VINA PLAINS REHABILITATION PROJECT

Tehama County, California
DISTRICT 2 – TEH – 99 (Post Mile 0.0 to 12.5)
EA 02-3H770 / EFIS 02-18000039
EA 02-4J310 / EFIS 02-23000010

INITIAL STUDY

with Proposed Mitigated Negative Declaration

Prepared by the
State of California, Department of Transportation

Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

April 2023

General Information About This Document

What is 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 99 in Tehama County, 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 the IS/MND will be available for review at the following locations: Caltrans District 2, 1657 Riverside Drive in Redding; Tehama County Library at 7881 State Highway 99E in Los Molinos; and the Tehama County Library at 740 3rd Street in Corning. This document may be downloaded at the following website:

  https://dot.ca.gov/caltrans-near-me/district-3/d3-programs/d3-environmental/d3-environmental-docs/d3-tehama-county

- Please send comments via U.S. mail to:

  California Department of Transportation
  Attention: Carolyn Sullivan
  North Region Environmental - District 2
  1031 Butte Street, MS 30
  Redding, CA 96001

- Send comments via e-mail to: Carolyn.Sullivan@dot.ca.gov
- Be sure to send comments by the deadline: 5/12/23

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) conduct 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, or in digital format. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Carolyn Sullivan, North Region Environmental - District 2, 1031 Butte Street MS 30, Redding, CA 96001; (530) 759-3455 Voice, or use the California Relay Service TTY number, 711 or 1-800-735-2929.

VINA PLAINS
REHABILITATION PROJECT

In Tehama County in and near Los Molinos from Butte County Line to Los Molinos Creek Bridge

INITIAL STUDY

With Proposed Mitigated Negative Declaration

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

4/5/23
Date of Approval

Wesley Stroud, Office Chief
North Region Environmental - District 2
California Department of Transportation
CEQA Lead Agency

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

Carolyn Sullivan, North Region Environmental - District 2
1031 Butte Street MS 30, Redding, CA 96001
(530) 218-8940 or use the California Relay Service TTY number,
711 or 1-800-735-292.

Proposed Mitigated Negative Declaration

Pursuant to: Division 13, California Public Resources Code

SCH Number: Pending

Project Description

The California Department of Transportation (Caltrans) proposes to rehabilitate State Route 99, from post mile 0.0 to 12.5 in Tehama County.

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 based on the following findings:

The project would have *No Impact* on the following resources:

- Agriculture and Forest Resources
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Recreation
- Tribal Cultural Resources
- Wildfire

The project would have *Less than Significant Impacts* on the following resources:

- Aesthetics
- Air Quality
- Cultural Resources
- Energy
- Geological Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Public Services
- Transportation
- Utilities and Service Systems

With the following mitigation measures incorporated, the project would have a less than significant impact to biological resources:

Mitigation Measure 1

To mitigate for the presence of listed shrimp habitat (i.e., wetlands), including listed vernal pool plant species that have the potential to occur in on-site wetlands, Caltrans incorporated the following design elements into the project scope:

- Steepen road shoulder fill slopes to allow for shoulder widening within the existing road prism
- Install guardrail/posts in locations that would avoid direct impacts to wetland bottoms (i.e., puncture the bottom, causing the wetland to drain)
- Install rail element walls, which serve to retain shoulder widening fill without widening the existing fill prism

Mitigation Measure 2

As summarized below, to mitigate for the presence of listed animal species that have the potential to occur in streams, riparian vegetation, and/or elderberry shrubs, Caltrans revised the broadband design to fully avoid these resources:

- Update Broadband Alignment
  As part of the original broadband design, conduit would be attached to the eastern portion of on-site bridges. This design required access road construction within streams, as well as riparian vegetation removal along the stream bottom and abutting areas. To avoid these resources, the design was updated to reflect directional boring. Using this installation method, on-site streams and associated riparian vegetation would be fully avoided.

- Relocate Directional Boring Pits
  The initial boring pit locations were sited in areas supporting elderberry shrubs, which would require trimming and/or removal. The pits were relocated to avoid fully avoid elderberry shrubs.

Wesley Stroud, Office Chief
North Region Environmental - District 2
California Department of Transportation

Date

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List of Abbreviated Terms

Abbreviation	Description
AB	Assembly Bill
APE	Area of Potential Effects
AQAP	Air Quality Attainment Plan
BMMN	Broadband Middle Mile Network
BMPs	Best Management Practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CALFIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CAP	Criteria Air Pollutants
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH_4	methane
CIA	Cumulative Impact Analysis
CNPS	California Native Plant Society
CO_2	carbon dioxide
CTP	California Transportation Plan
CWA	Clean Water Act
dB	decibels
DOT	Department of Transportation
DPPIA	Design Pollution Prevention Infiltration Areas
EEP	Emergency Evacuation Plan
EIR	Environmental Impact Report
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESHA	Environmentally Sensitive Habitat Area

Abbreviation	Description
ESL	Environmental Study Limits
ºF	degrees Fahrenheit
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
GWP	Global Warming Potential
H&SC	Health & Safety Code
HCP	Habitat Conservation Plan
HFCs	hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
LCFS	low carbon fuel standard
LSAA	Lake and Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
MMTC0_2e	million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
MSA	Magnuson-Stevens Fishery Conservation and Management Act
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NC	North Coast
NCCP	Natural Community Conservation Plan
NCRWQCB	North Coast Regional Water Quality Control Board
ND	Negative Declaration
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NSVPA	Northern Sacramento Valley Planning Area
O_3	ozone
Pb	lead

Abbreviation	Description
PDT	Project Development Team
PM(s)	post mile(s)
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PRC	Public Resources Code
REW	Rail element walls
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SHS	State Highway System
SNC	Sensitive Natural Community
SO_2	sulfur dioxide
SR	State Route
SSSC	State Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCAPCD	Tehama County Air Pollution Control District
TPZ	Timber Production Zones
TMP	Transportation Management Plan
U.S. or US	United States
USC	United States Code
USDOT	U.S. Department of Transportation
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGCRP	U.S. Global Change Research Program
VIA	Visual Impact Assessment
VMT	Vehicle Miles Traveled
WDRs	Waste Discharge Requirements
WPCP	Water Pollution Control Program
WQAR	Water Quality Assessment Report

Chapter 1 Proposed Project

1.1 Project History

The California Department of Transportation (Caltrans) is proposing to rehabilitate approximately 12 miles of State Route (SR) 99 between the Butte County line and the community of Los Molinos (Figure 1).

This segment of SR 99 was originally constructed in 1918. The project corridor remained two lanes until 1998 when the highway was widened and passing lanes were installed: northbound post miles (PM) 0.6 to 2.8 and southbound 2.8 to 4.5. Early on, this segment of SR 99 (PM 0.6 to 4.5) exhibited signs of distress, including settlement and pumping, particularly along the outside of the number two lane. The distress was likely the result of the relatively flat terrain, poor percolation of the native soils, and a high water table. As a result, numerous pavement maintenance projects have been completed along SR 99 to both repair the failed sections of roadway and minimize ongoing maintenance efforts:

- 2008 – Removed and replaced 0.10 feet of open-graded friction course - PM 0.0 to 4.7
- 2009 – Removed and replaced 0.10 feet of hot-mix asphalt - PM 4.7 to 7.9
- 2011 – Installed thin overlay of pavement - PM 8.9 to 12.0
- 2017 – Removed and replaced the outside edge of northbound lane - PM 0.0 to 8.9

Site inspections indicate the pavement condition will rapidly deteriorate beginning in 2023.

Caltrans is the lead agency under the California Environmental Quality Act (CEQA).

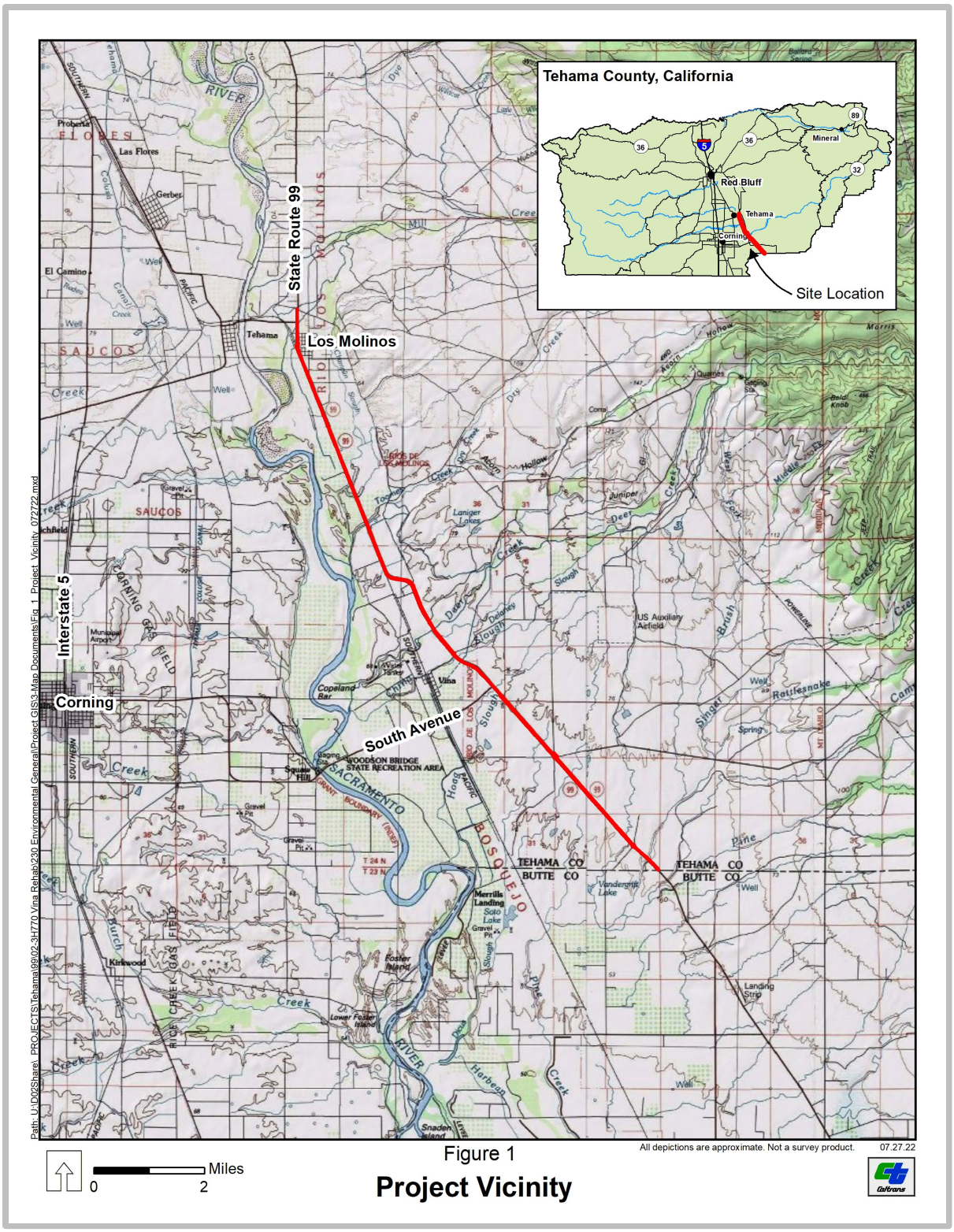

Figure 1. Project Vicinity

1.2 Project Description

The California Department of Transportation, using state and federal funding, proposes to rehabilitate State Route (SR) 99 through repaving activities, drainage improvements, and construction of appurtenant infrastructure. The limits of work occur between post mile (PM) 0.0 to 12.5, in Tehama County.

The purpose of the project is to restore the facility to a state of good repair so that the roadway will be in a condition that requires minimal maintenance. The project is needed because the pavement within the project limits is in a fair state of repair, requiring ongoing maintenance efforts. Additionally, it was determined that select culverts warrant replacement. Moreover, Caltrans would install fiber optic broadband in accordance with Senate Bill 156 (Chapter 112, Statutes of 2021), which expands the State's broadband fiber optic infrastructure and increases internet connectivity for families and businesses.

