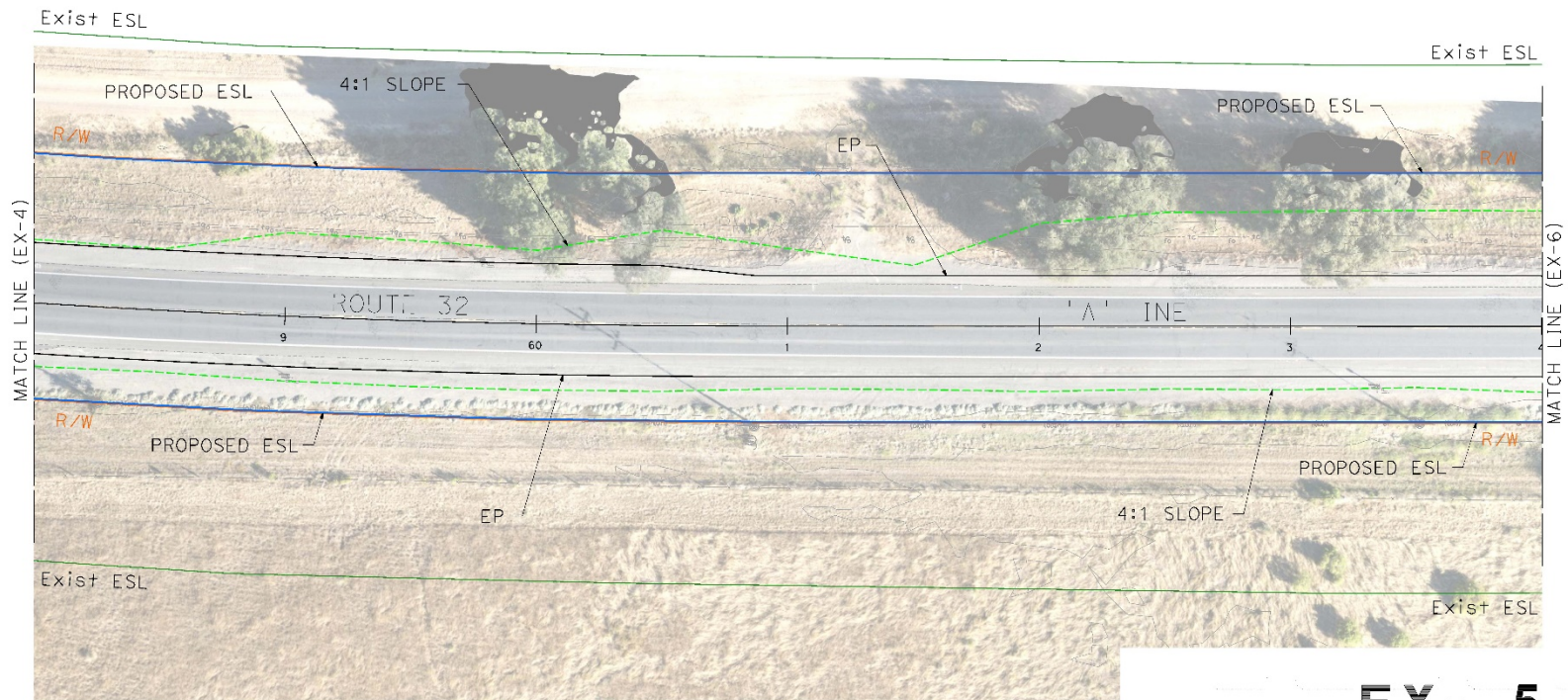
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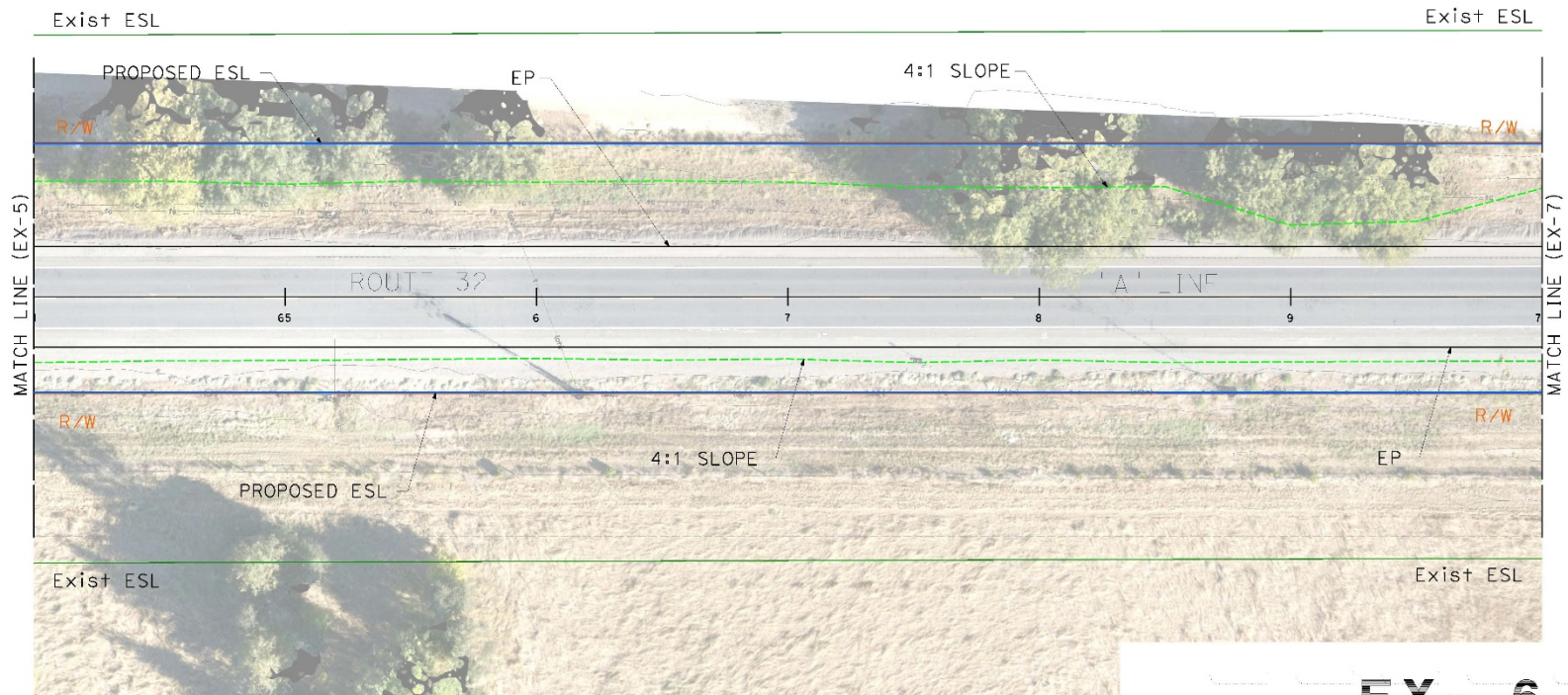


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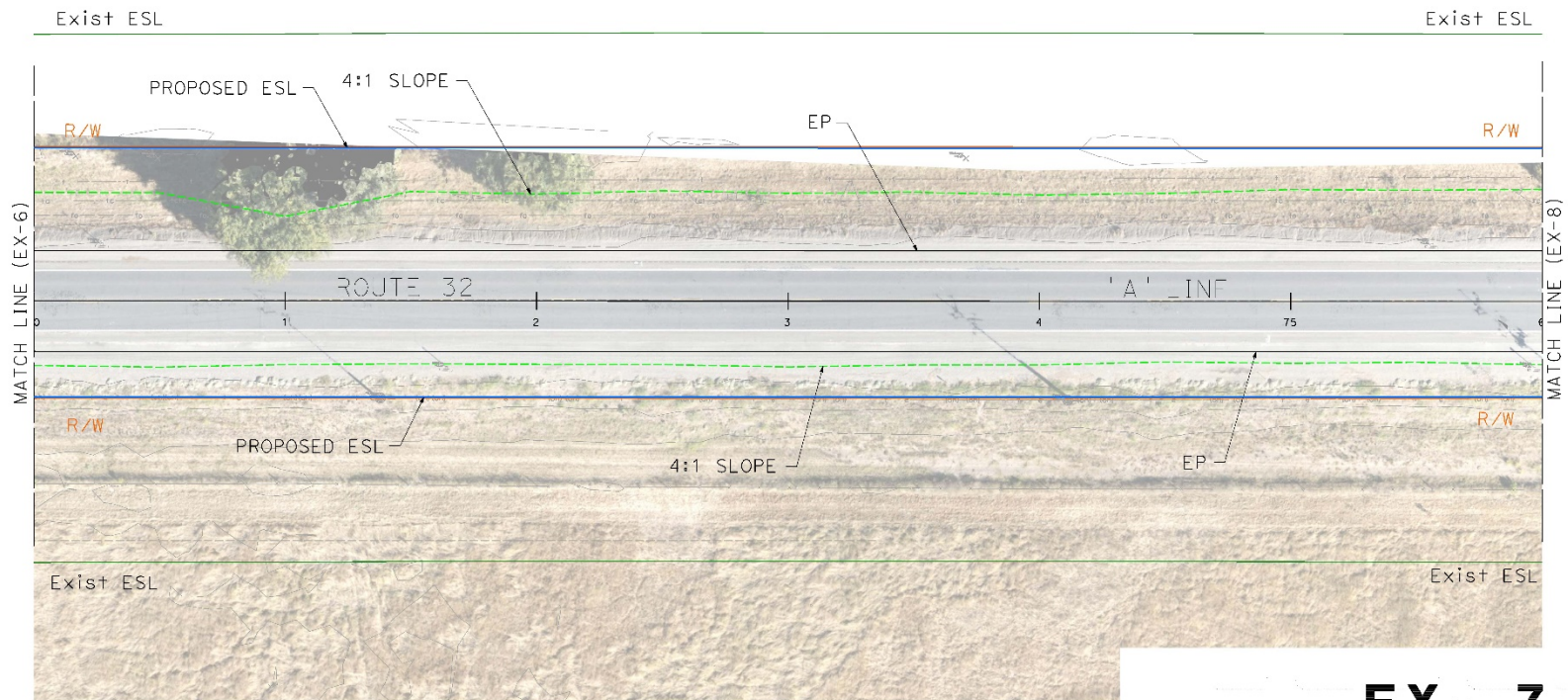


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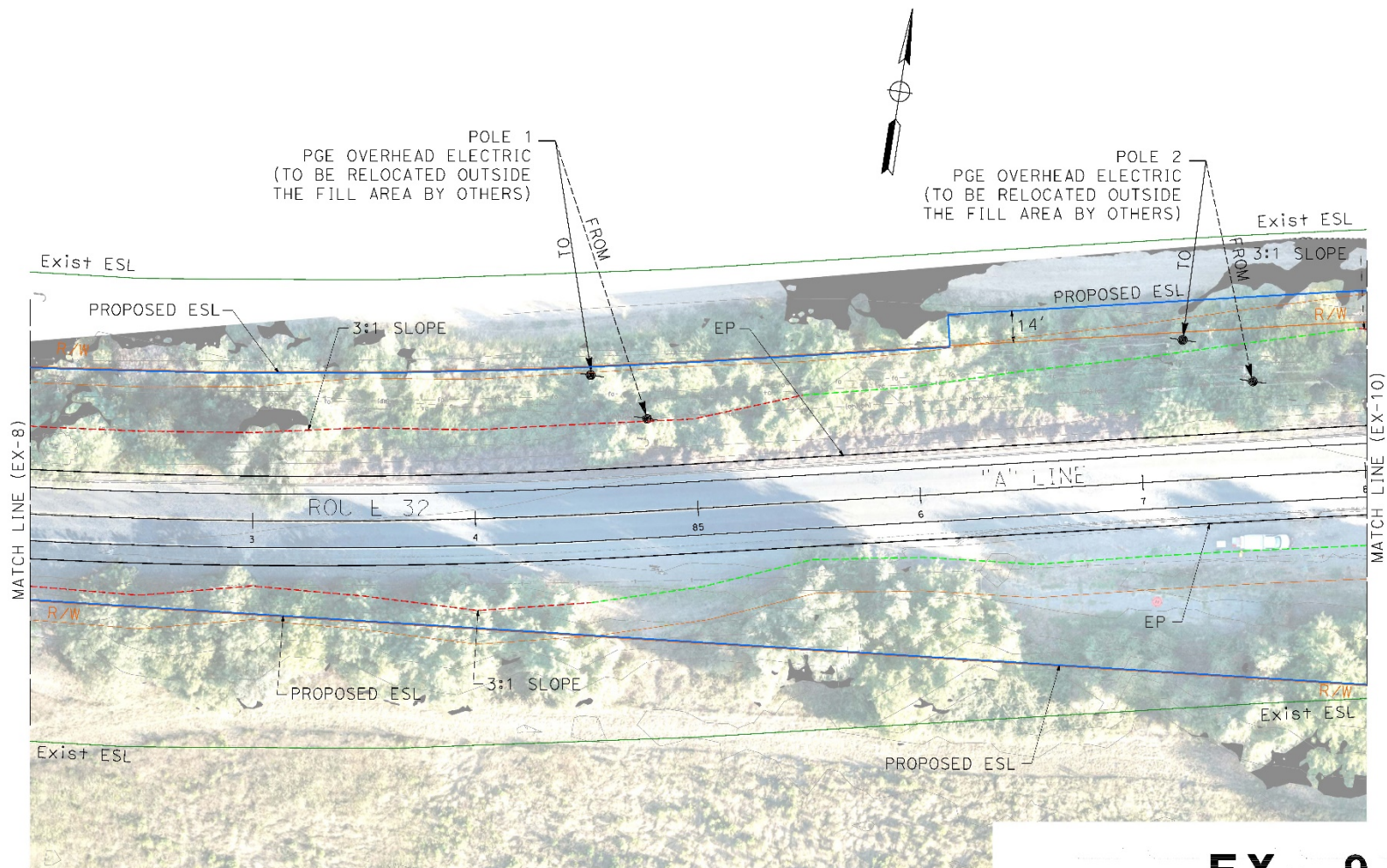