With the exception of pulling fiber optic line through existing conduit (installed as part of the approved South Avenue Safety Project), no improvements are proposed between PM 4.28 and 4.74.

Project implementation would include the following improvements:

Pavement

- SR 99 pavement rehabilitation warrants different treatments along various sections of the roadway. Paving activities include:
    - Cold-plane and overlay.
    - Full re-construction of the travel way thickness.
    - Full re-construction of the road shoulder.
    - Pavement widening (four to eight feet), where applicable, in accordance with shoulder width and soft median standards.
- Install shoulder backing to support edge of pavement.
- Repave or reconstruct existing road and driveway connections to conform to the proposed pavement treatments.

Signs and Delineation

- Upgrade/replace signs in accordance with current standards.
- Install/apply raised retroreflective pavement markers, as well as sprayable thermoplastic pavement striping/marking throughout the project corridor.

Traffic Monitoring Stations

Four traffic monitoring stations would be modified through loop and piezo replacement at the following locations: PM 0.112, 5.079, 11.091, and 12.254.

Worker Safety Pullouts

To provide for worker safety, paved maintenance vehicle pullouts would be installed at the following locations: PM 0.112R, 5.079R, and 11.091R.

Traffic Safety

- Replace steel-post guardrail in-place and transition railing at bridge sites. No work is proposed on the bridge decks.
- Replace existing shoulder and centerline rumble strips.
- Trees would be removed at PM 7.0 (east side of the highway) to increase sight distance for the traveling public.

Pedestrian Safety

Project implementation includes various pedestrian improvements in the community of Los Molinos (PM 11.9 to 12.1). The two-block segment between North Center and Josephine Streets (eastside of highway) and Josephine and Orange Streets (westside of highway) would be improved through the installation of sidewalks, curb ramps, curb, gutter, and driveways.

Tree Planting

As part to the proposed project, tree planting would occur along the proposed sidewalk improvements referenced above. Work would include irrigation system installation.

Lighting

Project implementation would include upgraded lighting along the SR 99 pedestrian improvement area referenced above.

Rail Element Wall

To minimize impacts to environmentally sensitive areas (i.e., wetlands), rail element walls (REW) would be constructed along various segments of SR 99. REW installation allows for shoulder widening without widening the fill prism. The REW consists of metal beam guardrail posts and rails. The posts are driven into the fill

slope approximately four feet from the proposed edge of pavement. Thereafter, one to three rails are attached to the posts to retain the fill material.

Disposal/Borrow Sites

Project implementation would include approximately 24.42 acres of ground disturbance; maximum excavation depth is estimated at 10 feet. Minor clearing and grubbing may be required. Excess soil material and construction debris (e.g., asphalt grindings) would become the property of the contractor. No disposal and/or borrow sites are proposed.

Drainage Improvements

As part of the proposed project, drainage improvements, consisting of culvert installation/replacement, drainage inlet installation/replacement, and over side drain replacement, would be performed at 25 locations. A detailed description of the proposed drainage improvements is provided in Table 1.

Table 1. Proposed Drainage Improvements

Location (PM)	Proposed Improvements
3.78	To conform with the proposed pavement widening, relocate existing drainage inlet along the same pipe alignment.
5.97R	Replace existing over side drain immediately south of the Deer Creek Bridge.
6.08R	Replace existing over side drain immediately north of the Deer Creek Bridge.
6.75L	Remove existing 30"-diameter x 30'-long culvert. Replace with a 30"-diameter x 30'-long culvert using cut and cover method.
6.94L	Remove existing 30"-diameter x 36'-long culvert. Replace with a 30"-diameter x 36'-long culvert using cut and cover method.
6.94R	Remove existing 18"-diameter x 41'-long culvert. Replace with an 18"-diameter x 41'-long culvert using cut and cover method.
7.92	Remove existing 12"-diameter x 38'-long culvert. Replace with a 12"-diameter x 38'-long culvert using cut and cover method.
9.08R	Remove existing 12"-diameter x 38'-long culvert. Replace with a 12"-diameter x 38'-long culvert using cut and cover method.
9.18	Remove existing 12"-diameter x 42'-long culvert. Replace with a 12"-diameter x 42'-long culvert using cut and cover method.
9.20L	Remove existing 12"-diameter x 68'-long culvert. Replace with a 12"-diameter x 68'-long culvert using cut and cover method.
9.37L	Remove existing 12"-diameter x 32'-long culvert. Replace with a 12"-diameter x 32'-long concrete valley gutter.
9.68	Remove existing 12"-diameter x 39'-long culvert. Replace with a 12"-diameter x 39'-long culvert using cut and cover method.
11.30	Remove existing 12"-diameter x 31'-long culvert. Replace with a 12"-diameter x 31'-long culvert using cut and cover method.
11.76R	Install 407'-long valley gutter parallel to NB lanes. Install RSP at outfall. Repave lot adjacent to valley gutter to reestablish flow line.
11.86–12.11	Install ten new culverts, in-line (i.e., end to end), beneath southbound lane of SR 99: 30"-diameter x 84'-long culvert 30"-diameter x 221'-long culvert 36"-diameter x 128'-long culvert 36"-diameter x 121'-long culvert 36"-diameter x 66'-long culvert 36"-diameter x 153'-long culvert 36"-diameter x 160'-long culvert 36"-diameter x 90'-long culvert 36"-diameter x 248'-long culvert 36"-diameter x 41'-long culvert

Location (PM)	Proposed Improvements
	Ten new drainage junction inlets would be installed as part of the proposed work, starting at the beginning of Culvert 1 and ending at the outlet of Culvert 9 (northernmost culvert).
11.86	The existing 18"-diameter x 56'-long culvert under SR 99 would be replaced with a 23"-wide x 14"-deep x 37'-long elliptical culvert and a 24"-diameter x 13.5'-long culvert. Culvert improvements include replacement of an existing drainage inlet and installation of a new drainage inlet. Additionally, a 58'-long valley gutter would be installed across Sycamore Avenue.
11.87	Install a new drainage inlet, a new reinforced concrete pipe (RCP) inlet junction box, and two RCP: New drainage inlet along the western edge of pavement New 60"-diameter RCP inlet junction in the southbound lane New 24"-diameter x 10.5'-long RCP between drainage inlet and RCP inlet junction. New 30"-diameter x 221'-long RCP between 60"-diameter RCP inlet junction box at PMs 11.87 and 11.88
11.91R	Install three new culverts at the intersection of North Center Street and SR 99: 24"-diameter x 20'-long culvert 24"-diameter x 40'-long culvert 24"-diameter x 12'-long culvert Culvert improvements include installation of three drainage inlets.
11.94R	Install new 24"-diameter x 40'-long cross culvert. Culvert improvements include the installation of one new drainage inlet.
11.96	Install new 24"-diameter x 42'-long cross culvert. Culvert improvements include the installation of one new drainage inlet.
11.97	Install two new culverts near the intersection of SR 99 and Josephine Street: 18"-diameter x 51'-long culvert immediately southeast of SR 99 and Josephine Street. 24"-diameter x 15.5'-long culvert under SR 99 immediately southwest of SR 99 and Josephine Street. Two new drainage inlets would be installed as part of the proposed work.
12.01	Install a new 24"-diameter x 15'-long culvert west SR 99. A new drainage inlet would be installed as part of the proposed work.
12.03	Remove existing culvert. Replace with 24"-diameter x 18'-long culvert.
12.05	Remove existing culvert. Replace with 24"-diameter x 23.5'-long culvert.
12.11	Remove existing culvert. Replace with 24"-diameter x 23.5'-long culvert.

Design Pollution Prevention Infiltration Areas

To help maintain long-term water quality, Design Pollution Prevention Infiltration Areas (DPPIA) would be installed as part of the proposed project. The DPPIAs would serve to provide long-term treatment of road runoff through infiltration. The DPPIAs would be installed approximately three feet from the edge of pavement, would be three to ten feet wide, and between 100 and 2,000 feet long depending on the location. The soil would be amended as needed to ensure proper treatment.

New Impervious Area

The new impervious area is estimated at 13.87 acres.

Staging

Three staging areas have been identified along the project corridor: PM 2.8, 5.5, and 6.8.

Utilities

SR 99 supports overhead and underground phone, fiber optic internet and telephone, water, and electric utilities throughout the project corridor. Minor utility relocation activities would occur in Los Molinos.

Broadband Middle-Mile Network Program

The Broadband Middle Mile Network (BMMN) consists of open access, state-owned high-capacity fiber optic lines that carry large amounts of data at higher speeds over longer distances between local networks. The proposed broadband would increase internet connectivity for families and businesses.

In accordance with the BMMN Program, fiber optic conduit/line would be installed primarily via open trenching; directional boring would be used to traverse multiple streams that bisect the highway. In one instance, conduit would be attached directly to a box girder bridge. In addition, splice vaults would be installed at regular intervals along the route.

Open Trenching

Open trenching would occur in the travelway and road shoulder through the use of a ditch witch. Open trenching would be approximately 0.25 feet wide x 3 feet deep. Shallower trenching may be necessary in some locations. Four conduits would be installed vertically within the trench. As part of conduit installation, the trench would be partially backfilled with two inches of sand. All open trenching

would be backfilled with clean fill material and treated with an underground warning tape.

Directional Boring

The directional boring process includes a boring pit and a receiving pit. Each pit is approximately 50 feet wide x 75 feet long. Starting at the boring pit, a drill pipe would be bored subsurface (±10 feet deep) to the receiving pit. The conduit is then attached to the drill pipe and pulled back to the boring pit. A drilling lubricant (i.e., bentonite) would be used to facilitate the drilling process.

Right-of-Way

Caltrans would acquire temporary construction easements at various locations to conform driveways and public roads, and to accommodate culvert installation. A permanent right-of-way easement would be required along SR 99 in Los Molinos: PM 11.85 to 12.04 (±0.09 acres) on the westside of the highway, and 11.90 to 11.98 (±0.08 acres) on the eastside of the highway.

Traffic Management

Project construction would utilize one-way reversing traffic control as needed.

Schedule

Working days for the Vina Plains Rehabilitation Project are estimated at 120 days. Caltrans would like to construct the Vina Plains Rehabilitation and South Avenue Roundabout Projects at the same time, which is estimated at a combined 160 working days.

1.2.1 Purpose and Need

Purpose

The purpose of the project is to restore the facility to a state of good repair so that the roadway would be in a condition that requires minimal maintenance.

Need

The project is needed because the pavement within the project limits is in a fair state of repair, requiring ongoing maintenance efforts.

1.2.2 Project Location

The project site is primarily comprised of SR 99 between the Butte County line and the community of Los Molinos, in Tehama County (see also Figure 1).