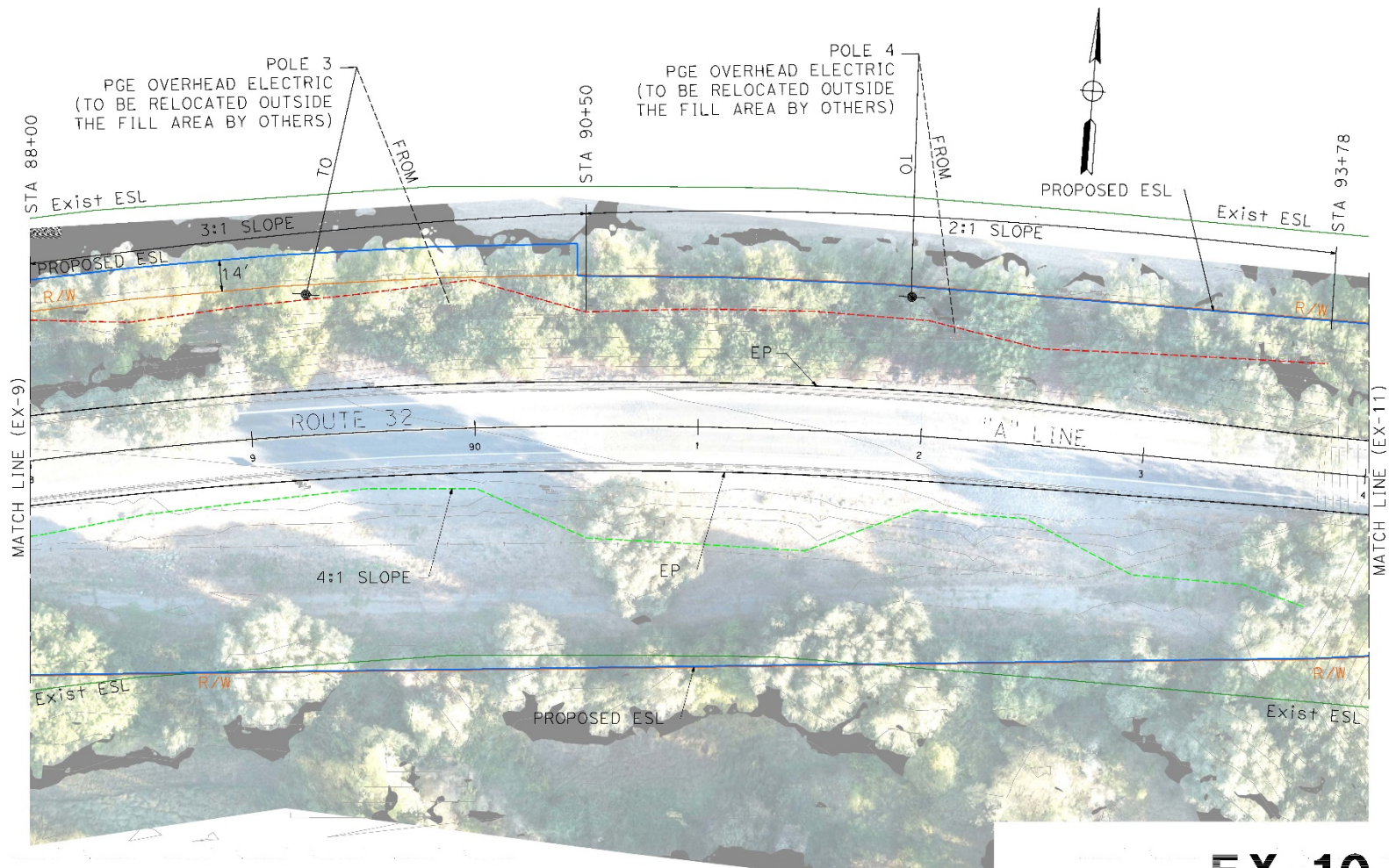
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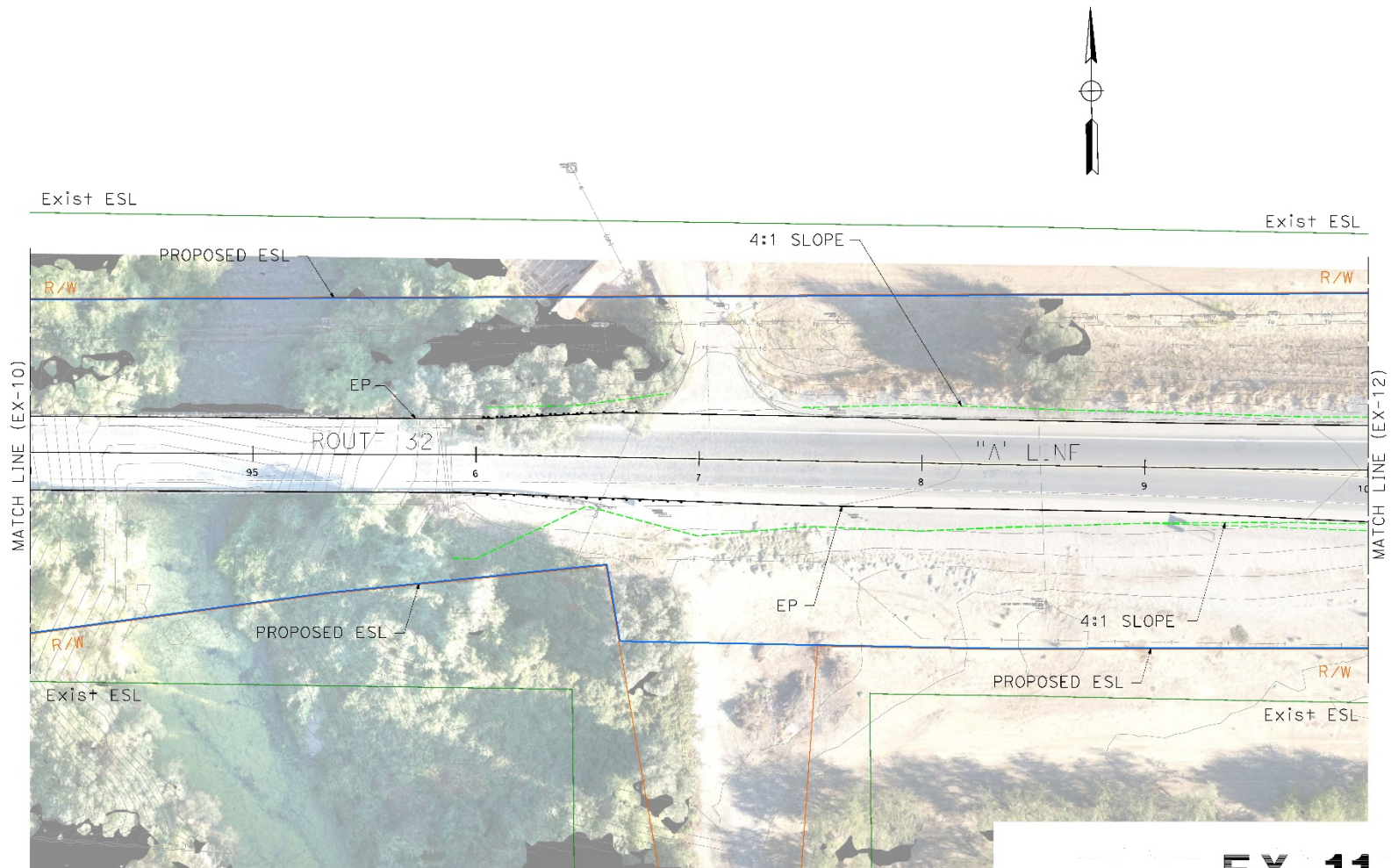


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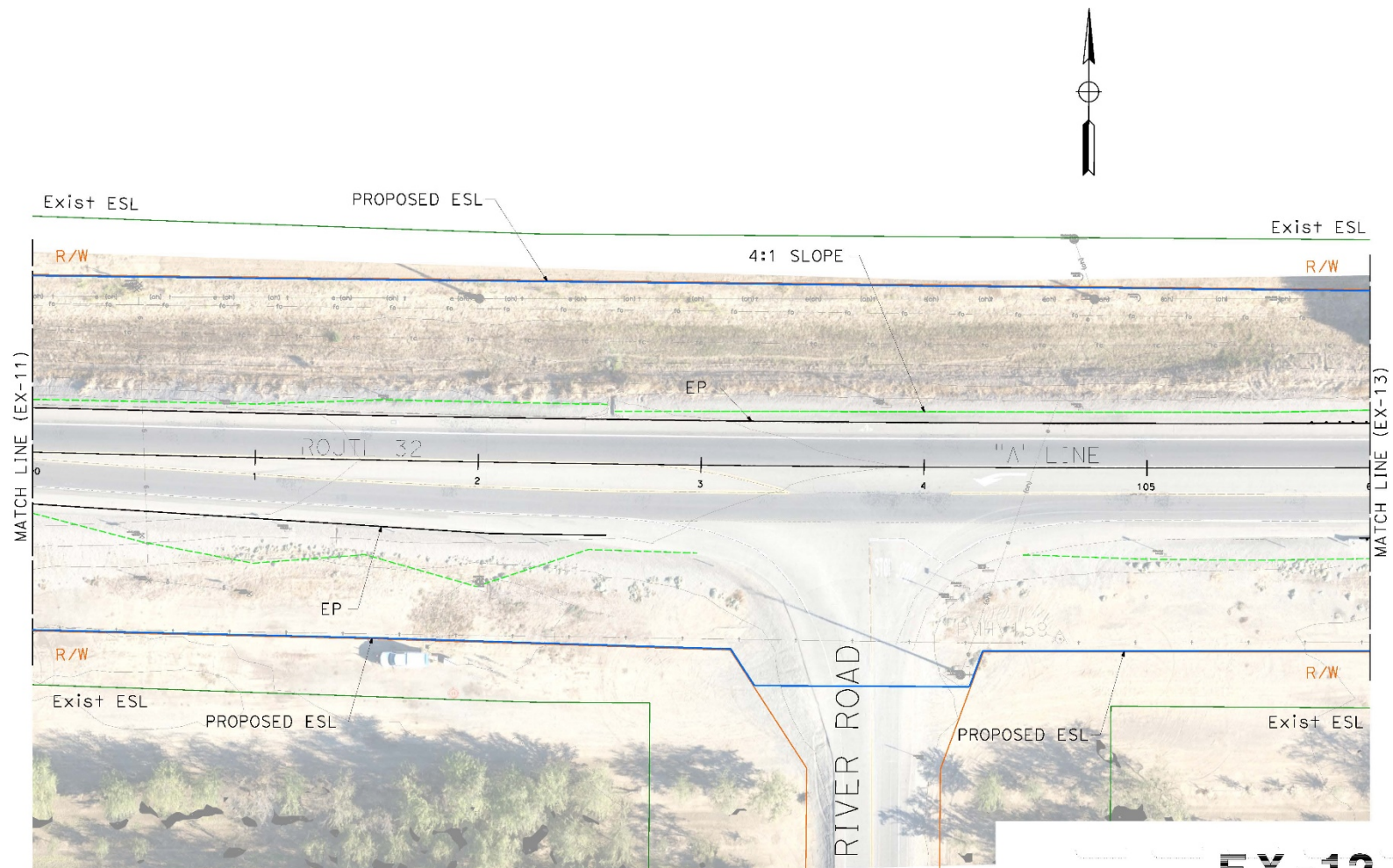


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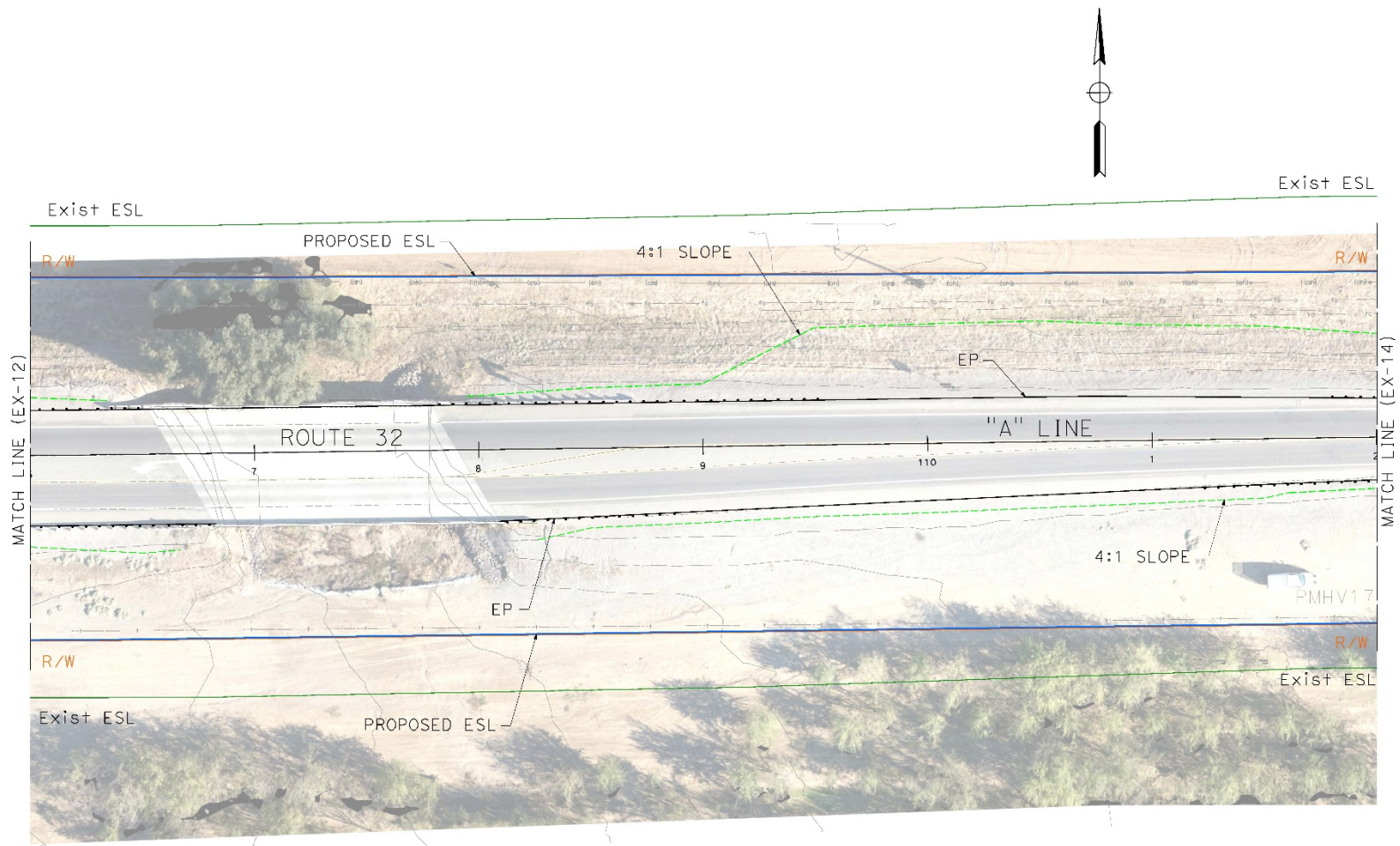


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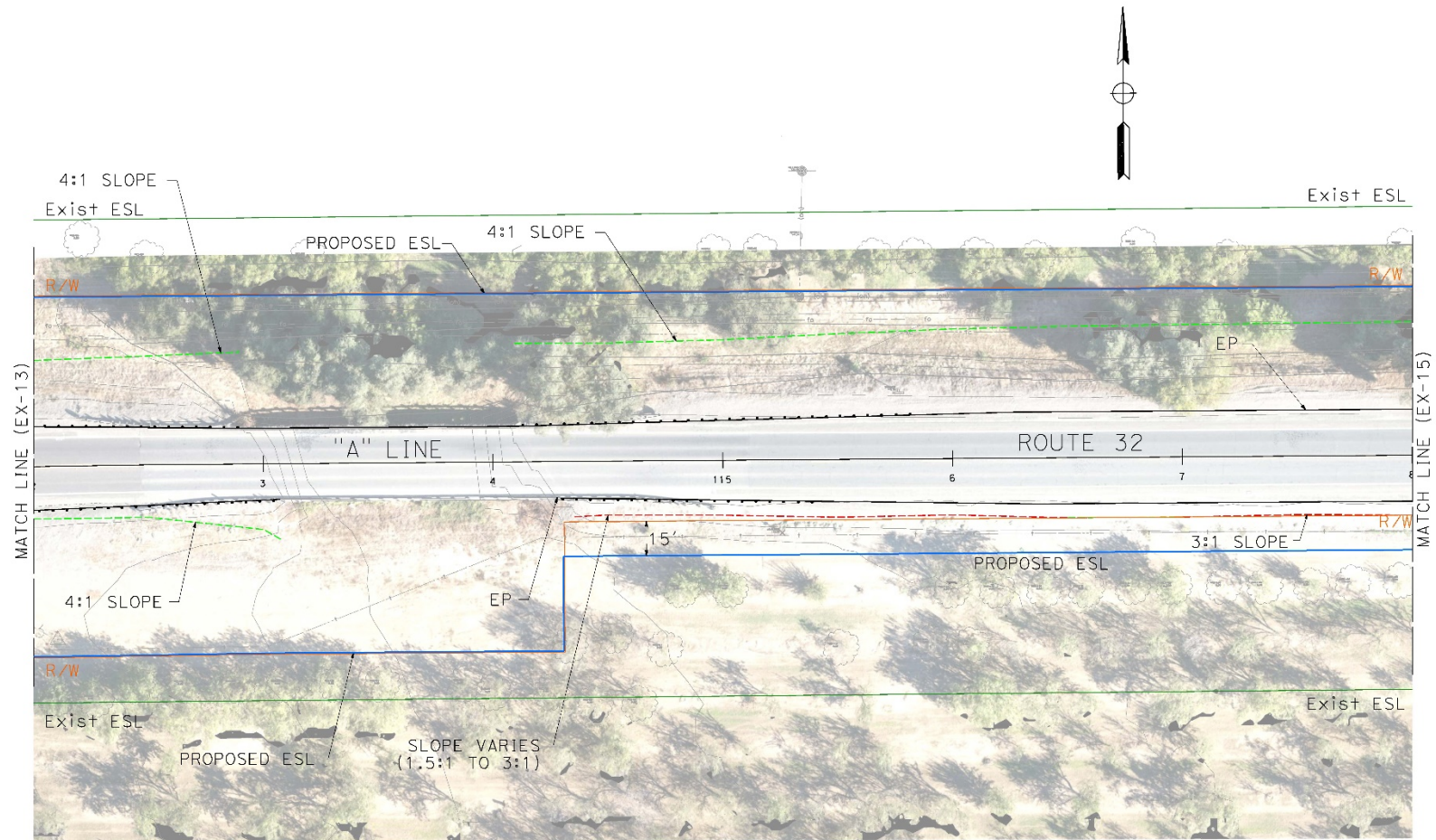