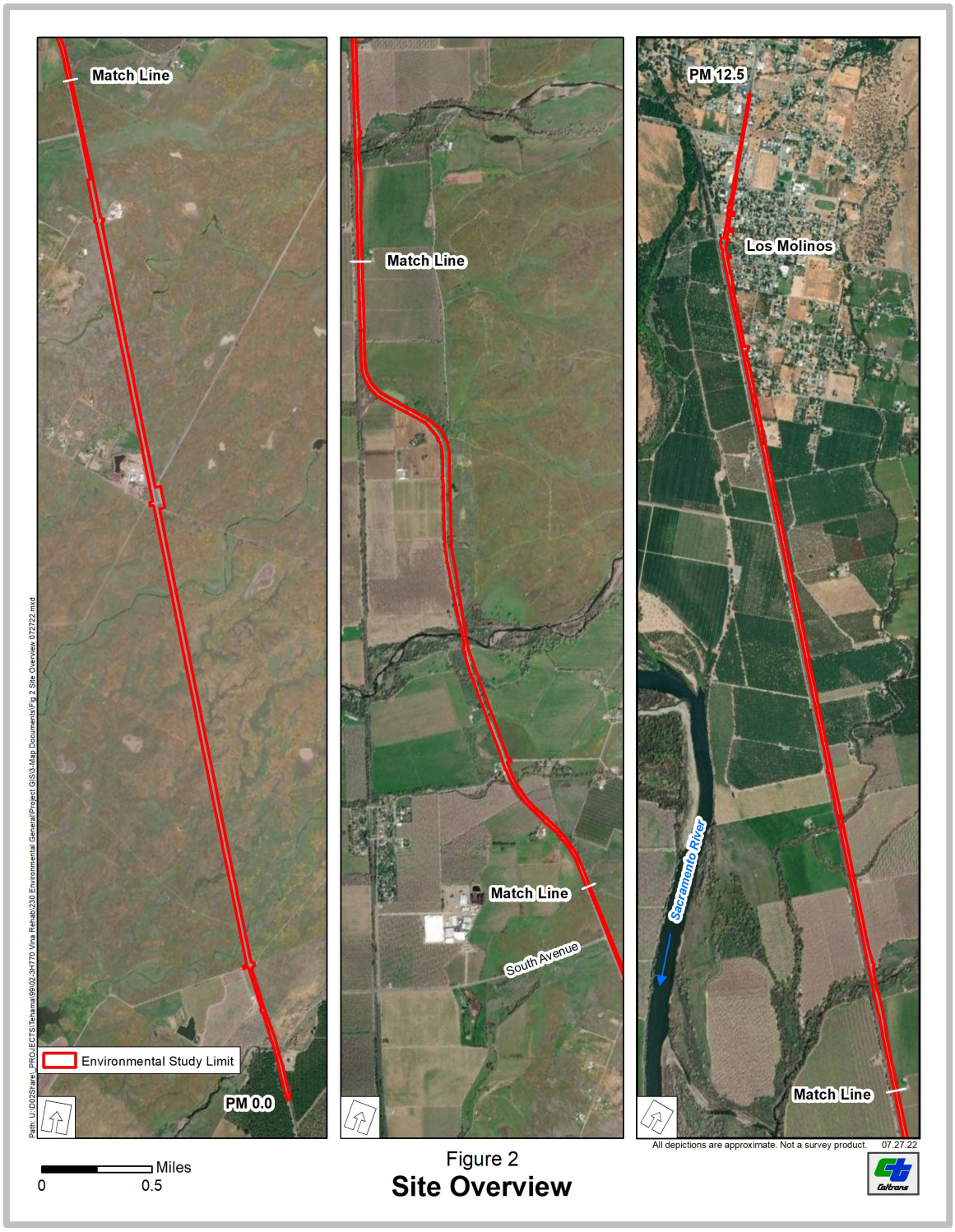

Figure 2. Project Location

1.2.3 No-Build Alternative

This alternative would maintain the facility in its current condition and would not meet the purpose and need of the project. For each potential impact area discussed in Chapter 2, the No-Build alternative has been determined to have no impact. Under the No-Build alternative, no alterations to the existing conditions would occur, and the proposed project would not be implemented.

1.2.4 General Plan Description, Zoning, and Surrounding Land Uses

The project site primarily occurs within Caltrans right-of-way. Several temporary construction easements would be required on private lands. Additionally, a portion of the work proposed in Los Molinos would require the purchase of adjacent land (i.e., permanent right-of-way take) to facilitate proposed improvements. Land uses in the community of Los Molinos are primarily commercial (e.g., restaurants, a bank, a gas station, and other service-related businesses). Surrounding land uses along the remaining portion of SR 99 consist primarily of agriculture and a nature preserve. The Union Pacific Railroad tracks parallel the west side of SR 99 for approximately 4.5 miles, between the community of Los Molinos and Tehama Vina Road.

1.3 Permits and Approvals Needed

The following table indicates the permitting agency, permits/approvals, and status of permits anticipated for the project:

Table 2. Agency Approvals

Agency	Permit/Approval	Status
U.S. Fish and Wildlife Service	Section 7 – Endangered Species Act Consultation	Informal Consultation completed on 3/24/23
State Water Resources Control Board (SWRCB)	Construction General Permit	Contractor to submit Notice of Intent prior to construction activities.

1.4 Standard Measures and Best Management Practices Included in All Alternatives

Under CEQA, “mitigation” is defined as avoiding, minimizing, rectifying, reducing/eliminating, and compensating for an impact. In contrast, Standard Measures and Best Management Practices (BMPs) are prescriptive and sufficiently standardized to be generally applicable, and do not require special tailoring for a project. They are generally measures that typically result from laws, permits, agreements, guidelines, and resource management plans that are relevant to the project. For this reason, the measures and practices are not considered mitigation under CEQA, rather, they are included as part of the project description in environmental documents.

The section below provides a list of project features, standard practices (measures), and BMPs that are included as part of the project description. They contain refinements in planning policies and implementing actions. These practices predate the project’s proposal and apply to all similar projects. For this reason, these measures and practices do not qualify as project mitigation, and the effects of the project are analyzed with these measures in place.

Standard measures relevant to the protection of natural resources deemed applicable to the proposed project include the following:

Biological Resources

BR-1: General

Before start of work, as required by permit or consultation conditions, a Caltrans biologist or Environmental Construction Liaison/Coordinator (ECL) would meet with the contractor to brief them on environmental permit conditions and requirements relative to each stage of the proposed project, including, but not limited to, work windows, drilling site management, and how to identify and report regulated species within the project areas.

BR-2: Animal Species

A. To protect migratory and nongame birds (occupied nests and eggs), if possible, vegetation removal would be limited to the period outside of

the bird breeding season (removal would occur between September 16 and January 31). If vegetation removal is required during the breeding season, a nesting bird survey would be conducted by a qualified biologist within one week prior to vegetation removal. If an active nest is located, a qualified biologist would establish appropriate species-specific buffer(s) and any monitoring requirements. The buffer would be delineated around each active nest, and construction activities would be excluded from these areas until birds have fledged, or the nest is determined to be unoccupied.

B. To prevent attracting corvids (birds of the Corvidae family which include jays, crows, and ravens), no trash or foodstuffs would be left behind or stored on-site. All trash would be deposited in a secure container daily and disposed of at an approved waste facility at least once a week. Also, on-site workers would not attempt to attract or feed any wildlife.

C. Artificial night lighting may be required. To reduce potential disturbance to sensitive resources, lighting would be temporary and directed specifically on the portion of the work area actively under construction. Use of artificial lighting would be limited to Cal/OSHA work area lighting requirements.

D. A Limited Operating Period would be observed, whereby all in-stream work below ordinary high water would be restricted to the period between June 15 and October 15.

BR-3: Invasive Species

Invasive non-native species control would be implemented. Measures would include:

- Straw, straw bales, seed, mulch, or other material used for erosion control or landscaping would be free of noxious weed seed and propagules.

- Staging and storage of equipment would only be done in weed free areas. Hand, mechanical, or chemical eradication treatments may be

needed for these areas. Additionally, areas may need to be designated as excluded from contractor's use.

- All equipment would be thoroughly cleaned of all dirt and vegetation prior to entering the job site to prevent importing invasive non-native species. Project personnel would adhere to the latest version of the *California Department of Fish and Wildlife Aquatic Invasive Species Cleaning/Decontamination Protocol (Northern Region)* for all field gear and equipment in contact with water.

BR-4: Plant Species, Sensitive Natural Communities, and ESHA

Prior to the start of work, Temporary High Visibility Fencing (THVF) and/or flagging would be installed around sensitive natural communities, environmentally sensitive habitat areas, rare plant occurrences, intermittent streams, and wetlands and other waters, where appropriate. No work would occur within fenced/flagged areas.

Cultural Resources

CR-1: Environmentally Sensitive Areas

A. Prior to the bidding process, the archaeologist shall delineate on the project plans an environmentally sensitive area (ESA) to protect a known cultural resource within the project boundary.

B. Prior to construction, a contractor-supplied archaeologist shall oversee the installation of high visibility temporary construction fencing by the contractor to mark the boundaries of the ESA to protect a known cultural resource**.**

CR-2 If cultural materials are discovered during construction, work activity within a 60-foot radius of the discovery would be stopped and the area secured until a qualified archaeologist can assess the nature and significance of the find in consultation with the State Historic Preservation Officer (SHPO).

CR-3: If human remains and related items are discovered on private or State land, they would be treated in accordance with State Health and Safety Code § 7050.5. Further disturbances and activities would cease in any

area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to California Public Resources Code (PRC) § 5097.98, if the remains are thought to be Native American, the coroner would notify the Native American Heritage Commission (NAHC) who would then notify the Most Likely Descendent (MLD).

Human remains and related items discovered on federally-owned lands would be treated in accordance with the Native American Graves Repatriation Act of 1990 (NAGPRA) (23 USC 3001). The procedures for dealing with the discovery of human remains, funerary objects, or sacred objects on federal land are described in the regulations that implement NAGPRA 43 CFR Part 10. All work in the vicinity of the discovery shall be halted and the administering agency's archaeologist would be notified immediately. Project activities in the vicinity of the discovery would not resume until the federal agency complies with the 43 CFR Part 10 regulations and provides notification to proceed.

Geological Resources

GS-1: The project would be designed to minimize slope failure, settlement, and erosion using recommended construction techniques and BMPs. Areas of disturbed soil would be vegetated to reduce erosion potential.

Greenhouse Gas Emissions

GHG-1: Caltrans Standard Specification "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality.

GHG-2: Compliance with Title 13 of the California Code of Regulations includes restricting idling of diesel-fueled commercial motor vehicles and equipment with gross weight ratings of greater than 10,000 pounds to no more than five minutes.

GHG-3: Caltrans Standard Specification "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resource Board (CARB).

GHG-4: Use of a Transportation Management Plan (TMP) to minimize vehicle delays and idling emissions. As part of this, construction traffic would be

scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along the highway during peak travel times.

Hazards and Hazardous Materials

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: If treated wood waste (such as removal of signposts or guardrail) is generated during this project, it would be disposed of in accordance with Standard Specification "Treated Wood Waste."

HW-3: Hazardous levels of lead and chromium occurring in traffic stripes would be removed and disposed of in accordance with Caltrans Standard Special Provision "Residue Containing Lead from Paints."

Noise

N-1: The contractor would be required to conform to the 2022 Caltrans Standard Specification, Section 14-8.02 "Noise Control" which states, "Control and monitor noise from work activities." and, "Do not exceed 86 dBA LMax at 50 feet from the job site activities from 9 p.m. to 6 a.m."

Transportation

TT-1: A Transportation Management Plan (TMP) would be applied to the project.

Utilities and Service Systems

UE-1: All emergency response agencies in the project area would be notified of the project construction schedule and would have access to SR 99 throughout the construction period.

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) as amended by subsequent orders, which became effective July 1, 2013. If the project results in a land disturbance of one acre or more, coverage under the Construction General Permit (Order 2009-0009-DWQ) is also required.

Before any ground-disturbing activities, the contractor would prepare a Stormwater Pollution Prevention Plan (SWPPP) (per the Construction General Permit Order 2009-0009-DWQ) or Water Pollution Control Program (WPCP) (for projects that result in a land disturbance of less than one acre) that includes erosion control measures and construction waste containment measures to protect Waters of the State during project construction.

The SWPPP or WPCP 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 *Caltrans 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 or WPCP would be continuously updated to adapt to changing site conditions during the construction phase.

Construction may require one or more of the following temporary construction site BMPs:

- Any spills or leaks from construction equipment (i.e., fuel, oil, hydraulic fluid, and grease) would be cleaned up in accordance with applicable local, State, and/or federal regulations.
- Temporary sediment control and soil stabilization devices 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.

WQ-2: The project would incorporate pollution prevention and design measures consistent with the 2016 Caltrans Storm Water Management Plan. This plan complies with the requirements of the Caltrans Statewide NPDES Permit (Order 2012-0011-DWQ) as amended by subsequent orders.

The project design may include one or more of the following:

- 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.
- Where possible, stormwater would be directed in such a way as to sheet flow across vegetated slopes, thus providing filtration of any potential pollutants.

1.5 Discussion of National Environmental Policy Act Compliance

This document contains information regarding compliance with the California Environmental Quality Act (CEQA) and other state laws and regulations. Separate environmental documentation supporting a Categorical Exclusion determination will be prepared for the proposed MND in accordance with the National Environmental Policy Act. 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 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

Environmental Factors Potentially Affected

The environmental factors in bold below would be potentially affected by this project. Please see the CEQA Environmental Checklist on the following pages for additional information.

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

The CEQA Environmental Checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the project will indicate there are

no impacts to a 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 Environmental 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 standardized measures applied to all or most Caltrans projects (such as BMPs and measures included in the Standard Plans and Specifications or as Standard Special Provisions [Section 1.4]), are an integral part of the project and have been considered prior to any significance determinations documented in the checklist or document.

Project Impact Analysis Under CEQA

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

CEQA requires the identification of each potentially “significant effect on the environment” resulting from the action, and ways to mitigate each significant effect. Significance is defined as “substantial or potentially substantial adverse change to any of the physical conditions within the area affected by the project” (14 CCR §

15382). CEQA determinations are made prior to and separate from the development of mitigation measures for the project.

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

Though not required, CEQA suggests lead agencies adopt thresholds of significance, which define the level of effect above which the Lead Agency 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 statewide basis has not been pursued by Caltrans. Rather, to ensure each resource is evaluated objectively, Caltrans analyzes potential resource impacts in the project area based on their location and the effect of the potential impact on the resource as a whole. For example, if a project has the potential to impact 0.10 acre of wetland in a watershed that has minimal development and contains thousands of acres of wetland, then a “less than significant” determination would be considered appropriate. In comparison, if 0.10 acre of wetland would be impacted that is located within a park in a city that only has 1.00 acre of total wetland, then the 0.10 acre of wetland impact could be considered “significant.”

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

Although the formulation of mitigation measures shall not be deferred until some future time, the specific details of a mitigation measure may be developed after

project approval when it is impractical or infeasible to include those details during the project's environmental review. The lead agency must (1) commit itself to the mitigation, (2) adopt specific performance standards the mitigation will achieve, and (3) identify the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure. Compliance with a regulatory permit or other similar processes may be identified as mitigation if compliance would result in implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards (§15126.4(a)(1)(B)).

Per CEQA, measures may also be adopted, but are not required, for environmental impacts that are not found to be significant (14 CCR § 15126.4(a)(3)). Under CEQA, mitigation is defined as avoiding, minimizing, rectifying, reducing, and compensating for any potential impacts (CEQA 15370). Regulatory agencies may require additional measures beyond those required for compliance with CEQA. Though not considered "mitigation" under CEQA, these measures are often referred to in an Initial Study as "mitigation," Good Stewardship, or Best Management Practices. These measures can also be identified after the Initial Study/Mitigated 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.

No-Build Alternative

For each of the following CEQA Environmental Checklist questions, the No-Build alternative has been determined to have "No Impact". Under the No-Build alternative, no alterations to the existing conditions would occur and no proposed improvements would be implemented. The No-Build alternative will not be discussed further in this document.

2.1 Aesthetics

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

2.1.1 Regulatory Setting

The California Environmental Quality Act (CEQA) establishes 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]).

2.1.2 Environmental Setting

The project site is located in the upper Sacramento Valley in a rural portion of Tehama County. Within the project area, the terrain is relatively flat and supports annual grassland and orchards outside the right-of-way. Travelers within the project area have expansive views of the Coast Range to the west and views of the Sierra

Nevada foothills to the east. The northernmost portion of the project site occurs in the community of Los Molinos. Current land uses in Los Molinos within the project area are primarily commercial (e.g., restaurants, a bank, a gas station, and other service-related businesses).

In support of the aesthetics evaluation, a Visual Impact Assessment (VIA) (California Department of Transportation, 2022a) was prepared for the proposed project.

2.1.3 Discussion of CEQA Question 2.1—Aesthetics

a) Would the project have a substantial adverse effect on a scenic vista?

Scenic vistas are defined as expansive views of highly valued landscapes from publicly accessible viewpoints. Scenic vistas include views of natural features such as mountains, hills, valleys, water courses, outcrops, and natural vegetation, as well as man-made scenic structures. As described in the VIA, scenic resources in the project area include northern California agricultural lands, the Sierra foothills, and natural creeks and streams. These scenic resources would remain intact. Visual impacts associated with the project are primarily limited to tree removal between PM 6.80 and 7.08. Given the minor amount of tree removal, project implementation would not have an adverse effect on a scenic vista. Thus, there would be no impact.

b) Would the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings, within a state scenic highway?

No State Scenic Highways have been designated within the project limits. The nearest officially designated State Scenic Highway is Route 151 (Shasta Dam Boulevard) in Shasta County. The nearest eligible highway is the western portion of State Route 70 (traversing portions of Butte, Plumas, and Lassen Counties), which is located approximately 28 miles southeast of the project site. Neither the designated nor eligible scenic route is visible from the project site. Therefore, the proposed project would have no impact to scenic resources within a designated State Scenic Highway.

c) Would the project, 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.)

Principal viewers in the project area include motorists on SR 99, people residing in the area, and local business employees and patrons. As described above, scenic resources in the project area include northern California agricultural lands, the Sierra foothills, and natural creeks and streams. These resources would not be impacted. Given the nature of the proposed improvements, project implementation would not substantially degrade the existing character or quality of the public views of the site and its surroundings. Therefore, there would be no impact.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The proposed project includes a minor amount of street lighting in the community of Los Molinos. The proposed lighting locations correspond to the proposed sidewalks between North Center and Josephine Streets (eastside of highway) and Josephine and Orange Streets (westside of highway). The purpose of the lighting is to improve public safety. As most of SR 99 within Los Molinos already supports street lighting, the addition of lighting along these two blocks would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Therefore, potential impacts associated with new lighting would be less than significant.

2.1.4 Cumulative Impacts

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. The project's impact on aesthetics would be minimal and when these impacts are considered along with impacts on aesthetics resulting from other Caltrans projects on SR 99 in Tehama County constructed in the last 20 years or that are reasonably foreseeable, they would not contribute to have an adverse cumulative impact. Therefore, the project's impact on aesthetics would be individually limited but not cumulatively considerable.

2.1.5 Mitigation Measures

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

2.2 Agriculture and Forest Resources

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

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
Would the project: b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
Would the project: c) Conflict with existing zoning or cause rezoning of forest land (as defined by 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))?				✓
Would the project: d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				✓

2.2.1 Regulatory Setting

The California Environmental Quality Act (CEQA) requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to discourage the early conversion of agricultural and open space lands to other uses.

Public Resources Code §12220(g) defines “Forest Land” as “land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.” Impacts to timberland are analyzed as required by the California Timberland Productivity Act of 1982 (CA Government Code Sections 51100 et seq.) which was enacted to preserve forest resources. Similar to the Williamson Act, this program gives landowners tax incentives to keep their land in timber production. Contracts involving Timber Production Zones (TPZ) are on 10-year cycles. Although State highways are exempt from provisions of the Act, the California Secretary of Resources and the local governing body are notified in writing if new or additional right of way from a TPZ will be required for a transportation project.

2.2.2 Environmental Setting

The project site is located on SR 99 in a rural portion of Tehama County. Surrounding lands are primarily comprised of open grassland, which is zoned as agriculture—the dominant land use in the county.

2.2.3 Discussion of CEQA Question 2.2—Agriculture and Forest Resources

a) Would the project 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?

According to the California Department of Conservation (2022a), project implementation would not convert prime farmland, unique farmland, or farmland of statewide importance to non-agricultural use. Thus, there would be no impact.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. As proposed, the project would not convert prime farmland, unique farmland, or farmland of statewide importance, does not include any components that would have a direct or indirect effect on farmland, nor would it impact Williamson Act contracts. Thus, there would be no impact.

c) Would the project 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))?

According to the County's Zoning Maps, the project site and surrounding area are not designated as timberland and are not zoned for timberland production. Areas in which improvements would occur do not meet the definition of forest land as defined in PRC §12220(g) or timberland as defined in PRC §4526. Therefore, the proposed project would have no impact on forest land or timberland.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

The project site and abutting areas are comprised of SR 99, agricultural lands, and commercial properties (i.e., Los Molinos). Project implementation would not result in the loss of forest land or conversion of forest land to non-forest use. Thus, there would be no impact.

e) Would the project 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?

As described above, the proposed project would not result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. Thus, there would be no impact.

2.2.4 Mitigation Measures

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

2.3 Air Quality

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

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

2.3.1 Regulatory Setting

The Federal Clean Air Act (CAA), as amended, is the primary federal law that governs air quality, while the California CAA is its corresponding State law. These laws, and related regulation by the United States Environmental Protection Agency (U.S. EPA) and California Air Resources Board (CARB) establishes maximum ambient concentrations for criteria air pollutants (CAP), For the federal CAA, ambient concentrations are known as the National Ambient Air Quality Standards (NAAQSs). Table 3 identifies the six federal CAPs as well as characteristics, principal health and atmospheric effects, and typical sources for each CAP.

Table 3. Federal Criteria Air Pollutants

Pollutant	Characteristics	Principal Health and Atmospheric Effects	Typical Sources
Ozone (O_3)	Ozone is a colorless or bluish gas formed through chemical reactions between two major classes of air pollutants: reactive organic gases (ROG) and oxides of nitrogen (NOx).	• High concentrations irritate lungs. • Long-term exposure may cause lung tissue damage and cancer. • Long-term exposure damages plant materials and reduces crop productivity. • Precursor organic compounds include many known toxic air contaminants. • Biogenic VOC may also contribute.	• Low-altitude ozone is almost entirely formed from reactive organic gases/volatile organic compounds (ROG or VOC) and nitrogen oxides (NOx) in the presence of sunlight and heat. • Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.
Carbon Monoxide (CO)	Carbon monoxide is an odorless, colorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline and wood. Because CO is emitted directly from internal combustion engines, motor vehicles operating at slow speeds are the primary source of carbon monoxide.	• CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. • CO is a minor precursor for photochemical ozone.	• Combustion sources, especially gasoline-powered engines and motor vehicles. • CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
Respirable Particulate Matter (PM_{10})	Particulate matter is a major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols that are small enough to remain suspended in the air for a long period of time.	• Irritates eyes and respiratory tract. • Decreases lung capacity. • Associated with increased cancer and mortality. • Contributes to haze and reduced visibility. • Includes some toxic air contaminants. • Many toxic and other aerosol and solid compounds are part of PM_{10}.	• Dust- and fume-producing industrial and agricultural operations; combustion smoke & vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; and natural sources.

Pollutant	Characteristics	Principal Health and Atmospheric Effects	Typical Sources
Fine Particulate Matter ($PM_{2.5}$)	Particulate matter is a major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols that are small enough to remain suspended in the air for a long period of time.	• Increases respiratory disease, lung damage, cancer, and premature death. • Reduces visibility and produces surface soiling. • Most diesel exhaust particulate matter–a toxic air contaminant–is in the $PM_{2.5}$ size range. • Many toxic aerosols and solid compounds are part of $PM_{2.5}$.	• Combustion, including motor vehicles, other mobile sources, and industrial activities. • Residential and agricultural burning. • Formed through atmospheric chemical and photochemical reactions involving other pollutants including NOx, sulfur oxides (SOx), ammonia, and ROG.
Nitrogen Dioxide (NO_2)	Nitrogen dioxide is a reddish-brown gas formed when nitrogen (N_2) combines with oxygen (O_2). Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation and acid deposition. Of the seven types of nitrogen oxide compounds, NO_2 is the most abundant in the atmosphere and is related to traffic density.	• Irritating to eyes and respiratory tract. • Contributes to acid rain and nitrate contamination of stormwater. • Part of the “NOx” group of ozone precursors.	• Motor vehicles and other mobile or portable engines, especially diesel; refineries; and industrial operations.
Sulfur Dioxide (SO_2)	Sulfur dioxide is a colorless, nonflammable gas that results mainly from burning high-sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries.	• Irritates respiratory tract; injures lung tissue. • Can yellow plant leaves. Destructive to marble, iron, steel. • Contributes to acid rain. • Limits visibility.	• Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources such as active volcanoes. • Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.