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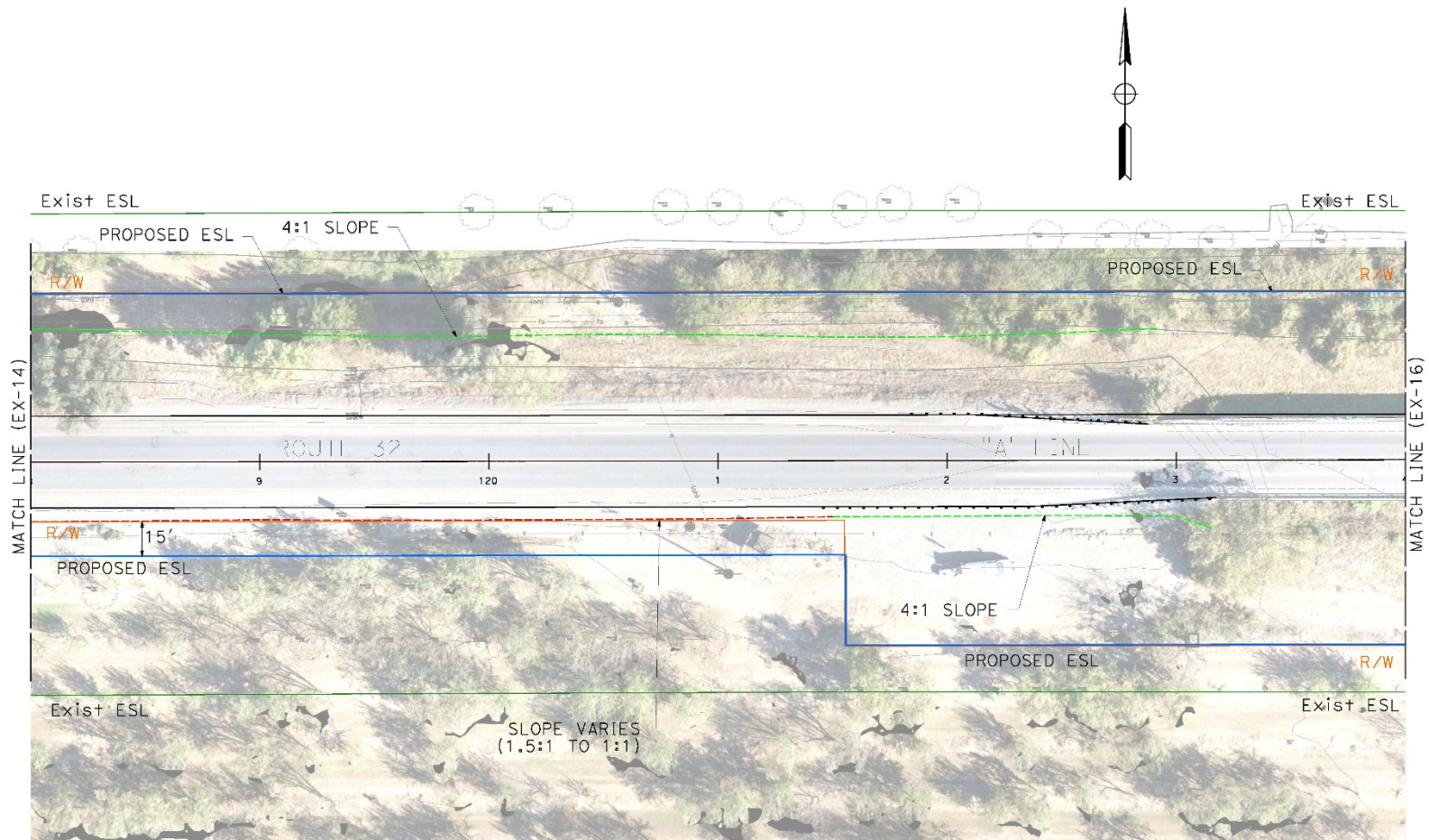


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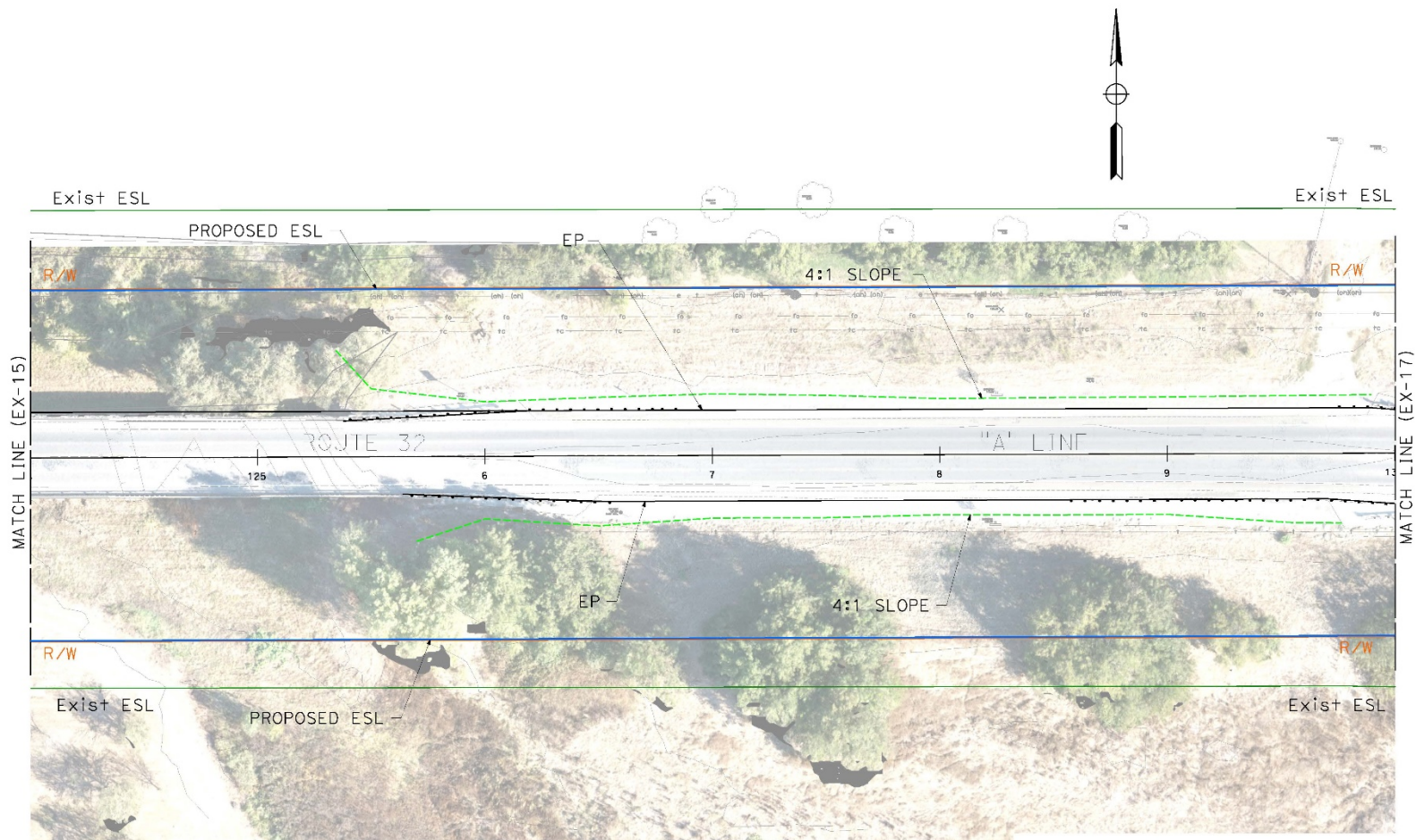


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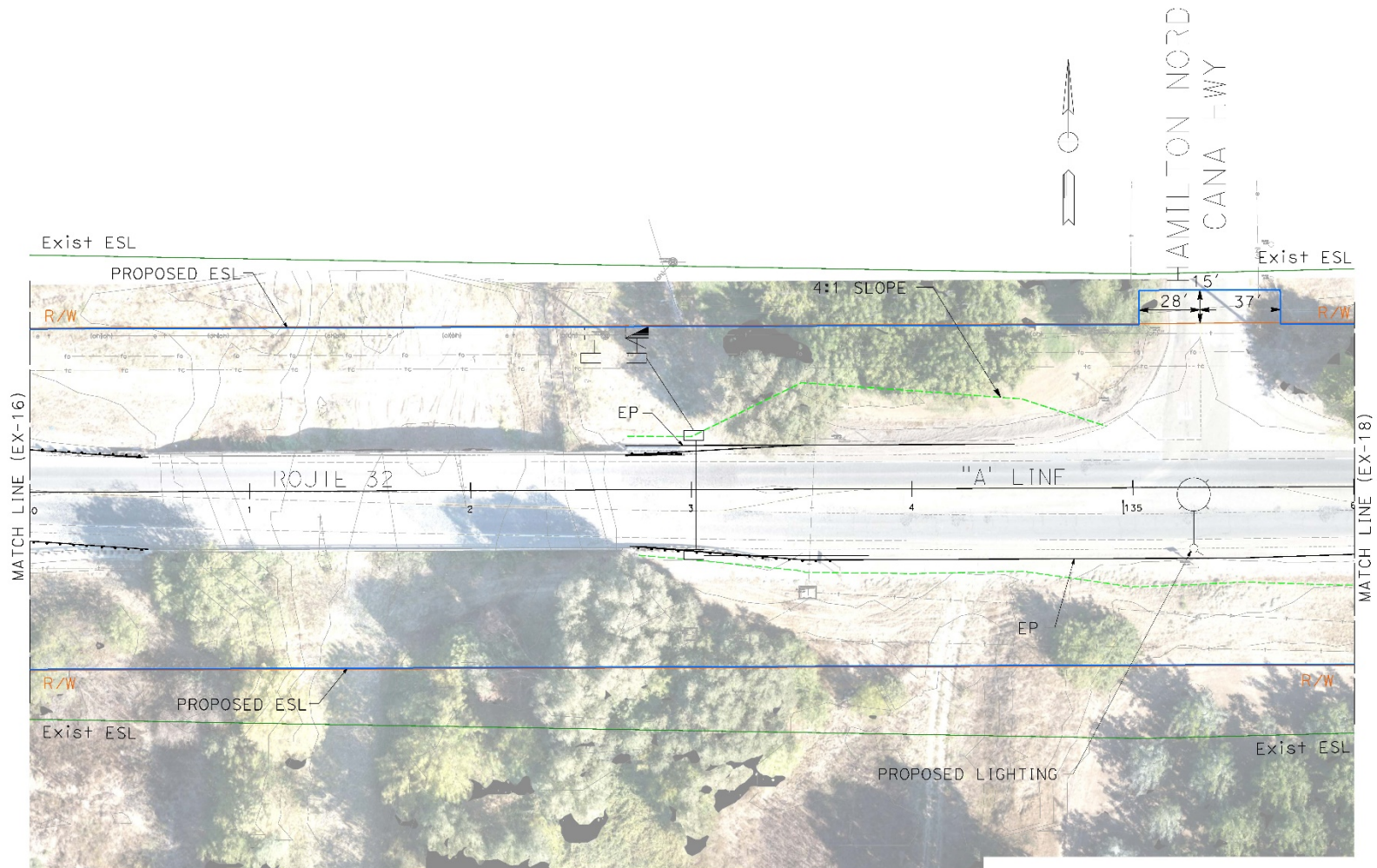


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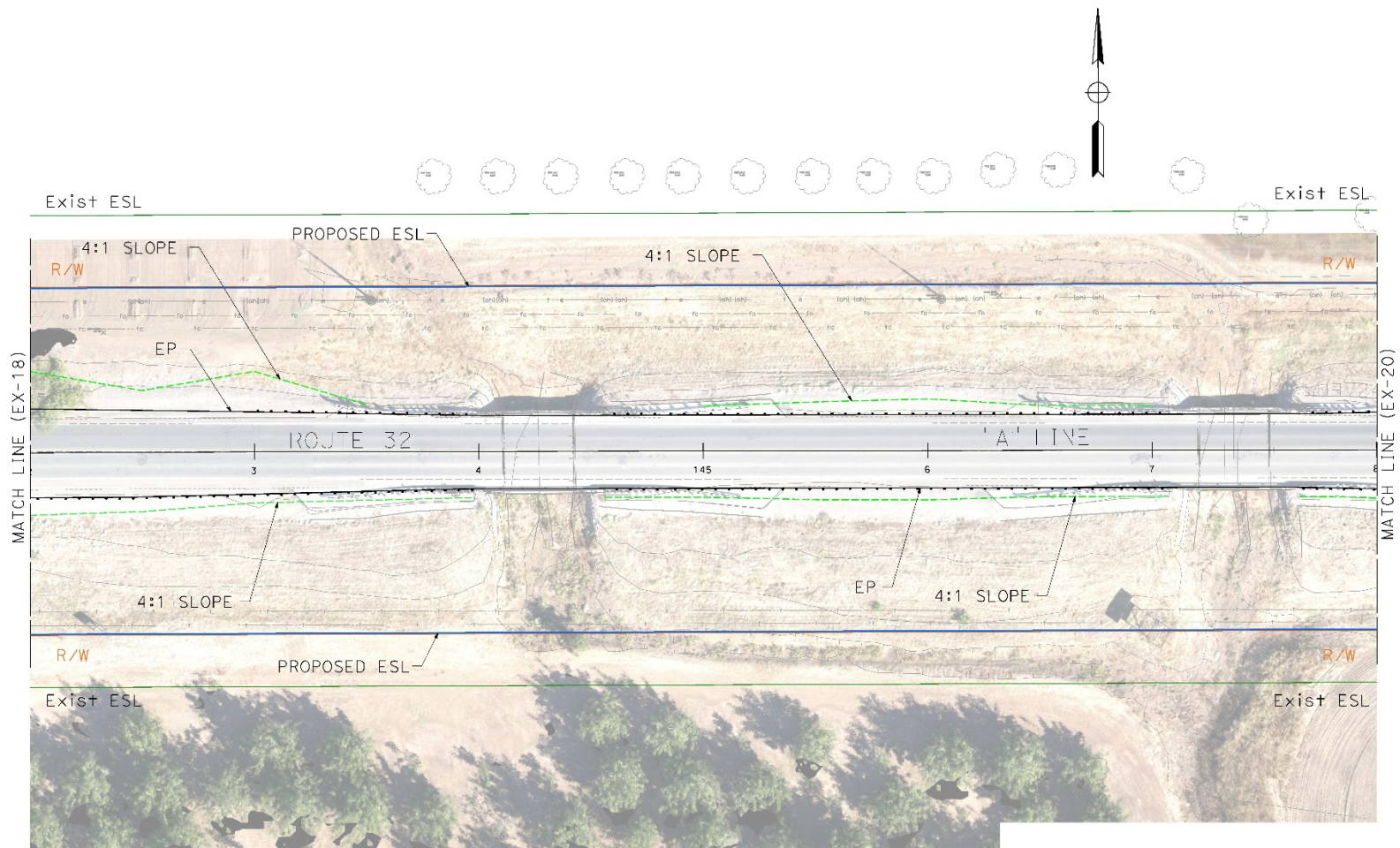