Pollutant	Characteristics	Principal Health and Atmospheric Effects	Typical Sources
Lead	A heavy metal that occurs both naturally in the environment and in manufactured products.	• Disturbs gastrointestinal system. • Causes anemia, kidney disease, and neuromuscular/ neurological dysfunction. • A toxic air contaminant and water pollutant.	• Lead-based industrial processes such as battery production and smelters. • Lead paint and leaded gasoline. • Aerially deposited lead from older gasoline use may exist in soils along major roads.

The California CAA establishes maximum concentrations for the six federal CAPs, as well as the four additional air pollutants identified below. The four additional standards are intended to address regional air quality conditions, not project-specific emissions. These maximum concentrations are known as the California Ambient Air Quality Standards (CAAQSs). The CARB has jurisdiction over local air districts and has established its own standards for each CAP under the CAAQS. For areas within the State that have not attained air quality standards, the CARB works with local air districts to develop and implement attainment plans to obtain compliance with both federal and State air quality standards. Table 4 identifies the four State CAPs as well as characteristics, principal health and atmospheric effects, and typical sources for each CAP.

Table 4. State Criteria Air Pollutants

Pollutant	Characteristics	Principal Health and Atmospheric Effects	Typical Sources
Sulfate (SO_4)	Sulfate is oxidized to sulfur dioxide (SO_2) during the combustion process and is subsequently converted to sulfate compounds in the atmosphere.	• Premature mortality and respiratory effects. • Contributes to acid rain. • Some toxic air contaminants attach to sulfate aerosol particles.	• Industrial processes such as refineries, oil fields, and mines. • Natural sources such as volcanic areas, salt-covered dry lakes, and large sulfide rock areas.
Hydrogen Sulfide (H_2S)	Hydrogen sulfide is a colorless gas with the odor of rotten eggs.	• Flammable and poisonous gas. • Respiratory irritant. • Neurological damage and premature death. • Headache, nausea. • Strong odor.	• Industrial processes such as refineries/oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. • Natural sources such as volcanic areas and hot springs.
Visibility-Reducing Particles	Particulate matter impacts the environment by decreasing visibility. Visibility-reducing particles vary greatly in shape, size, and chemical composition, and come from a variety of natural and manmade sources.	• Produces haze, which reduces visibility. NOTE: Not directly related to the Regional Haze program under the Federal Clean Air Act, which is oriented primarily toward visibility issues in National Parks and other "Class I" areas. However, some issues and measurement methods are similar.	• See particulate matter above. May be related more to aerosols than to solid particles.
Vinyl Chloride (chloroethene)	Vinyl chloride, a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor.	• Neurological effects, liver damage, cancer. • Considered a toxic air contaminant.	• Industrial processes.

The NAAQS and state standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under NEPA. In addition to this analysis, a parallel "conformity" requirement under the CAA also applies.

Conformity

The conformity requirement is based on FCAA Section 176(c), which prohibits the U.S. Department of Transportation (USDOT) and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to State Implementation Plan (SIP) for attaining the NAAQS. "Transportation Conformity" applies to highway and transit projects and takes place on two levels: the regional (or planning and programming) level and the project level. The project must conform at both levels to be approved.

Conformity requirements apply only in non-attainment and "maintenance" (former non-attainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. U.S. EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for NAAQS and do not apply at all for state standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS for carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$), and in some areas (although not in California), sulfur dioxide (SO_2). California has non-attainment or maintenance areas for all of these transportation-related "criteria pollutants" except SO_2, and also has a non-attainment area for lead (Pb); however, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on emission analysis of Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that include all transportation projects planned for a region over a period of at least 20 years (for the RTP) and four years (for the FTIP). RTP and FTIP conformity uses travel demand and emission models to determine whether or not the implementation of those projects

would conform to emission budgets or other tests at various analysis years showing that requirements of the FCAA and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), Federal Highway Administration (FHWA), and Federal Transit Administration (FTA) make the determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the FCAA. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept and scope and the "open-to-traffic" schedule of a proposed transportation project are the same as described in the RTP and FTIP, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the project comes from a conforming RTP and TIP; the project has a design concept and scope that has not changed significantly from those in the RTP and TIP; project analyses have used the latest planning assumptions and EPA-approved emissions models; and in PM areas, the project complies with any control measures in the SIP. Furthermore, additional analyses (known as hot-spot analyses) may be required for projects located in CO and PM non-attainment or maintenance areas to examine localized air quality impacts.

2.3.2 Environmental Setting

The project site is located in a rural part of Tehama County in northern California. The climate in the project vicinity is characterized by hot summers and cool winters. The average annual precipitation recorded in Red Bluff between 1933 and 2016 is 23.2 inches (Western Regional Climate Center 2022). In spring, prevailing winds are generally from the northwest. In winter, Pacific storms moving westward across northern California bring strong winds from the south to the area. Inversion layers, which are common in winter, occur when a layer of warm air overlies a layer of dense cold air and prevents atmospheric mixing. If the trapped cold air contains large quantities of pollutants, air quality can be substantially impaired.

The project site is located in the Sacramento Valley Air Basin and is within the jurisdiction of the Tehama County Air Pollution Control District (TCAQMD) and CARB. The project site is located in an attainment/unclassified area for all current NAAQS. Therefore, conformity requirements do not apply. With regard to state air quality standards, the project site is located in an attainment or unclassified area for carbon monoxide (CO), nitrogen dioxide (NO_2), particular matter ($PM_{2.5}$), Lead (Pb),

and sulfur dioxide (SO_2), while Ozone (O_3) and particulate matter (PM_{10}) are considered non-attainment. (CARB, 2022a).

2.3.3 Discussion of CEQA Question 2.3—Air Quality

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

As discussed under the Regulatory Setting, for areas within the State that have not attained air quality standards, the CARB works with local air districts to develop and implement attainment plans to obtain compliance with both federal and State air quality standards. The Northern Sacramento Valley Planning Area (NSVPA) 2021 Triennial Air Quality Attainment Plan (AQAP) serves as the air quality plan for the region. All areas in Tehama County are designated non-attainment for State ozone and PM_{10} standards; the County is designated as an attainment or unclassified area for all other federal and State ambient air quality standards.

As stated in the *Tehama County Air Quality Planning and Permitting Handbook (2015)*, development projects are considered consistent with the AQAP if:

- The project does not require a general plan amendment or rezone, and projected emissions of ROG and NOx from the proposed project are equal to or less than the emissions anticipated for the site if developed under the existing land use designation;
- The project does not exceed the “project alone” significance criteria;
- The lead agency for the project requires the project to implement any applicable emission reduction measures contained in and/or derived from the AQAP; and
- The project complies with all applicable district rules and regulations.

The proposed project consists of roadway improvements, and no general plan amendment or rezone is required. Caltrans would implement all Standard Measures referenced in Section 2.8 to reduce construction-related emissions, there are no stationary source control measures that would apply to the project, and the project would comply with applicable district rules and regulations.

Therefore, compliance with applicable State and local regulations, including but not limited to the Standard Measures referenced in Section 2.8 ensures that impacts are less than significant and that the project complies with the NSVPA AQAP.

b) Would the project 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?

The Air Quality Analysis prepared for the project (Caltrans, 2022b) concluded that because the project is not a capacity-increasing project, no long-term impacts on air quality resulting from operation of the project would occur. However, during construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other construction-related activities. Emissions from construction equipment also are expected and would include carbon monoxide (CO), nitrogen oxides (NOx), volatile organic compounds (VOCs), directly emitted particulate matter (PM_{10} and $PM_{2.5}$), and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NOx and VOCs in the presence of sunlight and heat.

Site preparation and roadway construction typically involves clearing, cut-and-fill activities, grading, removing or improving existing roadways, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. These activities could temporarily generate enough PM_{10}, $PM_{2.5}$, and small amounts of CO, SO_2, NOx, and VOCs to be of concern. Sources of fugitive dust would include disturbed soils at the construction site, and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site could deposit mud on local streets, which could be an added source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by the United States Environmental Protection Agency (U.S. EPA) to add 1.2 tons of fugitive dust

per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50 percent. The Department's standard specifications on dust minimization require use of water or dust palliative compounds and would reduce potential fugitive dust emissions during construction.

In addition to dust-related PM_{10} emissions, heavy-duty trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NOx, VOCs and some soot particulate (PM_{10} and $PM_{2.5}$) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

SO_2 is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Under California law and CARB regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel (not more than 15 ppm sulfur), so SO_2-related issues due to diesel exhaust would be minimal.

Some phases of construction, particularly asphalt paving, may result in short-term odors in the immediate area of each paving site(s). Such odors would quickly disperse to below detectable levels as distance from the site increases.

As noted under the Environmental setting section, all areas in Tehama County are designated non-attainment for State ozone and PM_{10} standards; the County is designated as an attainment or unclassified area for all other federal and State ambient air quality standards. As previously discussed, project construction would cause a minor temporary increase in criteria pollutants associated with fuel combustion and earth work (i.e., O_3, VOCs, NO_2, SO_2, CO, and $PM_{10}/PM_{2.5}$) in the immediate area. The proposed project would not result in significant impacts associated with hydrogen sulfide (H_2S), vinyl chloride, or lead as discussed below.

Hydrogen Sulfide. Hydrogen sulfide is formed during the decomposition of organic material in anaerobic environments, including sewage treatment processes. Because these conditions are not applicable to the proposed project, project implementation would not result in hydrogen sulfide emissions.

Vinyl Chloride. Vinyl chloride is used to manufacture PVC plastic and other vinyl products. Approximately 98 percent of vinyl chloride produced in the United States is used during the manufacture of PVC. Additionally, vinyl chloride is produced during the microbial breakdown of chlorinated solvents (e.g., engine cleaner, degreasing agent, adhesive solvents, paint removers). The potential for vinyl chloride exposure is primarily limited to areas in close proximity to PVC production facilities. Because PVC manufacturing facilities are absent from the project area, and project implementation would not include the use of chlorinated solvents, project implementation would not result in vinyl chloride emissions.

Lead. Elevated levels of airborne lead at the local level are usually found near industrial operations that process materials containing lead, such as smelters and battery manufacturing/recycling facilities. However, aerially deposited lead may be present along the margins of the highway due to the historic use of leaded gasoline. Compliance with standard measures for lead contamination (described in Section 2.9) would ensure impacts related to lead would be less than significant.

As proposed, the project would cause a minor temporary increase in criteria pollutants. As such, the project would not result in a cumulatively considerable net increase of any criteria pollutant. Thus, impacts would be considered less than significant.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Sensitive receptors are individuals or groups of people that are more affected by air pollution than others, including young children, the elderly, and people weakened by disease or illness. Locations that may contain high concentrations of sensitive receptors include residential areas, schools, playgrounds, childcare centers, hospitals, convalescent homes, and retirement homes. For the purposes of this project, pollutants consist of construction emissions and fugitive dust associated with earthwork. Most of the project corridor is sparsely developed with commercial and residential properties (PM 0.0 to 11.15). The northernmost portion of the project corridor (PM 11.15 to 12.50) occurs within the community of Los Molinos, which supports commercial and residential properties. Two sensitive receptors, Los Molinos High School and Los Molinos Elementary School, are located approximately

0.25 miles east of the project corridor. Given their distance from the project site, the project would not impact sensitive receptors. Thus, there would be no impact.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Construction activities have the potential to emit odors from diesel equipment, fugitive dust, and paving (asphalt). Odors from construction are intermittent and temporary, and generally would not extend beyond the construction area. Due to the temporary and intermittent nature of construction odors, impacts would be less than significant.

2.3.4 Cumulative Impacts

The project's impact on air quality would be minimal and temporary and when these impacts are considered along with impacts on air quality resulting from other Caltrans projects on SR 99 in Tehama County constructed in the last 20 years or that are reasonably foreseeable, they would not contribute to have an adverse cumulative impact. Therefore, the project's impact on air quality would be individually limited but not cumulatively considerable.

2.3.5 Mitigation Measures

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

2.4 Biological Resources

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

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

2.4.1 Regulatory Setting

Within this section of the document (2.4. Biological Resources), the topics are separated into Natural Communities, Wetlands and Other Waters, Plant Species, Animal Species, Threatened and Endangered Species, and Invasive Species. Plant and animal species listed as “threatened” or “endangered” are covered within the Threatened and Endangered sections. Other special-status plant and animal species, including California Department of Fish and Wildlife fully protected species, species of special concern, State Candidate species, U.S. Fish and Wildlife Service and National Marine Fisheries Service Candidate species, and California Native Plant Society (CNPS) rare and endangered plants are covered in the Plant and Animal sections.