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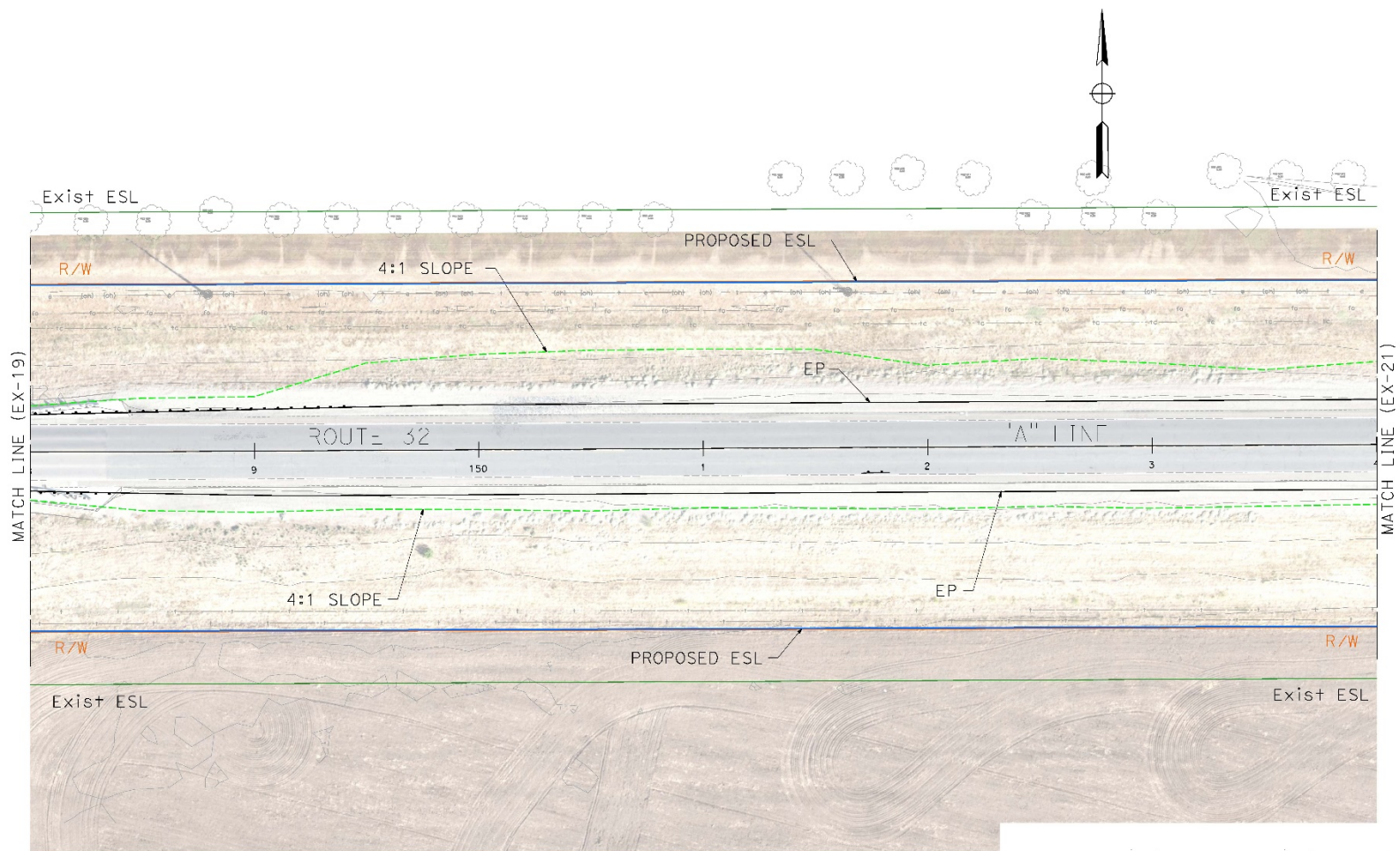


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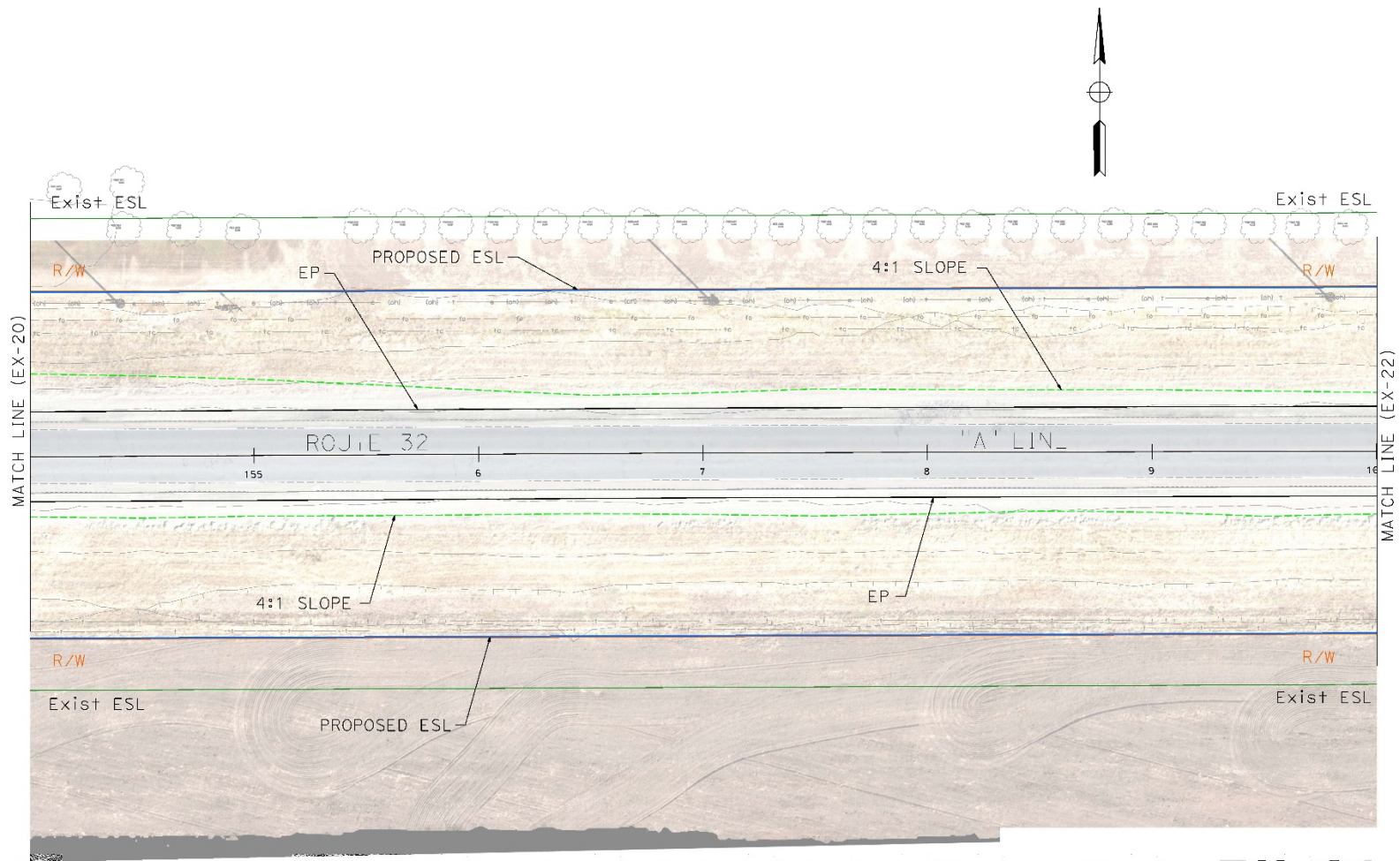


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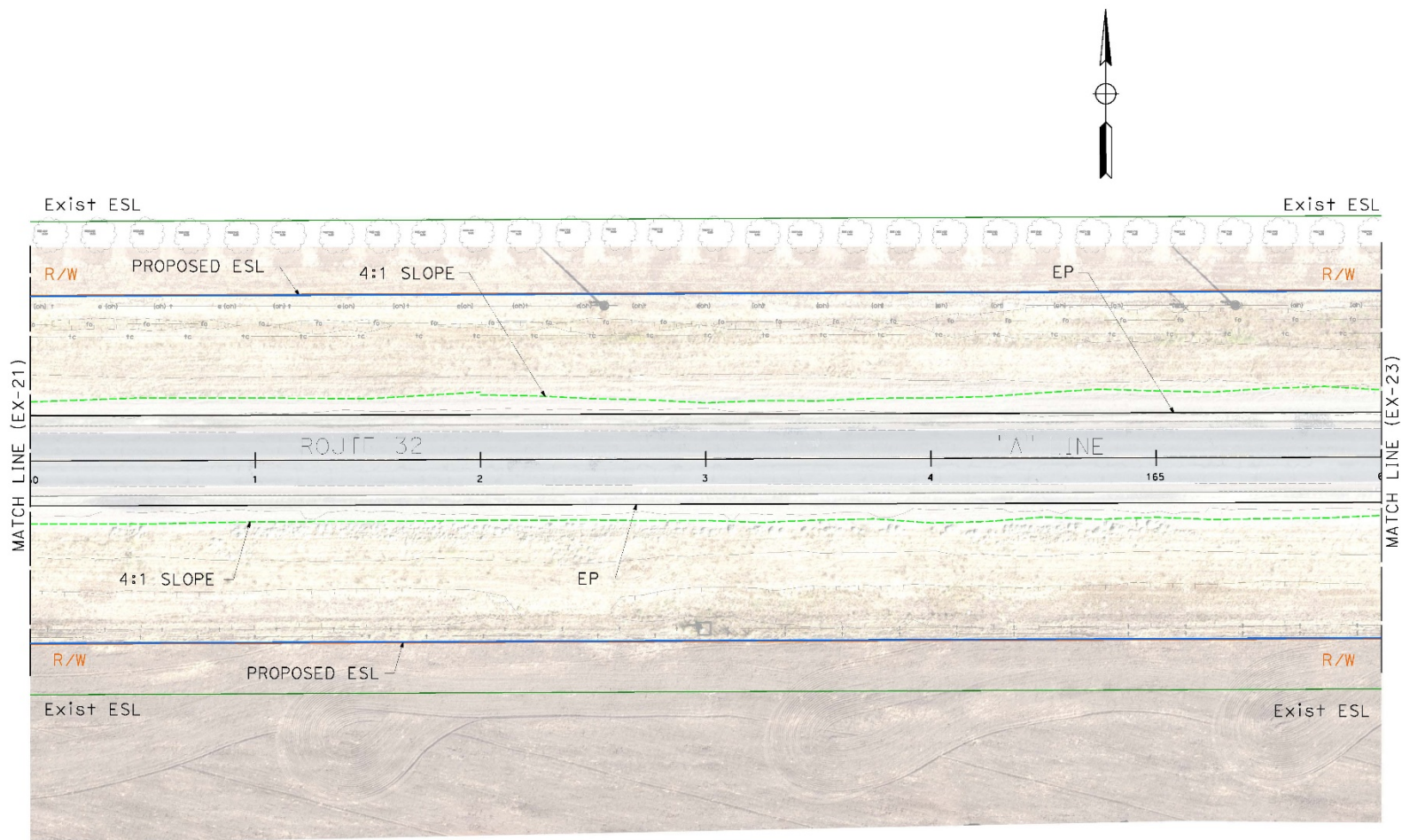


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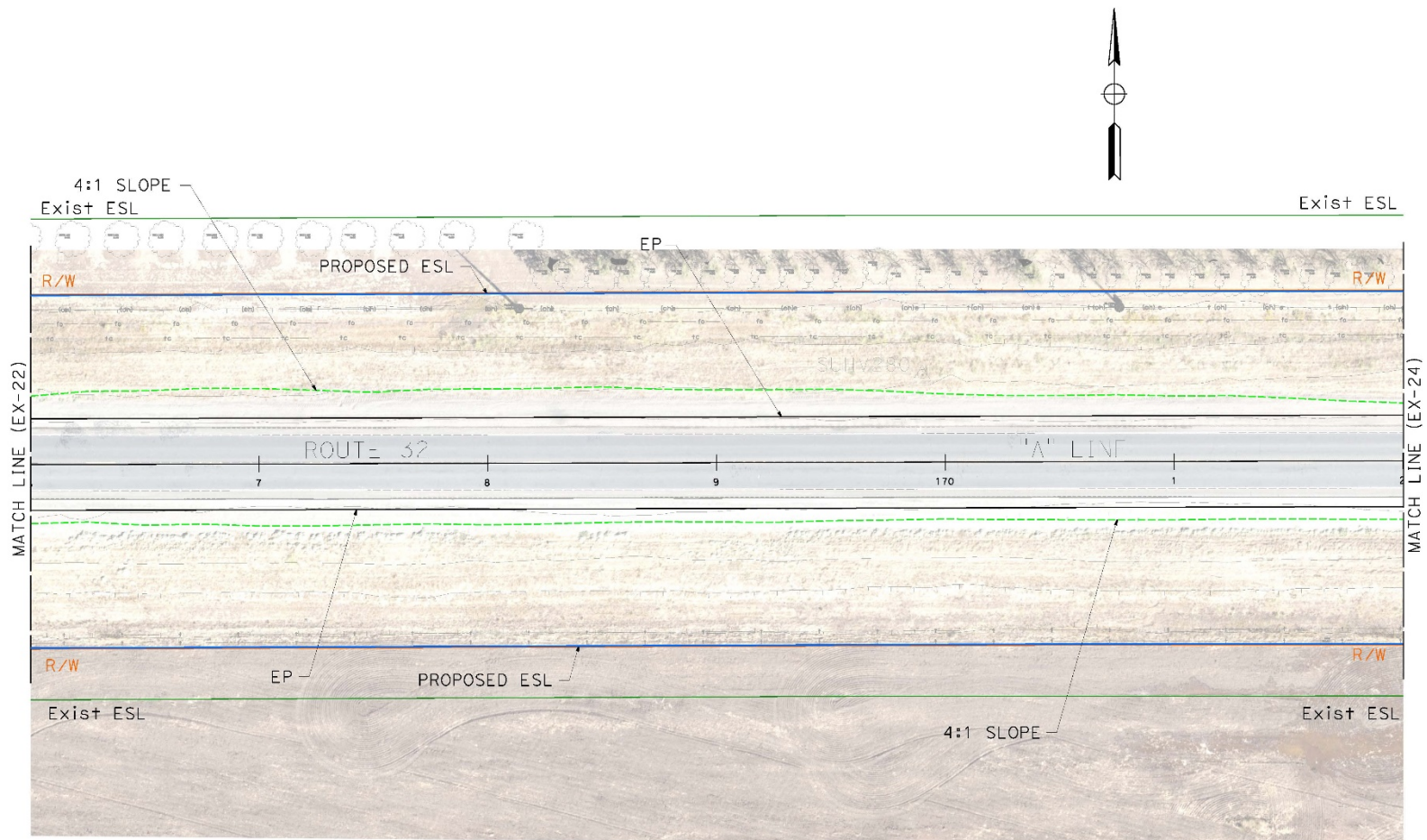


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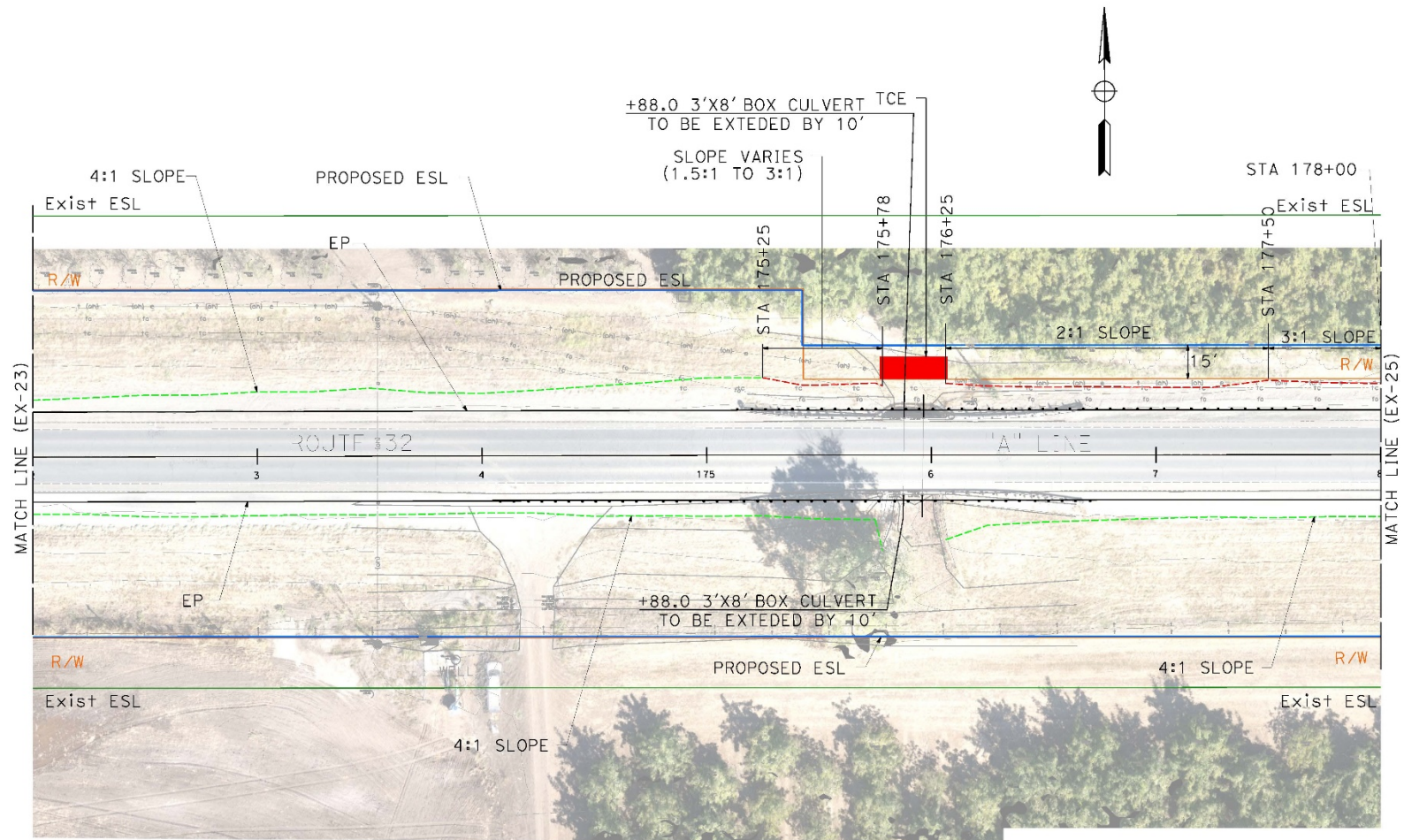