Natural Communities

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

Wetlands and Other Waters

“Waters” of the United States (including wetlands) and State are protected under several laws and regulations. The primary laws and regulations governing wetlands and other waters include:

- Federal Clean Water Act (CWA), 33 USC 1344

- Federal Executive Order for the Protection of Wetlands (EO 11990)
- State Sections 1600–1607 of the California Fish and Game Code (CFGC)
- State Porter-Cologne Water Quality Control Act, Section 3000 et seq.

Plant Species

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

- Federal Endangered Species Act (FESA), United States Code 16 (USC), Section 1531, et seq. See also 50 CFR Part 402
- California Endangered Species Act (CESA), California Fish and Game Code, Section 2050, et seq.
- Native Plant Protection Act, California Fish and Game Code, Sections 1900–1913
- National Environmental Policy Act (NEPA), 40 C.F.R. Section 1500–Section 1508
- California Environmental Quality Act (CEQA), California Public Resources Code, Sections 21000–21177

Animal Species

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

- NEPA, 40 C.F.R. Section 1500–Section 1508
- CEQA, California Public Resources Code, Sections 21000–21177
- Migratory Bird Treaty Act, 16 U.S.C. Sections 703–712
- Fish and Wildlife Coordination Act, 16 U.S. Code Section 661
- Sections 1600–1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

Threatened and Endangered Species

The primary laws governing threatened and endangered species include:

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

- CESA, California Fish and Game Code, Section 2050, et seq.
- CEQA, California Public Resources Code, Sections 21000–21177
- Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S. Code Section 1801

Invasive Species

The primary laws governing invasive species are Executive Order (EO) 13112 and NEPA.

2.4.2 Environmental Setting

The project site is located in a rural portion of Tehama County. The site primarily consists of rolling grasslands, ranging in elevation between 150 and 230 feet above mean sea level. The site is bisected by several major streams, including Singer Creek, Deer Creek, Deer Creek Overflow, Toomes Creek, and Champlin Slough. Bisecting streams discharge to the Sacramento River. Surrounding land uses include agriculture, protected natural areas (i.e., The Nature Conservancy Vina Plains Preserve) and urban areas in the community of Los Molinos.

The climate of the project vicinity consists of hot summers and cool winters. The average annual temperature is approximately 62.8 degrees Fahrenheit (°F). Monthly mean maximum temperatures range from a high of 97.9°F in July to a low of 37.1°F in January. Daily high temperatures commonly exceed 95°F during the summer. Precipitation is about 23 inches per year.

A Natural Environment Study (NES) (Caltrans, 2022c) was prepared for the project. Caltrans coordinated with agency personnel from the USFWS. See Chapter 3 for a summary of these coordination efforts and professional contacts.

Records Review and Field Surveys

As documented in the NES, records reviewed for this evaluation consisted of the following:

- CNDDB records for special-status plants and animals
- CNPS *Inventory of Rare and Endangered Plants of California*
- USFWS records for federally listed, proposed, and Candidate plant and animal species under the jurisdiction of the USFWS

- National Marine Fisheries Service Records for federally listed, proposed, and Candidate animal species under the jurisdiction of the NMFS
- Noxious weed lists maintained by the U.S. Department of Agriculture, California Department of Food and Agriculture, and the California Invasive Plant Council
- Soils records maintained by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS, 2022)

The field surveys were conducted on March 23, April 8, June 28, 2021, as well as April 7, May 19, and November 14, 2022. Most special-status species potentially occurring on the site would have been evident at the time the fieldwork was conducted; presence/absence of those special-status species that would not have been apparent could readily be determined based on habitat characteristics.

Natural Communities

The site is primarily comprised of open grassland, including minor components of wetlands and riparian vegetation. Wetlands are primarily limited to the southern portion of the site (PM 0.0 to 5.0); riparian vegetation occurs along the major streams listed in the Environmental Setting section. Herbaceous species within the open grassland include Italian wild rye, medusahead, soft chess brome, red brome, and ripgut brome. Representative wetland species include creeping spikerush, coyote thistle, popcorn flower, and white-flowered navarretia. Riparian vegetation is represented by Himalayan blackberry, elderberry, willow, and cottonwood.

Open grassland is not considered a sensitive natural community, while wetlands, streams, and riparian areas are considered sensitive natural communities. Additionally, based on the results of the field surveys, including the CNDDB records search, the following sensitive communities were observed on the project site: Central Valley Drainage Fall Run Chinook Stream, Central Valley Drainage Valley Floor River, Great Valley cottonwood riparian forest, Great Valley mixed riparian forest, Great Valley oak riparian forest, and Great Valley willow scrub. The USFWS does not identify any designated critical habitats for federally listed species within the study area.

Wetlands and Other Waters

The records review showed that the southern portion of the site supporting wetlands (approximately PM 0.0 to 5.0) is comprised of three soil series complexes: Tuscan,

Molinos, and Anita. Northern hardpan vernal pools are typically found in these complexes, which are formed on alluvial terraces with silicate-cement soil layers. Clay particles sort out and accumulate forming a claypan layer that becomes impermeable when saturated.

During the field review, Caltrans identified multiple streams (i.e., other waters) that bisect the site via bridges and culverts. On-site streams flow west across the site and ultimately discharge to the Sacramento River. No work is proposed in wetlands or streams.

Threatened and Endangered Species

This section addresses plant and animal species that are listed as "threatened" or "endangered" under the Federal or State Endangered Species Acts, including Federally threatened (FT), Federally endangered (FE), and State endangered (SE).

According to the records search, five listed plant species have the potential to occur in the project area. Based on habitat requirements, all five species have the potential to occur on the project site.

- Boggs Lake hedge hyssop
  (State endangered, CNPS 1B.2)
- Greene's tuctoria
  (Federal endangered, State Rare, CNPS 1B.1)
- Hairy Orcutt grass
  (Federal endangered, State endangered, CNPS 1B.1)
- Hoover's spurge
  (Federal threatened, CNPS 1B.2)
- Slender Orcutt grass
  (Federal threatened, State endangered, CNPS 1B.1)

According to the records search, 14 listed animal species have the potential to occur in the project area. Based on habitat requirements, nine species have the potential to occur on the project site.

- California Central Valley steelhead trout
  (Federal threatened)
- Central Valley spring-run Chinook salmon
  (Federal threatened, State threatened)

- Conservancy fairy shrimp
(Federal endangered)
- Sacramento River winter-run Chinook salmon
(Federal endangered, State endangered)
- Swainson's hawk
(State threatened)
- Tricolored blackbird
(State threatened, SSSC)
- Valley elderberry longhorn beetle
(Federal threatened)
- Vernal pool fairy shrimp
(Federal threatened)
- Vernal pool tadpole shrimp
(Federal endangered)

See Appendix C, Table 1 for an evaluation of the potential for each listed species to occur on the project site.

Plant Species

This section addresses special-status plant species, including CDFW species of special concern, USFWS Candidate and sensitive species, and CNPS rare and endangered plants.

According to the records search, 14 special-status plant species have been reported within the project area. Based on habitat requirements, the following 11 species have the potential to occur on the project site:

- Adobe lily
(CNPS 1B.2)
- Adobe navarretia
(CNPS 4.2)
- Ahart's paronychia
(CNPS 1B.1)
- Coulter's goldfields
(CNPS 1B.1)
- Depauperate milk-vetch
(CNPS 4.3)
- Dwarf downingia
(CNPS 2B.2)
- Hogwallow starfish
(CNPS 4.2)
- Shield-bracted monkeyflower
(CNPS 4.3)
- Silky cryptantha
(CNPS 1B.2)
- Tehama navarretia
(CNPS 4.3)
- Woolly meadowfoam
(CNPS 4.2)

See Appendix C, Table 1 for an evaluation of the potential for each special-status plant species to occur on the project site.

Animal Species

This section addresses special-status animal species, including CDFW State species of special concern (SSSC), USFWS and NMFS Federal candidate (FC) species, and State candidate (SC) species.

According to the records search, four special-status animal species have the potential to occur in the project area. Based on habitat requirements, two species have the potential to occur on the project site:

- Foothill yellow-legged frog (SSSC)
- Western pond turtle (SSSC)

See Appendix C, Table 1 for an evaluation of the potential for each special-status animal species to occur on the project site.

Under the Migratory Bird Treaty Act (MBTA) of 1918, as amended, migratory bird species listed in CFR Title 50, §10.13, including their nests and eggs, are protected from injury or death, and any project related disturbances. The MTBA applies to over 1,000 bird species, including geese, ducks, shorebirds, raptors, songbirds, and other bird species that were near extinction before MBTA protections were put in place in 1918. The MTBA also provides protections for native bird species, including non-migratory birds.

Invasive Species

The project site is known to support invasive species. Implementation of Standard Measure BR-3 (Section 1.4) would serve to minimize the introduction and/or spread of invasive species.

2.4.3 Discussion of CEQA Question 2.4a)—Biological Resources

a) Would 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 Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries/NMFS?

Threatened and Endangered Species

As described in the Environmental Setting section, based on the records search, 19 listed species, 5 plants and 14 animals, have the potential to occur in the project area. Listed plants include Boggs Lake hedge hyssop, Greene's tuctoria, hairy Orcutt grass, Hoover's spurge, and slender Orcutt grass. As documented in Appendix C, Table 1, listed plant species would not be present. Further, through consultation with the USFWS (consultation history provided in Table 7), highway widening activities were designed to avoid listed plant species habitat (i.e., wetlands) that abut the highway. To avoid widening the fill slope, Caltrans would steepen existing slopes, as well as install rail element walls. Additionally, guardrail/posts would be installed in locations that would avoid direct impacts to wetland bottoms (i.e., puncture the bottom, causing the wetland to drain). With implementation of Mitigation Measure 1 (see Section 2.4.10), listed plant species habitat (vernal pool bottoms/margins) would not be impacted during project implementation. Thus, potential impacts to listed plant species/habitat would be less than significant with mitigation.

The following listed animals have the potential to occur in the project area: bank swallow, California Central Valley steelhead trout, Central Valley spring-run Chinook salmon, Conservancy fairy shrimp, delta smelt, green sturgeon, least Bell's vireo, Sacramento River winter-run Chinook salmon, Swainson's hawk, tricolored blackbird, valley elderberry longhorn beetle, vernal pool fairy shrimp, vernal pool tadpole shrimp, and western yellow-billed cuckoo.

Conservancy fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp occur in wetlands, which would be fully avoided through implementation of Mitigation Measure 1. California Central Valley steelhead trout, Central Valley spring-run Chinook salmon, least Bell's vireo, and Sacramento River winter-run Chinook salmon occur in streams or riparian areas. Tricolored blackbird primarily occur near open water; generally constructing their nests in dense cattails or tules. Additionally, elderberry shrubs (host plant of the valley elderberry longhorn beetle) were observed within riparian areas.

The initial broadband alignment included mounting conduit to the eastern portion of select bridges. This design required access road construction within streams, as well

as riparian vegetation removal along the stream bottom and abutting areas. As documented in Mitigation Measure 2 (see Section 2.4.10), to avoid these resources, the design was updated to reflect directional boring. Using this installation method, on-site streams, riparian vegetation, and the elderberry shrubs would be fully avoided. Due to the lack of breeding habitat (i.e., stands with few trees), Swainson's hawk would not occur on the project site. Due to the lack of suitable habitat (e.g., deep/large cobble streams, vertical banks near streams, dense cattails and tules, and extensive deciduous riparian thickets with a dominant willow component), the remaining species would not be present. The potential for listed animal species to occur on the project site is documented in Appendix C, Table 1.

With implementation of Mitigation Measure 2, streams, riparian vegetation, and elderberry shrubs occurring in riparian areas would not be impacted during project implementation. Thus, potential impacts to listed plant species/habitat would be less than significant with mitigation.

Based on the results of the records search and habitat evaluation, as well as implementation of the above mitigation measures, site development would not result in substantial adverse effects, either directly or through habitat modifications, of any listed plant or animal species. Impacts are considered less than significant with mitigation.

Plant Species

As described in the Environmental Setting section, based on the records search, 14 special-status plant species have the potential to occur on the project site: Adobe lily, Adobe navarettia, Ahart's paronychia, Bidwell's knotweed, Coulter's goldfields, depauperate milk vetch, dwarf downingia, hogwallow starfish, Sanford's arrowhead, shield-bracted monkey flower, silky cryptantha, Stony Creek spurge, Tehama navarretia, and woolly meadowfoam.

The site provides marginal habitat for Adobe lily, Bidwell's knotweed, depauperate milk-vetch, hogwallow starfish, Stony Creek spurge, and Tehama navarretia. With project activities limited to the road prism (i.e., paved roadway and disturbed fill slopes), and that these species were not observed during the botanical surveys, these species would not be impacted. The site does not support marshes or swamps; therefore, Sanford's arrowhead would not be present. With implementation of Mitigation Measures 1 and 2 (i.e., avoidance of wetlands, streams, and riparian

areas), the remaining species would not be affected. The potential for listed plant species to occur on the project site is documented in Appendix C, Table 1.

Animal Species

As described in the Environmental Setting section, based on the records search, four special-status animal species have the potential to occur on the project site: foothill yellow-legged frog, Monarch butterfly, western pond turtle, and western spadefoot. As documented in Appendix C, Table 1, foothill yellow-legged frog, monarch butterfly, and western pond turtle would not be impacted based on the following: 1) lack of suitable breeding habitat (i.e., milkweed), or 2) on-site habitat would not be impacted during construction (i.e., streams would be avoided). Western spadefoot would not be present due to the lack of breeding habitat (i.e., temporary ponds) and that ground disturbance would be limited to the road prism (i.e., avoiding non-breeding habitat). As described in Mitigation Measure 1, project implementation would not impact suitable habitat, nor would it result in habitat modifications; thus, impacts would be less than significant with mitigation.

Based on the results of the records search and habitat evaluation, as well as implementation of Mitigation Measures 1 and 2, site development would not result in substantial adverse effects, either directly or through habitat modifications, of any special-status plant or animal species. Impacts are considered less than significant with mitigation.

2.4.4 Discussion of CEQA Question 2.4b)—Biological Resources

b) Would the project 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?

Natural Communities

The project site supports wetlands, streams, and riparian vegetation, including communities identified by the California Department of Fish and Wildlife, which are considered sensitive natural communities. As proposed, shoulder widening activities adjacent to wetlands would include steepening road shoulder slopes, installing rail element walls, and locating guardrail/posts as to not impact wetland bottoms (Mitigation Measure 1). These design elements allow for shoulder improvements without widening the fill prism. Thus, wetlands would be avoided.

To avoid larger streams/riparian vegetation (Singer Creek, Deer Creek, Deer Creek Overflow, and Champlin Slough), identified by CDFW as sensitive natural communities, broadband installation would occur through directional boring (Mitigation Measure 2). No work is proposed in lesser streams regulated by the California Department of Fish and Wildlife.

As documented in Mitigation Measures 1 and 2, design elements were incorporated into the project scope to avoid sensitive natural communities. Thus, impacts would be less than significant with mitigation.

2.4.5 Discussion of CEQA Question 2.4c)—Biological Resources

c) Would the project 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?

Wetlands

As discussed in Question A above, Mitigation Measure 1 has been incorporated into the project design to avoid wetlands.

Thus, impacts to wetlands would be less than significant with mitigation.

2.4.6 Discussion of CEQA Question 2.4d)—Biological Resources

d) Would the project 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?

Animal Species

Wildlife nursery sites in the project vicinity may include deer fawning grounds and bird nesting habitats. However, with SR 99 bisecting the site, there is a low potential for abutting areas to serve as an important nursery site or wildlife corridor. With respect to migratory fish, with full avoidance of larger streams, resident and migratory fish would not be affected. Based on the above information, the proposed improvements would not further affect wildlife passage.

The project area is located within the Pacific Flyway, and it is possible that migratory birds could nest in or adjacent to the project area. However, with vegetation removal occurring outside the migratory bird nesting season, as required by Standard Measure BR-2 (Section 1.4), migratory bird nests would be not directly impacted.

If vegetation removal activities occur during the bird nesting season, a nesting survey would be conducted within one week prior to removal of vegetation.

If active nests are found in the project area, a qualified biologist would establish appropriate species-specific buffer(s) and any monitoring requirements. The buffer would be delineated around each active nest, and construction activities would be excluded from these areas until birds have fledged, or the nest is determined to be unoccupied. Compliance measures may include, but are not limited to, exclusion buffers and ongoing monitoring by biologists.

Therefore, because site development would not further impede wildlife movement, and Standard Measure BR-2 would reduce the potential for adversely affecting nesting birds, the proposed project would have a less than significant impact on the movement of wildlife species and would not significantly impact migratory wildlife corridors or native wildlife nursery sites.

2.4.7 Discussion of CEQA Question 2.4e)—Biological Resources

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The project site occurs on lands managed by the State of California (i.e., Caltrans), which is not subject to local policies or ordinances. Therefore, there would be no conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Thus, there would be no impact.

2.4.8 Discussion of CEQA Question 2.4f)—Biological Resources

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

A Habitat Conservation Plan (HCP) is a federal planning document that is prepared pursuant to Section 10 of the FESA. A Natural Community Conservation Plan (NCCP) is a State planning document administered by CDFW. No HCPs or NCCPs

occur on the project site or in the surrounding area. The Nature Conservancy, a non-profit organization, owns and maintains the Vina Plains Preserve, which occurs on both sides of SR 99 between Haille and Rowles Roads (PM 0.6 to PM 2.8). The Preserve serves to protect annual grasslands and vernal pools located on the upper terrace of the Sacramento Valley. As proposed, highway rehabilitation activities occurring in this area would be limited to Caltrans right-of-way. The proposed work would not directly or indirectly affect Preserve lands. Given the absence of HCPs and NCCPs in the project vicinity, and that project activities would not impact the Vina Plains Preserve, there would be no conflict with an HCP, NCCP, or other approved local, regional, or State habitat conservation plan. Thus, there would be no impact.

2.4.9 Cumulative Impacts

As proposed, the project would avoid direct impacts to natural communities, wetlands and other waters, special-status species, and listed species. With respect to potential indirect impacts, project implementation would result in a minor loss of nesting habitat (i.e., tree removal) for migratory birds. However, the loss of nesting habitat would be minimal and when these impacts are considered along with similar impacts resulting from other Caltrans projects on SR 99 in Tehama County constructed in the last 20 years or that are reasonably foreseeable, they would not contribute to have an adverse cumulative impact. Therefore, the project's impact on biological resources would be individually limited but not cumulatively considerable.

2.4.10 Mitigation Measures

The following mitigation measures have been incorporated into the project to reduce impacts to a less-than-significant level.

Mitigation Measure 1

To mitigate for the presence of listed shrimp habitat (i.e., wetlands), including listed vernal pool plant species that have the potential to occur in on-site wetlands, Caltrans incorporated the following design elements into the project scope:

- Steepen road shoulder fill slopes to allow for shoulder widening within the existing road prism
- Install guardrail/posts in locations that would avoid direct impacts to wetland bottoms (i.e., puncture the bottom, causing the wetland to drain) and/or areas contributing flow to these features

- Install rail element walls, which serve to retain shoulder widening fill without widening the existing fill prism

Mitigation Measure 2

As summarized below, to mitigate for the presence of listed animal species that have the potential to occur in streams, riparian vegetation, and/or elderberry shrubs, Caltrans revised the broadband design to fully avoid these resources:

- Update Broadband Alignment

  As part of the original broadband design, conduit would be attached to the eastern portion of on-site bridges. This design required access road construction within streams, as well as riparian vegetation removal along the stream bottom and abutting areas. To avoid these resources, the design was updated to reflect directional boring. Using this installation method, on-site streams and associated riparian vegetation would be fully avoided.

- Relocate Directional Boring Pits

  The initial boring pit locations were sited in areas supporting elderberry shrubs, which would require trimming and/or removal. The pits were relocated to fully avoid elderberry shrubs.

2.5 Cultural Resources

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

2.5.1 Regulatory Setting

The term “cultural resources,” as used in this document, refers to the built environment (e.g., structures, bridges, railroads, water conveyance systems), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under California State laws, cultural resources that meet certain criteria of significance are referred to by various terms including “archaeological resources,” “historic resources,” “historic districts,” “historical landmarks,” and “tribal cultural resources” as defined in PRC § 5020.1(j) and PRC § 21074(a). The primary State laws and regulations governing cultural resources include:

- California Historical Resources, PRC 5020 et seq.
- California Register of Historical Resources, PRC 5024 et seq. (codified 14 CCR § 4850 et seq.)
    - PRC 5024, Memorandum of Understanding: The MOU between Caltrans and the State Historic Preservation Officer streamlines the PRC 5024 process.

- California Environmental Quality Act, PRC § 21000 et seq. (codified 14 CCR § 15000 et seq.)
- Native American Historic Resource Protection Act, PRC § 5097 et seq.
- Assembly Bill (AB) 52, amends California Environmental Quality Act and the Native American Historic Resource Protection Act
    - An effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment.
    - Additional consultation guidelines and timeframes.
- California Native American Graves Protection and Repatriation Act, CA Health and Safety Code 8010-8011

2.5.2 Environmental Setting

The project area occurs within the aboriginal territory of the Paskenta Band of Nomlaki Indians. Historically, the Sacramento River in the City of Red Bluff served as a major hub for steamboats transporting goods and people in support of mining activities occurring in Shasta and Tehama Counties. Today, Tehama County continues to support various sand and gravel extraction operations.

An Archaeological Survey Report (ASR) (Caltrans, 2022d) was completed for the proposed project by Caltrans. The study included a records search, Native American consultation, and field evaluation.

Area of Potential Effects (APE)

The horizontal APE extends from PM 0.0 to 12.5 and encompasses most of the Caltrans right-of way. The vertical APE (i.e., associated with the potential for buried cultural resources) is based upon the existing topography, geological history, site development history, and the engineering design of the project. The vertical APE for the proposed project is anticipated to be no more than 10 feet.

Field Survey

Archaeological fieldwork took place on January 11 and 19, 2022. Culvert, staging, bridge, and creek locations were surveyed in transects. Ground visibility was estimated between 10 and 35 percent.

Records Search

The Northeast Information Center/California Historic Resources Information System (NEIC/CHRIS) provided the results of the records search on February 22, 2022, which covered an approximate quarter-mile radius around the APE for previously recorded archaeological sites and for previously conducted surveys. The size and scope of the search area was determined to be sufficient based on the results.

Native American Consultation

In response to Caltrans's request for information on the APE, on April 4, 2022, the Native American Heritage Commission (NAHC) conducted a search of the Sacred Lands File; the search identified a known Native American sacred site or cultural resource in the project area. The NAHC also provided contact information for the Paskenta Bank of Nomlaki Indians, who were subsequently contacted through various means, with requests to provide comments on the proposed project. To date, no comments or concerns have been received regarding the project.

2.5.3 Discussion of CEQA Question 2.5—Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

The cultural resources study included literature and records review of the project area, Native American outreach, and an archaeological field survey of the project area. The purpose of these efforts was to identify and evaluate any cultural resources that may exist within the project area and to assess any effects that the project might have related to the cultural resources.

Based on the results of the records search and field review, the site does not support historical resources. Because the project APE does not contain historic resources listed or eligible for listing on the California Register of Historical Resources, the project would have no impact to historical resources pursuant to § 15064.5. Thus, there would be no impact.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Based on the results of the records search and field review, the site supports two archaeological resources. It is Caltrans' policy to avoid cultural resources whenever possible. To ensure the project would have no adverse effects on archaeological resources, as discussed in Section 1.4, Caltrans would install Environmentally Sensitive Area fencing (Standard Measure CR-1) to address known resources. Further, Caltrans would implement Standard Measure CR-2 to ensure no adverse effects to unknown archaeological resources. With implementation of CR-1 and CR-2, the project would not cause a substantial adverse change to an archaeological resource. Thus, impacts would be less than significant.

c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

The project area does not include any known cemeteries, burial sites, or human remains. Caltrans would implement Standard Measure CR-3 in the unlikely event human remains are encountered. The project is not expected to disturb any human remains, including those interred outside of dedicated cemeteries. Thus, there would be no impact.