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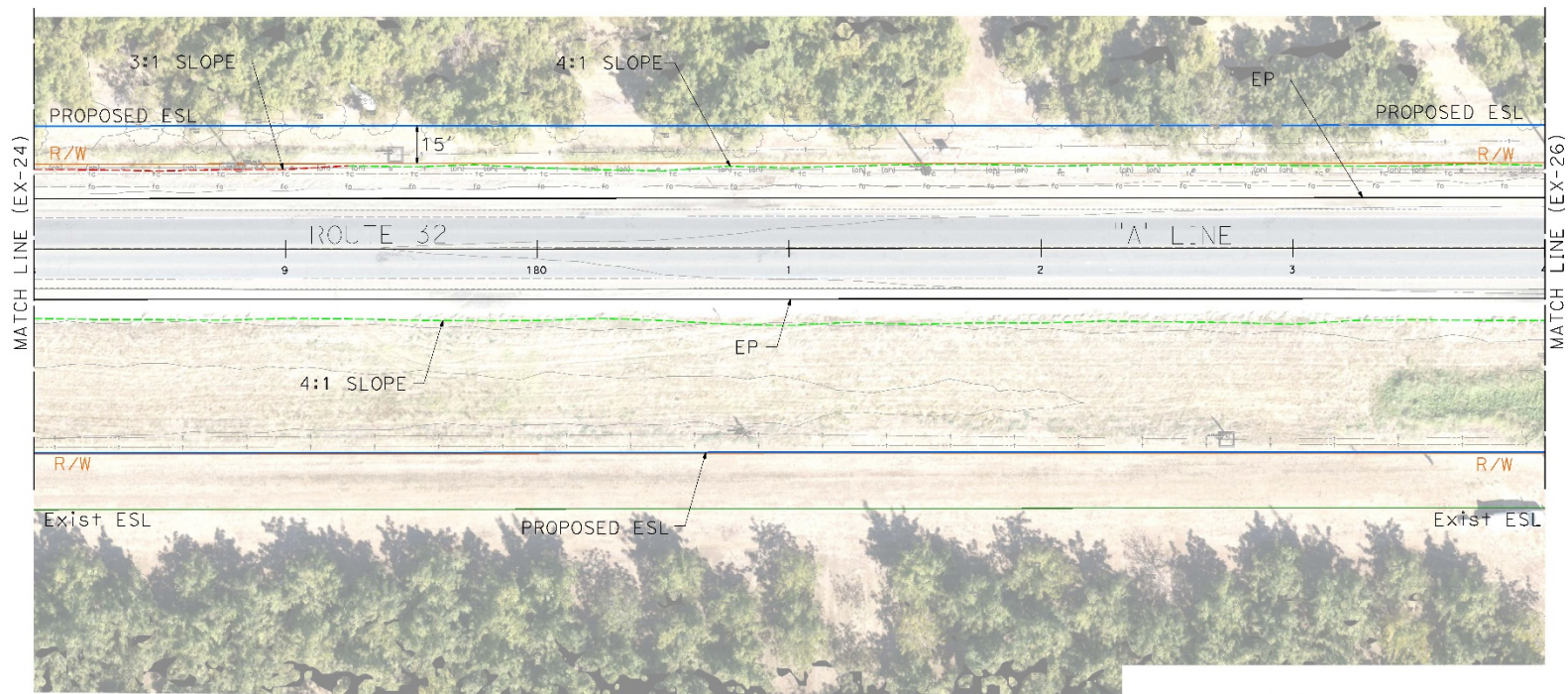
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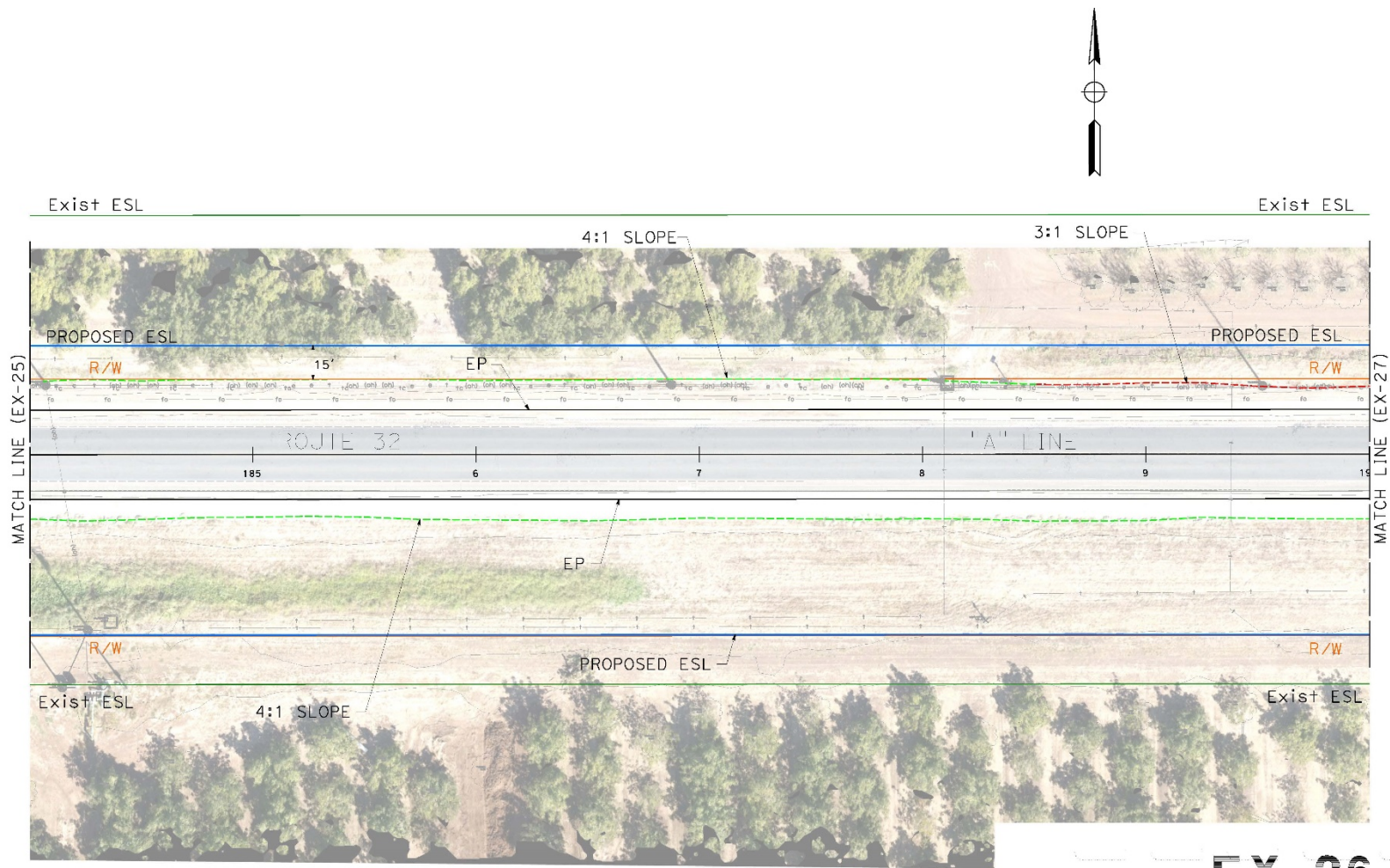


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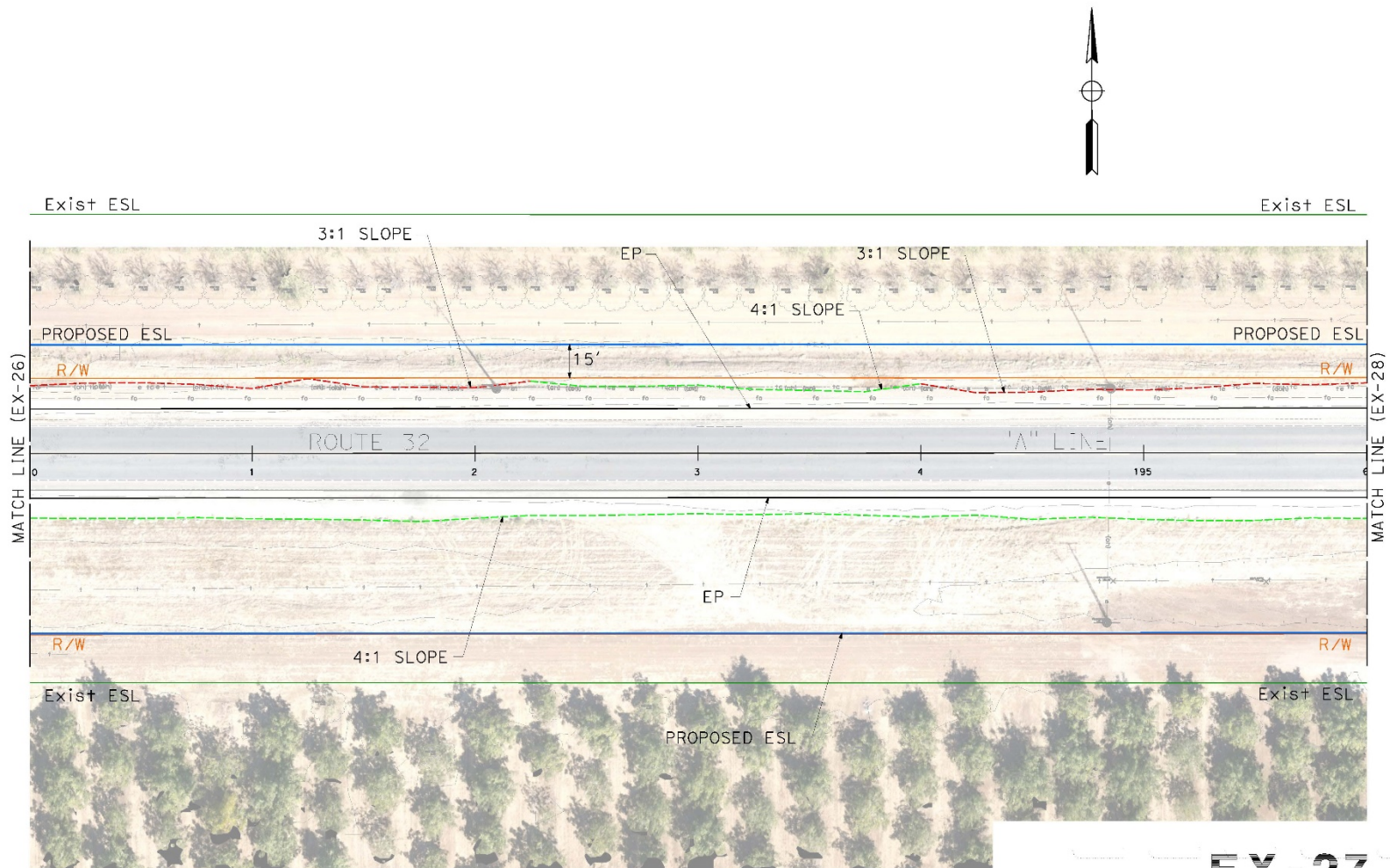
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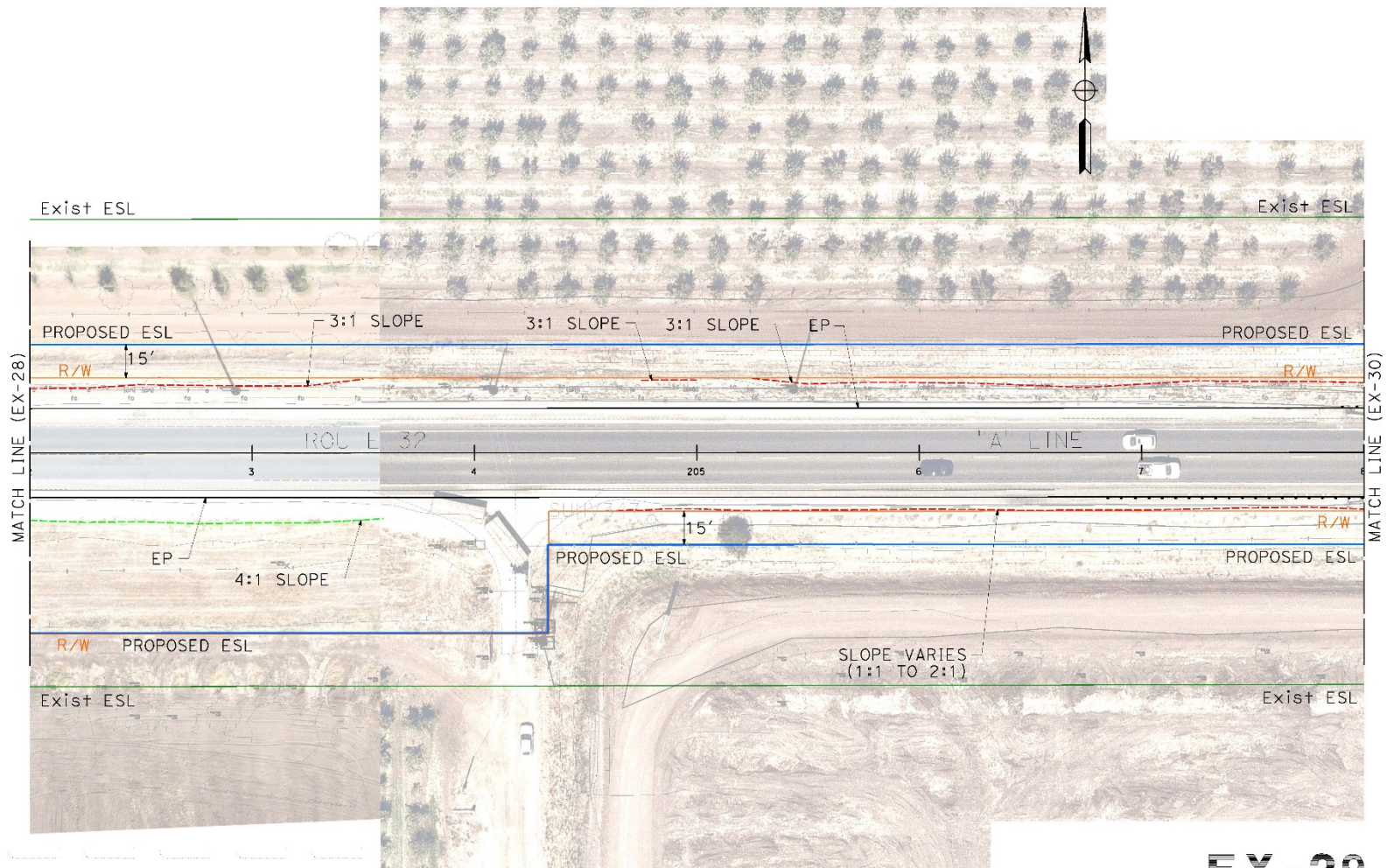




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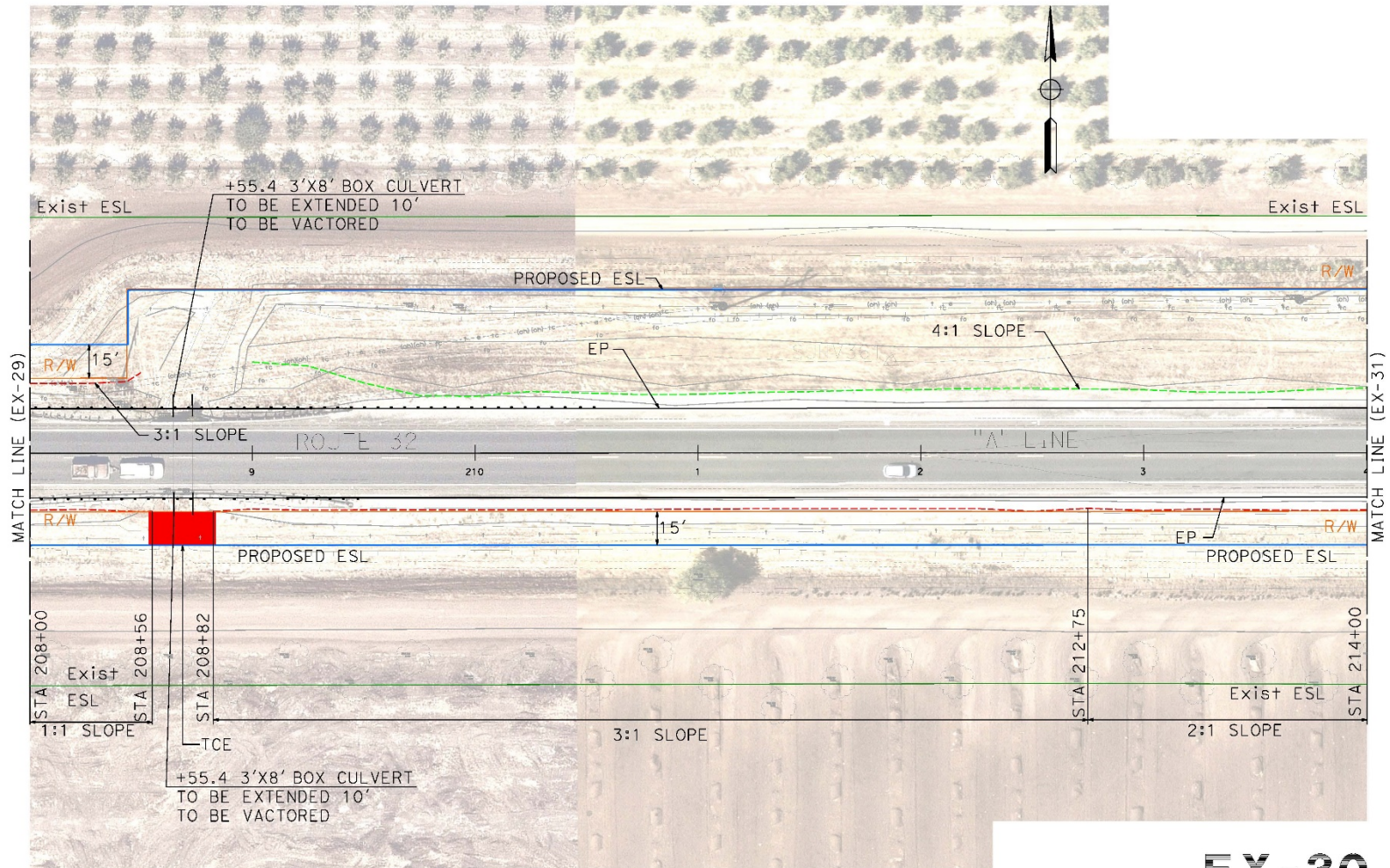






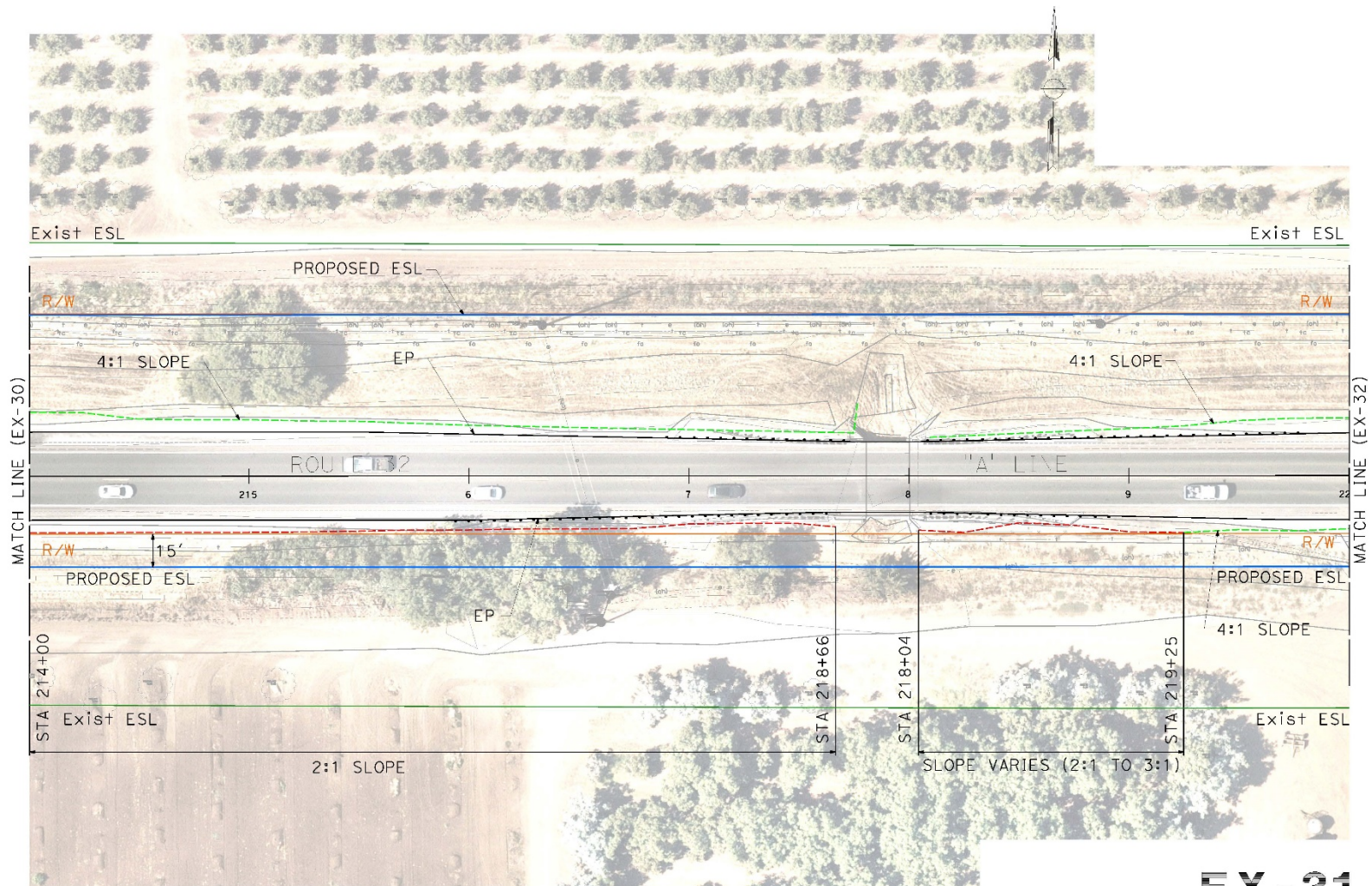
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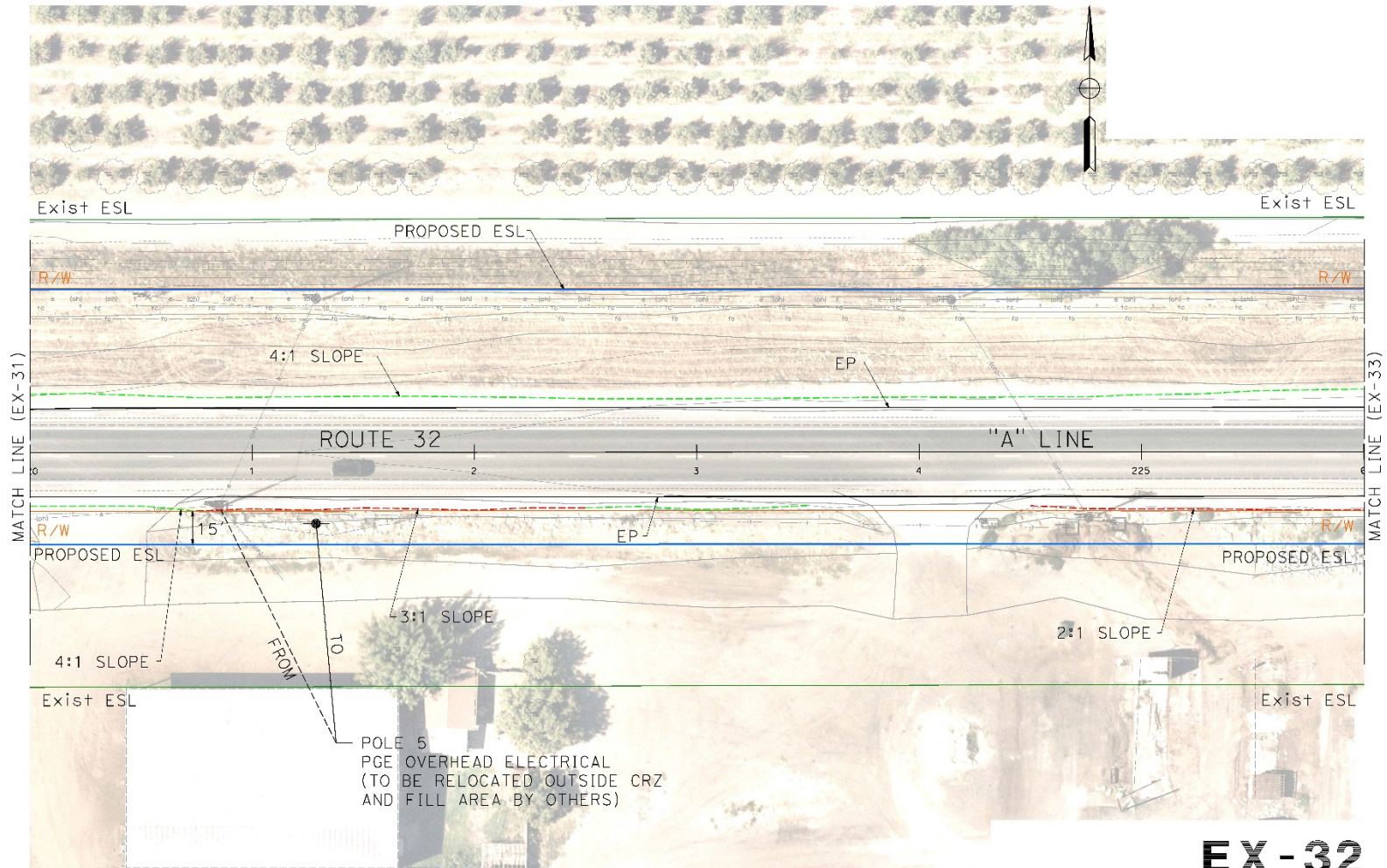
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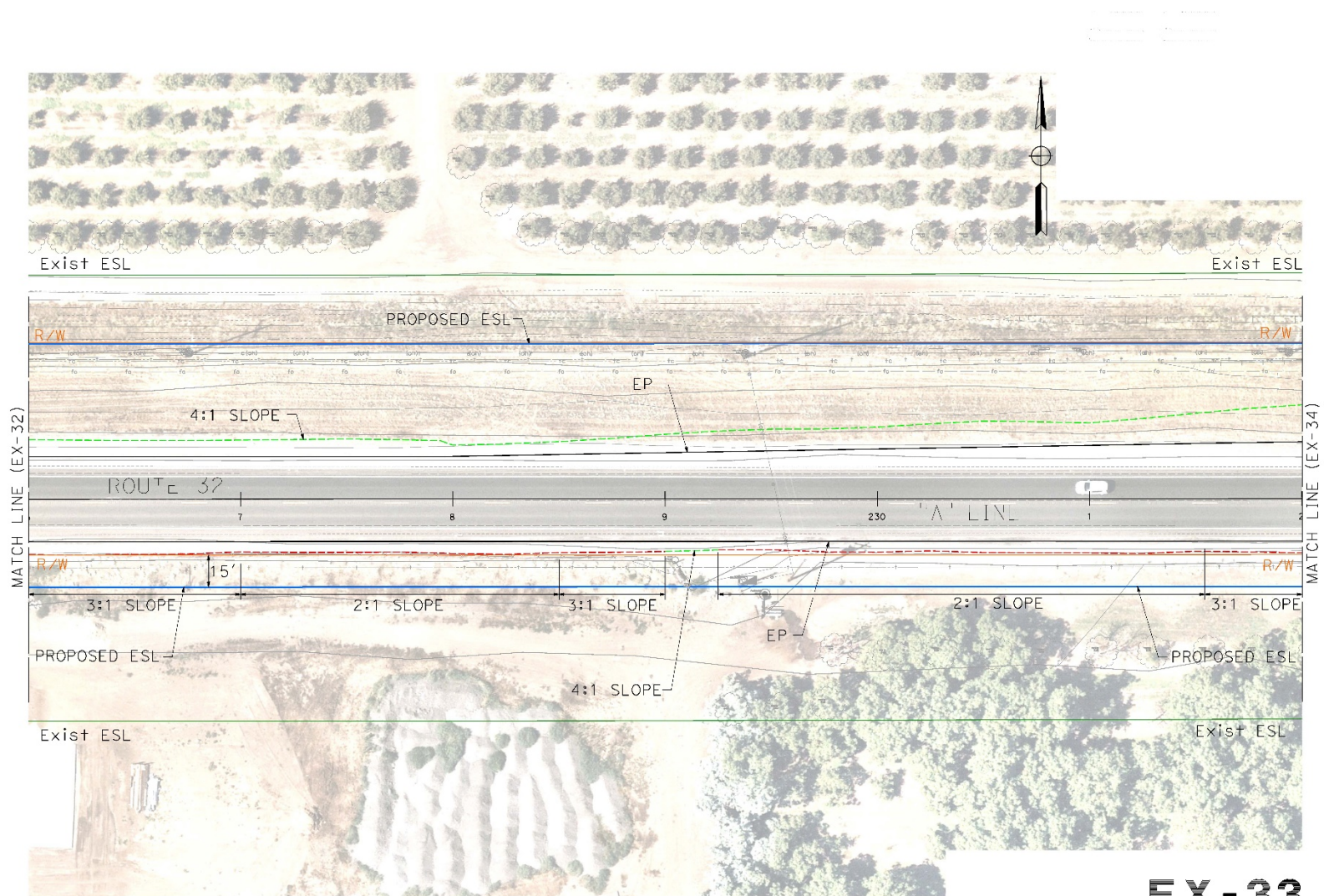


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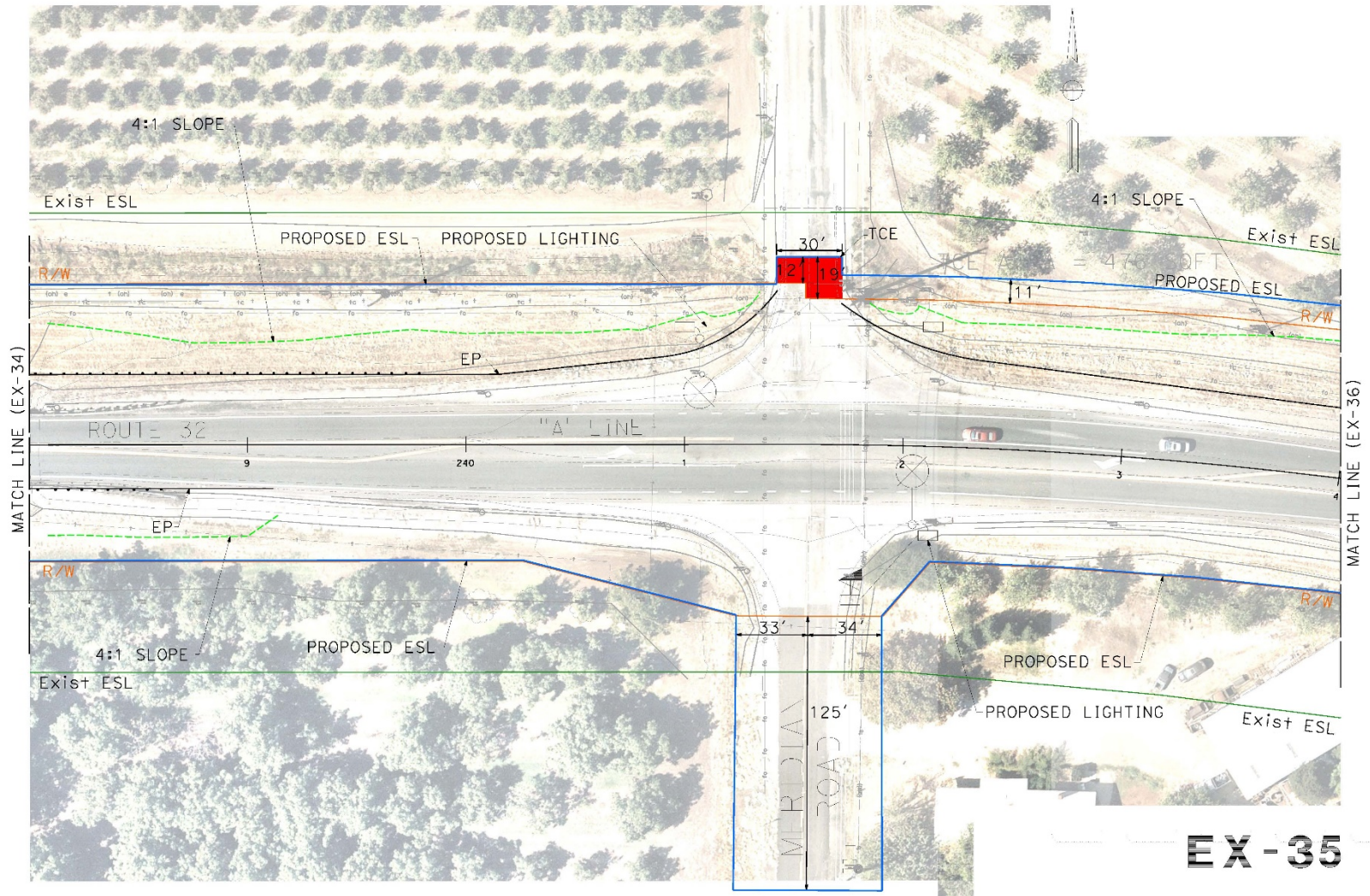


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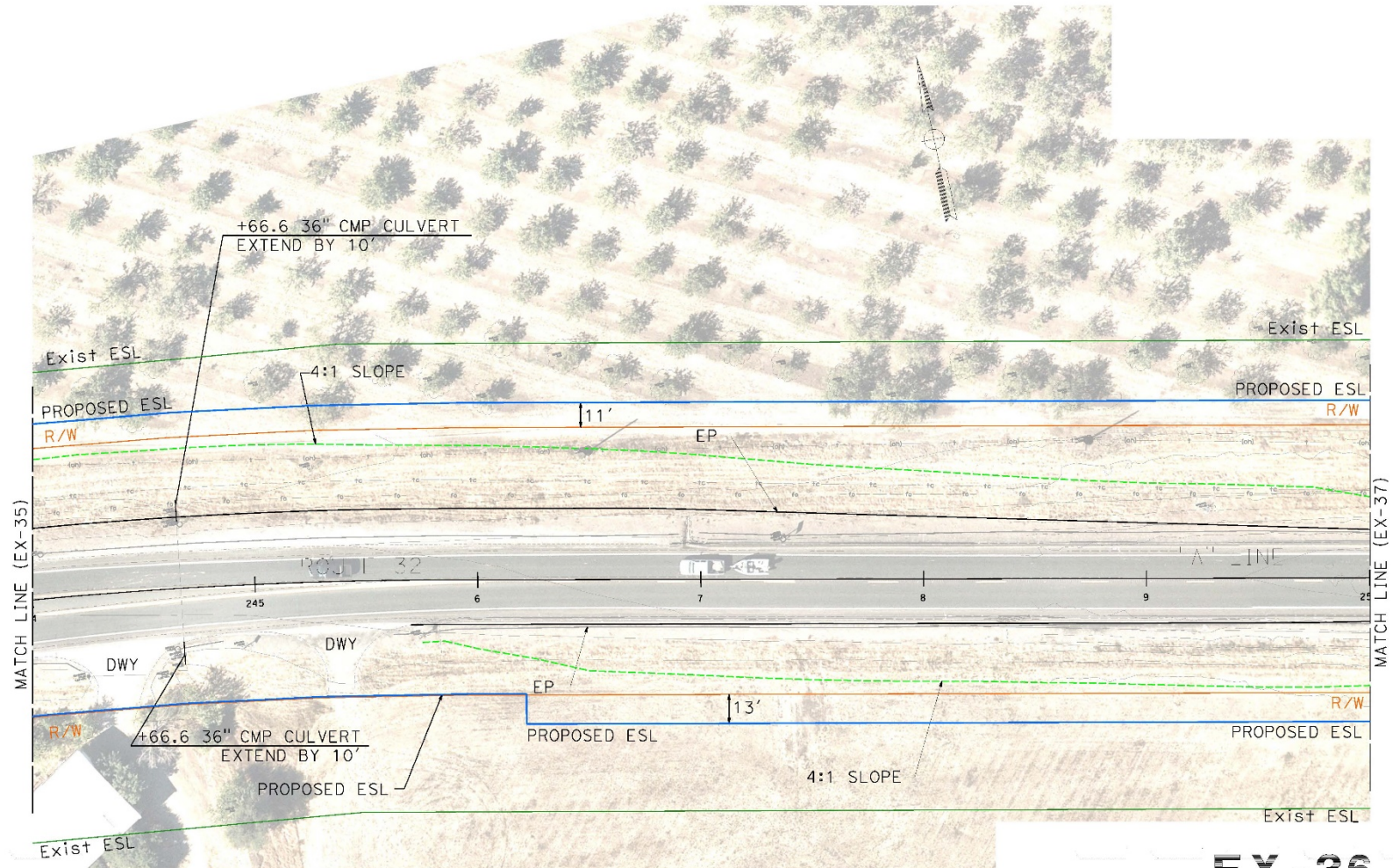












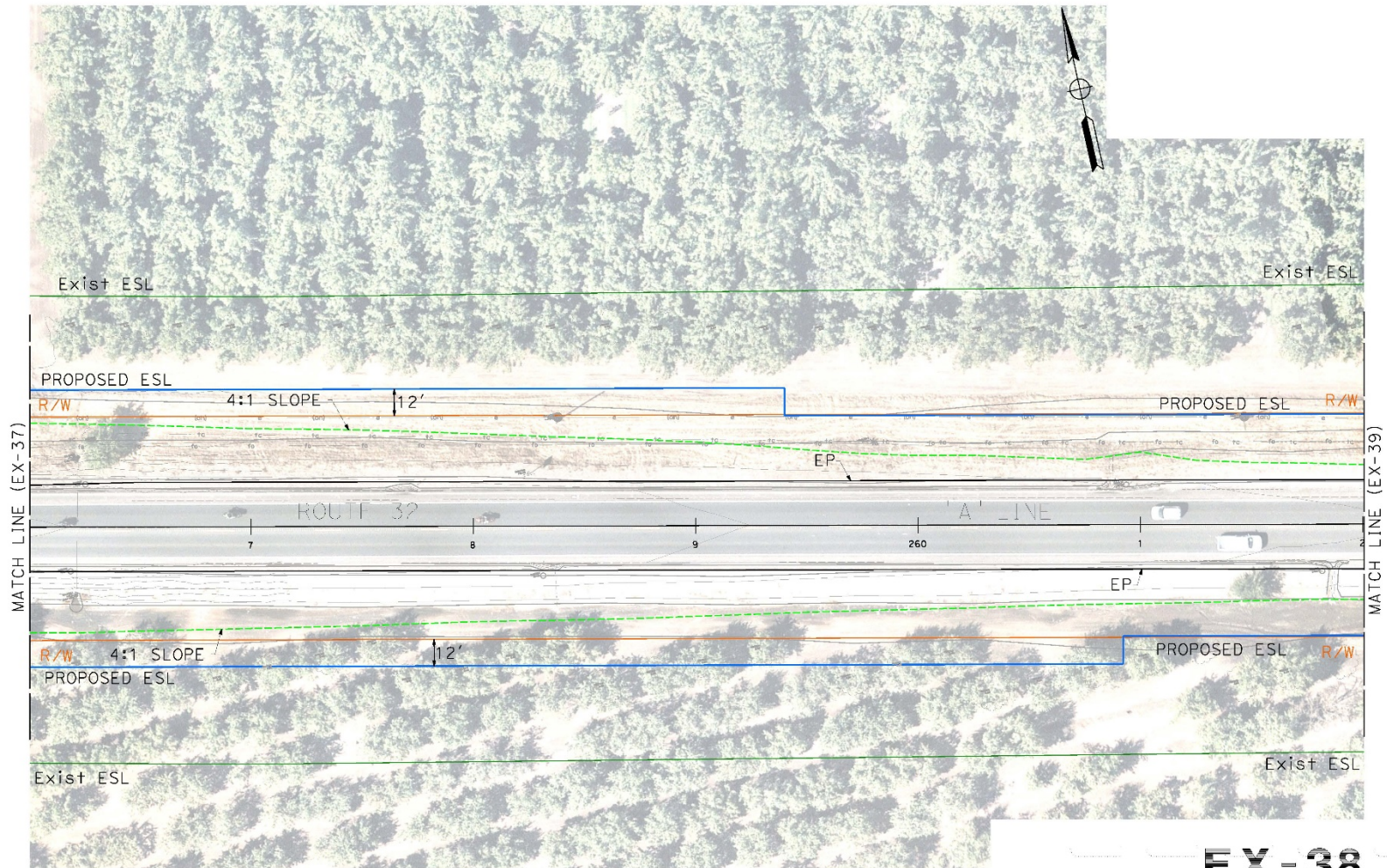
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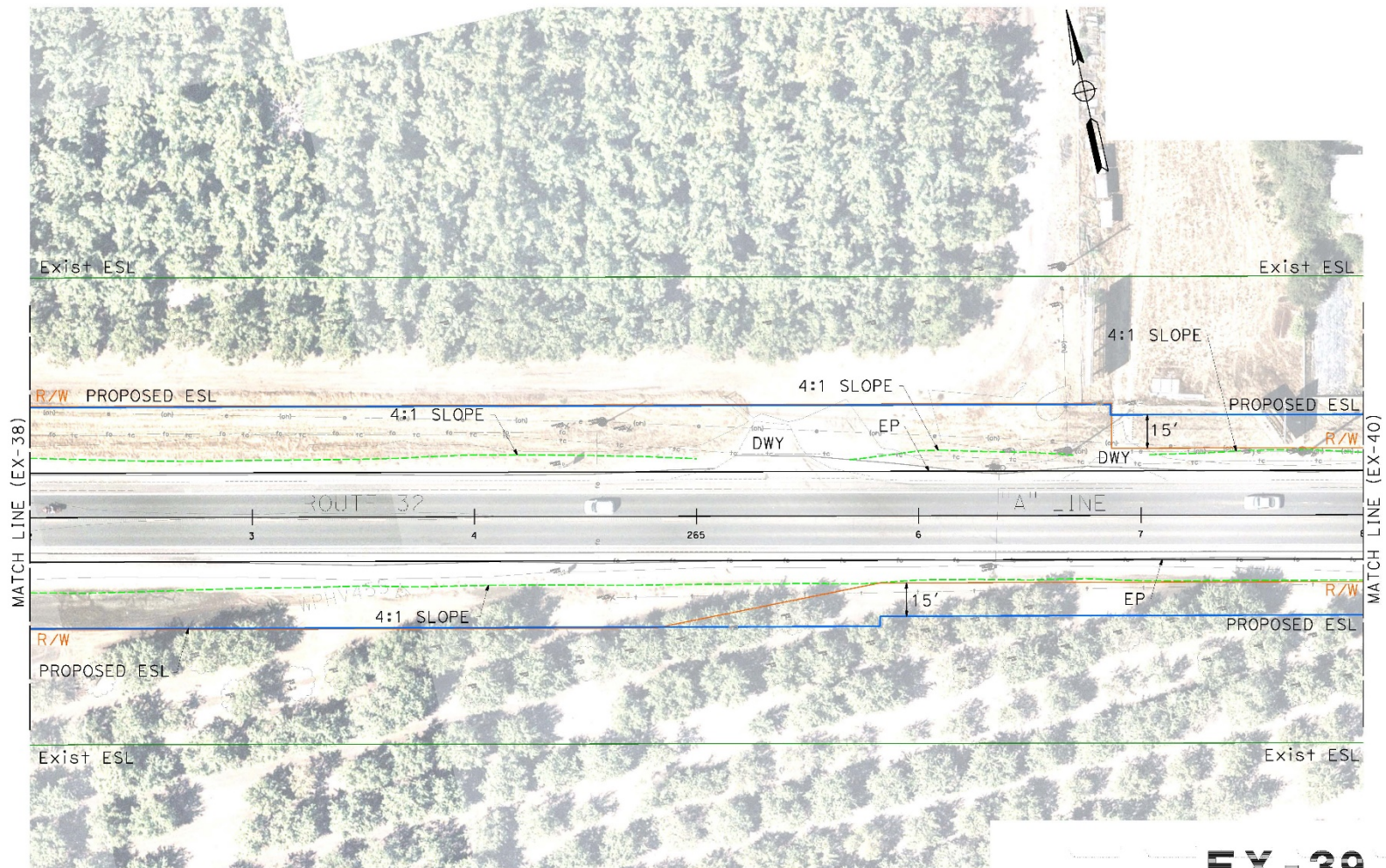
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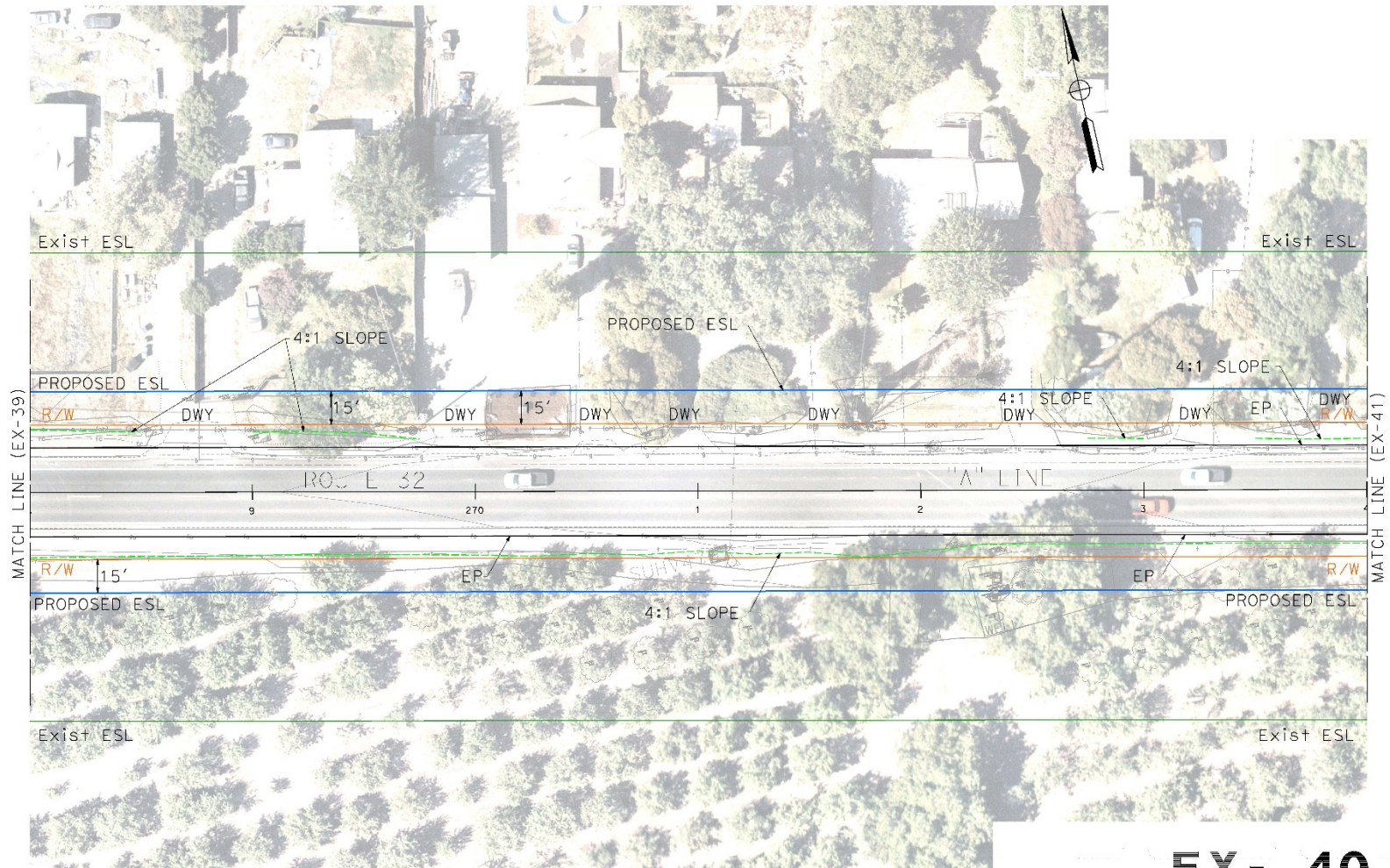


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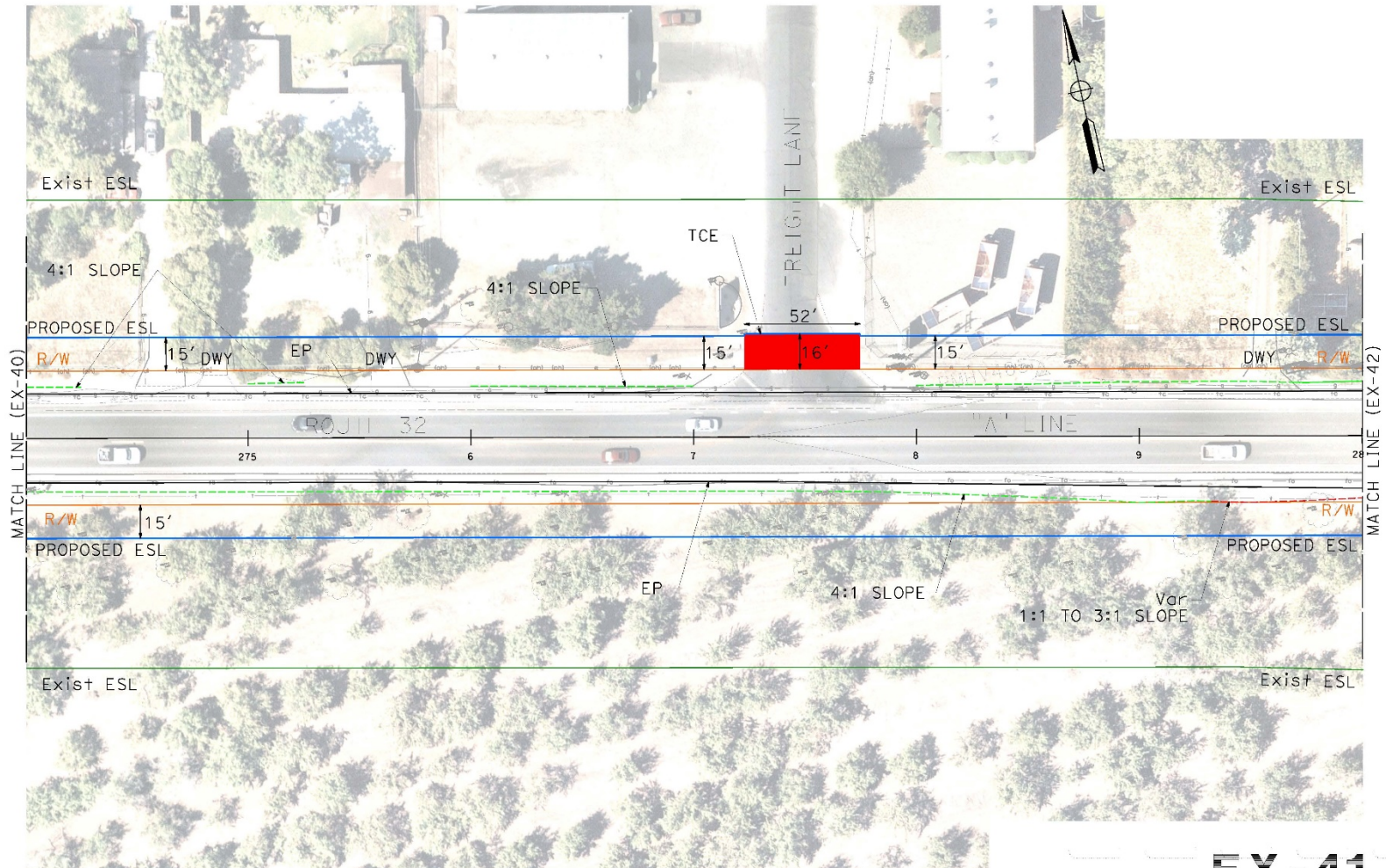




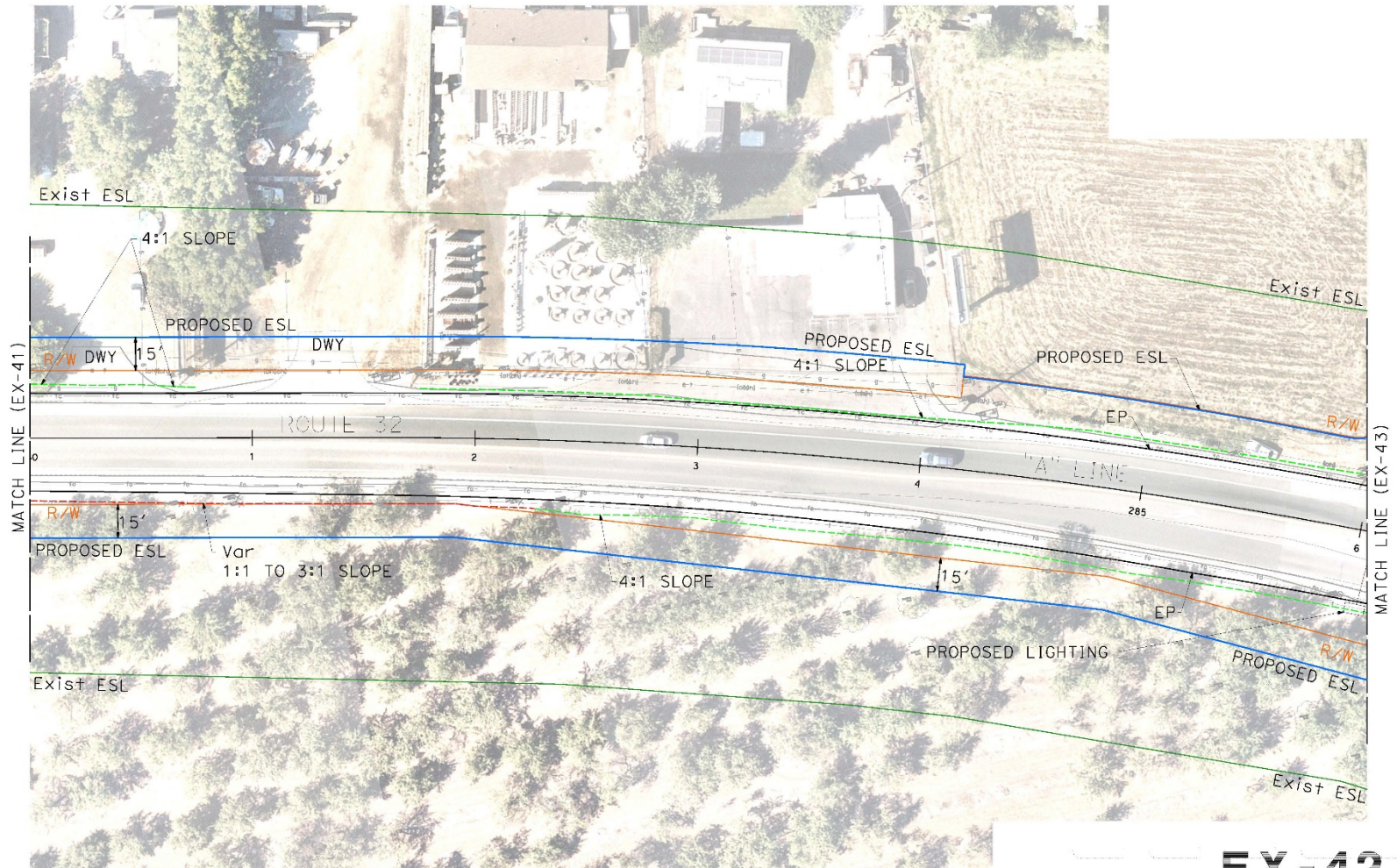


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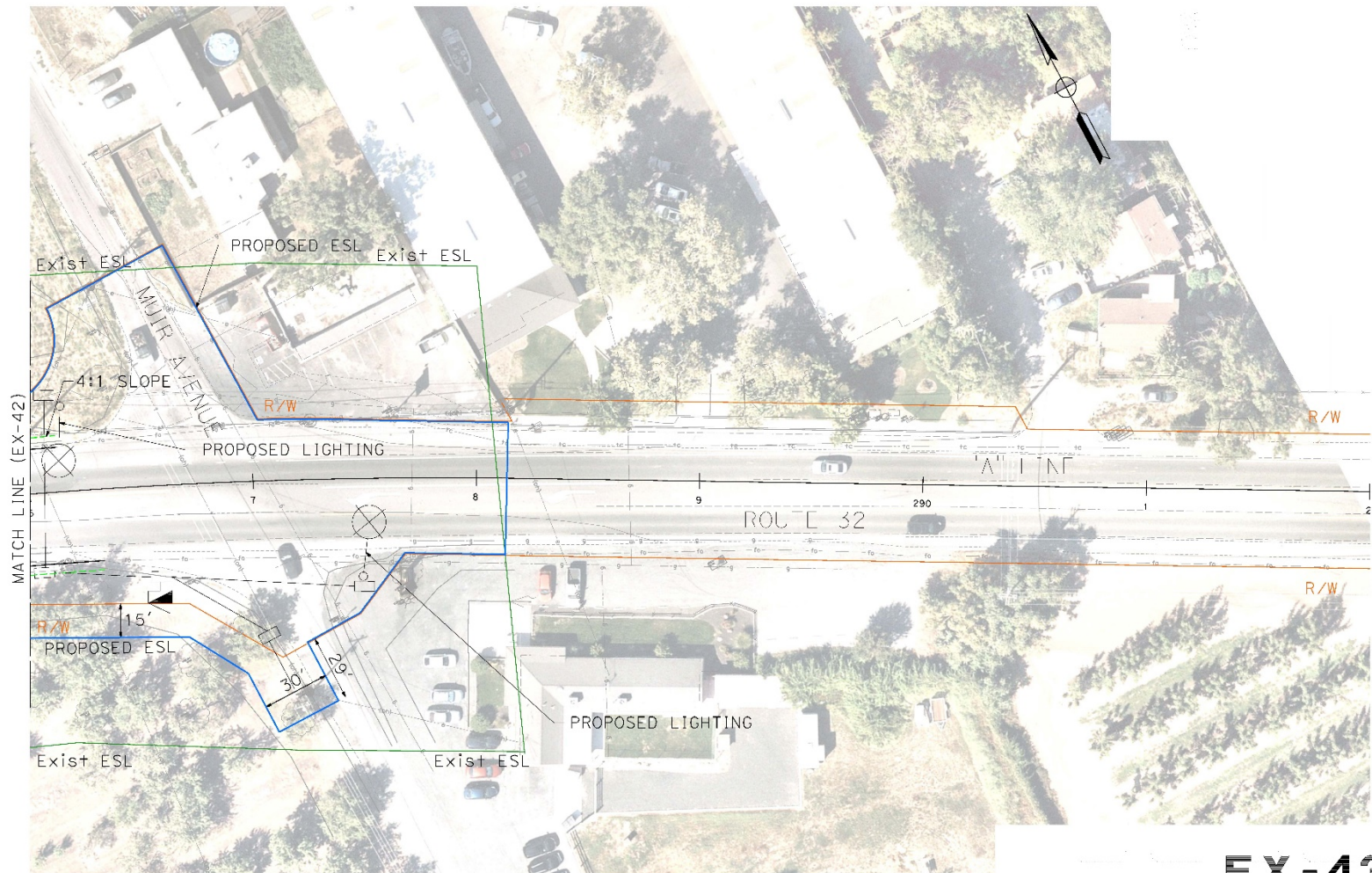






**EX-42**





**EX-43**



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## Appendix C. USFWS and NMFS Species List

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### 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:

August 27, 2020

Consultation Code: 08ESMF00-2020-SLI-0746

Event Code: 08ESMF00-2020-E-08391

Project Name: 03-4H880 BUT-32

Subject: Updated 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](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.

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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](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

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## Project Summary

Consultation Code: 08ESMF00-2020-SLI-0746

Event Code: 08ESMF00-2020-E-08391

Project Name: 03-4H880 BUT-32

Project Type: TRANSPORTATION

Project Description: Shoulder widening

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/39.75200725792078N121.98518315959674W>



Counties: Butte, CA

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## Endangered Species Act Species

There is a total of 12 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 Fisheries<sup>1</sup>, 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.

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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
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is <b>proposed</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/3911">https://ecos.fws.gov/ecp/species/3911</a>	Threatened

## Reptiles

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

## Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a> Species survey guidelines: <a href="https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf">https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf</a>	Threatened

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## Fishes

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

## Insects

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

## Crustaceans

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

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## Flowering Plants

NAME	STATUS
Butte County Meadowfoam <i>Limnanthes floccosa ssp. californica</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/4223">https://ecos.fws.gov/ecp/species/4223</a>	Endangered
Greene's Tuctoria <i>Tuctoria greenei</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/1573">https://ecos.fws.gov/ecp/species/1573</a>	Endangered
Hoover's Spurge <i>Chamaesyce hooveri</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/3019">https://ecos.fws.gov/ecp/species/3019</a>	Threatened
Slender Orcutt Grass <i>Orcuttia tenuis</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/1063">https://ecos.fws.gov/ecp/species/1063</a>	Threatened

## Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Yellow-billed Cuckoo <i>Coccyzus americanus</i> <a href="https://ecos.fws.gov/ecp/species/3911#crithab">https://ecos.fws.gov/ecp/species/3911#crithab</a>	Proposed

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Quad Name **Nord**

Quad Number **39121-G8**

**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) - **X**

**ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat -  
CCC Coho Critical Habitat -  
CC Chinook Salmon Critical Habitat -  
CVSR Chinook Salmon Critical Habitat - **X**  
SRWR Chinook Salmon Critical Habitat - **X**  
NC Steelhead Critical Habitat -  
CCC Steelhead Critical Habitat -  
SCCC Steelhead Critical Habitat -  
SC Steelhead Critical Habitat -  
CCV Steelhead Critical Habitat - **X**  
Eulachon Critical Habitat -  
sDPS Green Sturgeon Critical Habitat - **X**

**ESA Marine Invertebrates**

Range Black Abalone (E) -  
Range White Abalone (E) -

**ESA Marine Invertebrates Critical Habitat**

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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 -





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



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Astragalus tener</i> var. <i>ferrisiae</i></b> Ferris' milk-vetch	PDFAB0F8R3	None	None	G2T1	S1	1B.1
<b><i>Athene cunicularia</i></b> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<b><i>Branchinecta conservatio</i></b> Conservancy fairy shrimp	ICBRA03010	Endangered	None	G2	S2	
<b><i>Branchinecta lynchi</i></b> vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
<b><i>Branchinecta mesoatlantica</i></b> midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
<b><i>Buteo swainsoni</i></b> Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
<b><i>Castilleja rubicundula</i> var. <i>rubicundula</i></b> pink creamsacs	PDSCR0D482	None	None	G5T2	S2	1B.2
<b><i>Erethizon dorsatum</i></b> North American porcupine	AMAFJ01010	None	None	G5	S3	
<b><i>Eumops perotis californicus</i></b> western mastiff bat	AMACD02011	None	None	G5T4	S3S4	SSC
<b><i>Euphorbia hooveri</i></b> Hoover's spurge	PDEUP0D150	Threatened	None	G1	S1	1B.2
<b><i>Fritillaria pluriflora</i></b> adobe-lily	PMLIL0V0F0	None	None	G2G3	S2S3	1B.2
<b><i>Lepidurus packardii</i></b> vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3S4	
<b><i>Limnanthes floccosa</i> ssp. <i>californica</i></b> Butte County meadowfoam	PDLIM02042	Endangered	Endangered	G4T1	S1	1B.1
<b><i>Limnanthes floccosa</i> ssp. <i>floccosa</i></b> woolly meadowfoam	PDLIM02043	None	None	G4T4	S3	4.2
<b><i>Lindera occidentalis</i></b> California linderella	ICBRA06010	None	None	G2G3	S2S3	
<b>Northern Hardpan Vernal Pool</b> Northern Hardpan Vernal Pool	CTT44110CA	None	None	G3	S3.1	
<b><i>Oncorhynchus mykiss irideus</i> pop. 11</b> steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
<b><i>Riparia riparia</i></b> bank swallow	ABPAU08010	None	Threatened	G5	S2	
<b><i>Spea hammondi</i></b> western spadefoot	AAABF02020	None	None	G3	S3	SSC
<b><i>Tuoria greenei</i></b> Greene's tuoria	PMPOA6N010	Endangered	Rare	G1	S1	1B.1

Record Count: 20