2.5.4 Cumulative Impacts

The project's impact on cultural resources would be minimal and when these impacts are considered along with impacts on cultural resources resulting from other Caltrans projects on SR 99 in Tehama County constructed in the last 20 years or that are reasonably foreseeable, they would not contribute to have an adverse cumulative impact. Therefore, the project's impact on cultural resources would be individually limited but not cumulatively considerable.

2.5.5 Mitigation Measures

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

2.6 Energy

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

2.6.1 Regulatory Setting

CEQA Guidelines Section 15126.2(b) and CEQA Guidelines Appendix F—Energy Conservation require an analysis of a project's energy use to determine if the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources.

2.6.2 Environmental Setting

The project site is primarily comprised of SR 99. Energy use in the project area is affected by the volume of SR 99 through traffic and minor street lighting in the community of Los Molinos.

2.6.3 Discussion of CEQA Question 2.6—Energy

a) Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?

An Energy Analysis Report was prepared for the project (Caltrans, 2022e). Project implementation would result in construction and operational energy usage. During construction, there would be a minor short-term increase in energy use due to the operation of construction vehicles/equipment, and from vehicles idling at one-way reversing traffic controls (the idling of vehicles is an inefficiency in energy use).

Additionally, the as-built project would result in a minor increase in energy consumption resulting from streetlight installation/usage. The proposed lighting would not be wasteful or inefficient. The purpose of the lighting is to improve pedestrian and vehicle safety within Los Molinos. The minor temporary increase in energy usage associated with construction activities, including the operation of streetlighting would result in a less-than-significant impact.

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

As proposed, new energy usage associated with the project is limited to a minor amount of street lighting. The proposed street lighting would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Thus, there would be no impact.

2.6.4 Cumulative Impacts

The project's impact on energy resources would be minimal and when these impacts are considered along with impacts on energy resources resulting from other Caltrans projects on SR 99 in Tehama County constructed in the last 20 years or that are reasonably foreseeable, they would not contribute to have an adverse cumulative impact. Therefore, the project's impact on energy resources would be individually limited but not cumulatively considerable.

2.6.5 Mitigation Measures

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

2.7 Geology and Soils

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				✓
ii) Strong seismic ground shaking?				✓
iii) Seismic-related ground failure, including liquefaction?				✓
iv) Landslides?				✓
Would the project: b) Result in substantial soil erosion or the loss of topsoil?			✓	
Would the project: c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				✓
Would the project: d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				✓
Would the project: 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?				✓

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

2.7.1 Regulatory Setting—Geology and Soils

The primary laws governing geology and soils include:

- Historic Sites Act of 1935, 16 U.S.C. 461 et seq.
- CEQA, California Public Resources Code (PRC) 21000

2.7.2 Environmental Setting—Geology and Soils

The project site is located in the upper Sacramento Valley. The surrounding geology dates to the Pleistocene to Holocene periods. The underlying geology in the project area consists of marine and non-marine sedimentary rocks (California Department of Conservation, 2022b).

The project site supports the following soil series: Anita, Berrendos, Bosequejo, Columbia, Inks, Keefers, Los Robles, Molinos, Tuscan, and Vina.

2.7.3 Discussion of CEQA Questions 2.7 (a–e)—Geology and Soils

a) Would the project 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.

According to the Alquist-Priolo Earthquake Fault Zoning Maps (California Department of Conservation, 2022c), the closest known fault is the Bangor Fault Zone, located approximately 39 miles southeast of the project area near the

community of Oroville. Given the absence of known earthquake faults in the area, the project would not result in a rupture. Thus, there would be no impact.

ii) Strong seismic ground shaking?

According to seismic ground shaking data maintained by the California Department of Conservation (California Department of Conservation, 2022d), the potential for strong seismic ground shaking is low. Based on the project location and work scope, the project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction?

Liquefaction results from an applied stress on the soil, such as earthquake shaking or other sudden change in stress condition, and is primarily associated with saturated, cohesionless soil layers located close to the ground surface. During liquefaction, soils lose strength and ground failure may occur. This is most likely to occur in alluvial (geologically recent, unconsolidated sediments) and stream channel deposits, especially when the groundwater table is high. According to data maintained by the California Department of Conservation (California Department of Conservation, 2022e), California regions susceptible to liquefaction are limited to the San Francisco Bay Area and the Los Angeles Basin. Thus, there is no potential for impacts resulting from seismic-related ground failure, including liquefaction.

iv) Landslides?

The project site occurs in the upper Sacramento Valley, which is relatively flat. Based on data maintained by the Department of Conservation (2022f), the project site does not occur within a mapped slide area. Further, the nearest mapped slide area is located approximately 100 miles to the west. Thus, the project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Project activities would primarily be performed within the existing road prism, minimizing the potential for substantial soil erosion or the loss of topsoil. Additionally, BMPs for erosion and sediment control would be implemented in accordance with standard practices. Further, Caltrans would obtain coverage under the State's

Construction General Permit, which requires development of a Storm Water Pollution Prevention Plan (SWPPP) that includes BMPs to control erosion and sedimentation and prevent damage to streams, watercourses, and aquatic habitat. With implementation of Caltrans standard erosion and sediment control practices, as well as coverage under the State's Construction General Permit, the potential for soil erosion and loss of topsoil would be less than significant.

c) Would the project 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?

On-site slope stability is addressed in Question a(iv) above. Considering site topography, the absence of slides in the surrounding area, and implementation of Standard Measure GS-1 (Section 1.4), the project would not result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse. Thus, there would be no impact.

d) Would the project 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?

Some soils have a potential to swell when they absorb water and shrink when they dry out. These expansive soils generally contain clays that expand when moisture is absorbed into the crystal structure. When these soils swell, the change in volume can exert significant pressure on loads that are upon them. A soil's shrink-swell potential is determined through linear extensibility. Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. The amount and type of clay minerals in the soil influence the change in volume. According to data maintained by the Natural Resource Conservation Service (NRCS, 2021), the linear extensibility of on-site soils is considered low to moderate. Road rehabilitation would primarily occur within the existing road prism, which is constructed on fill and overtopped with pavement (i.e., impervious surface). Based on the above information, the proposed project would not create substantial risks to life or property. Therefore, there would be no impact.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The proposed project does not include the installation or use of alternative wastewater disposal systems. Therefore, there would be no impact.

2.7.4 Cumulative Impacts

The project's impact on geology and soils would be minimal and when these impacts are considered along with impacts on geology and soils resulting from other Caltrans projects on SR 99 in Tehama County constructed in the last 20 years or that are reasonably foreseeable, they would not contribute to have an adverse cumulative impact. Therefore, the project's impact on geology and soils would be individually limited but not cumulatively considerable.

2.7.5 Mitigation Measures—Geology and Soils

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

2.7.6 Regulatory Setting—Paleontological Resources

Several sections of the California Public Resources Code protect paleontological resources, including Sections 5097.5 and 30244.

2.7.7 Environmental Setting—Paleontological Resources

Paleontological resources and fossils are found primarily in sedimentary rock deposits. According to the California Geological Survey (CGS), rock formations on the project site consist of marine and non-marine (continental) sedimentary rocks.

2.7.8 Discussion of CEQA Question 2.7 (f)—Paleontological Resources

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Paleontological resources include fossils and the deposits that contain fossils. Fossils are evidence of ancient life preserved in sediments and rock, such as the remains of animals, animal tracks, plants, and other organisms. According to the Department of Conservation, rock formations within the project site are relatively young, dating to the Pleistocene-Holocene periods. Generally speaking, the parent material of on-site soils consists of alluvium derived from sedimentary rock. Younger alluvial deposits generally have a low potential to harbor paleontological resources because they consist of sediments that are too young to produce fossils. Further, the project area has no unique geological features, and the majority of work would be

conducted in previously disturbed areas. The project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Thus, there would be no impact.

2.7.9 Mitigation Measures—Paleontological Resources

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

2.8 Greenhouse Gas Emissions

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

2.8.1 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy. Climate change in the past has generally occurred gradually over millennia, or more suddenly in response to cataclysmic natural disruptions. The research of the Intergovernmental Panel on Climate Change and other scientists over recent decades, however, has unequivocally attributed an accelerated rate of climatological changes over the past 150 years to GHG emissions generated from the production and use of fossil fuels.

Human activities generate GHGs consisting primarily of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), and various hydrofluorocarbons (HFCs). CO_2 is the most abundant GHG; while it is a naturally occurring and necessary component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO_2 that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of GHG emissions, mostly CO_2.

The impacts of climate change are already being observed in the form of sea level rise, drought, extended and severe fire seasons, and historic flooding from changing storm patterns. The most important strategy to address climate change is to reduce

GHG emissions. Additional strategies are necessary to mitigate and adapt to these impacts. In the context of climate change, “mitigation” involves actions to reduce GHG emissions to lessen adverse impacts that are likely to occur. “Adaptation” is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation project.

2.8.2 Regulatory Setting

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

Federal

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

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

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

The federal government has taken steps 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) as amended by the Energy Independence and Security Act (EISA) of 2007; and Corporate Average Fuel Economy (CAFE) Standards. This act established fuel economy standards for on-road motor vehicles sold in the United States. The U.S. Department of Transportation's National Highway Traffic and Safety Administration (NHTSA) sets and enforces the CAFE standards based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States. The Environmental Protection Agency (U.S. EPA) calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards under the Clean Air Act. Raising CAFE standards leads automakers to create a more fuel-efficient fleet, which improves our nation's energy security, saves consumers money at the pump, and reduces GHG emissions (U.S. DOT 2014).

U.S. EPA published a final rulemaking on December 30, 2021, that raised federal GHG emissions standards for passenger cars and light trucks for model years 2023 through 2026, increasing in stringency each year. This rulemaking revised lower emissions standards that had been previously established for model years 2021 through 2026 in the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part Two in June 2020. The updated standards will result in avoiding more than 3 billion tons of GHG emissions through 2050 (U.S. EPA 2021a).

State

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

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

Assembly Bill (AB) 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals outlined in EO S-3-05, while further mandating that the California Air Resources Board (CARB) 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 CARB to adopt rules and

regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

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

Senate Bill (SB) 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires CARB 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 CARB, 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 CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent ($MMTCO_2e$). GHGs differ in how much heat each traps in the atmosphere, called global warming potential, or GWP. CO_2 is the most important GHG, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent," or

CO2e. The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2. 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."

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

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

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

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

2.8.3 Environmental Setting

The proposed project is in a rural area, with an economy based on natural resources and agriculture. SR 99 is the main transportation route to and through the area for both passenger and commercial vehicles. The nearest alternate route is Interstate 5, located approximately seven miles to the west. Traffic counts are low. Railroad tracks running parallel to the SR 99 right-of-way regularly carry passenger and freight trains. The Tehama County Transportation Commission guides transportation development in the project area. The Tehama County General Plan Open Space and Conservation element addresses GHGs in the project area.

GHG Inventories

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 CARB does so for the state, as required by H&SC Section 39607.4. Cities and other local jurisdictions may also conduct local GHG inventories to inform their GHG reduction or climate action plans.

National GHG Inventory

The annual GHG inventory submitted by the U.S. EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. The 1990-2019 inventory found that overall GHG emissions were 6,558 million metric tons (MMT) in 2019, down 1.7 percent from 2018 but up 1.8% from 1990 levels. Of these, 80 percent were CO_2, 10 percent were CH_4, and 7 percent were N_2O; the balance consisted of fluorinated gases. CO_2 emissions in 2019 were 2.2 percent less than in 2018, but 2.8 percent more than in 1990. As shown on Figure 3, the transportation sector accounted for 29 percent of U.S. GHG emissions in 2019 (U.S. EPA 2021b, 2021c).

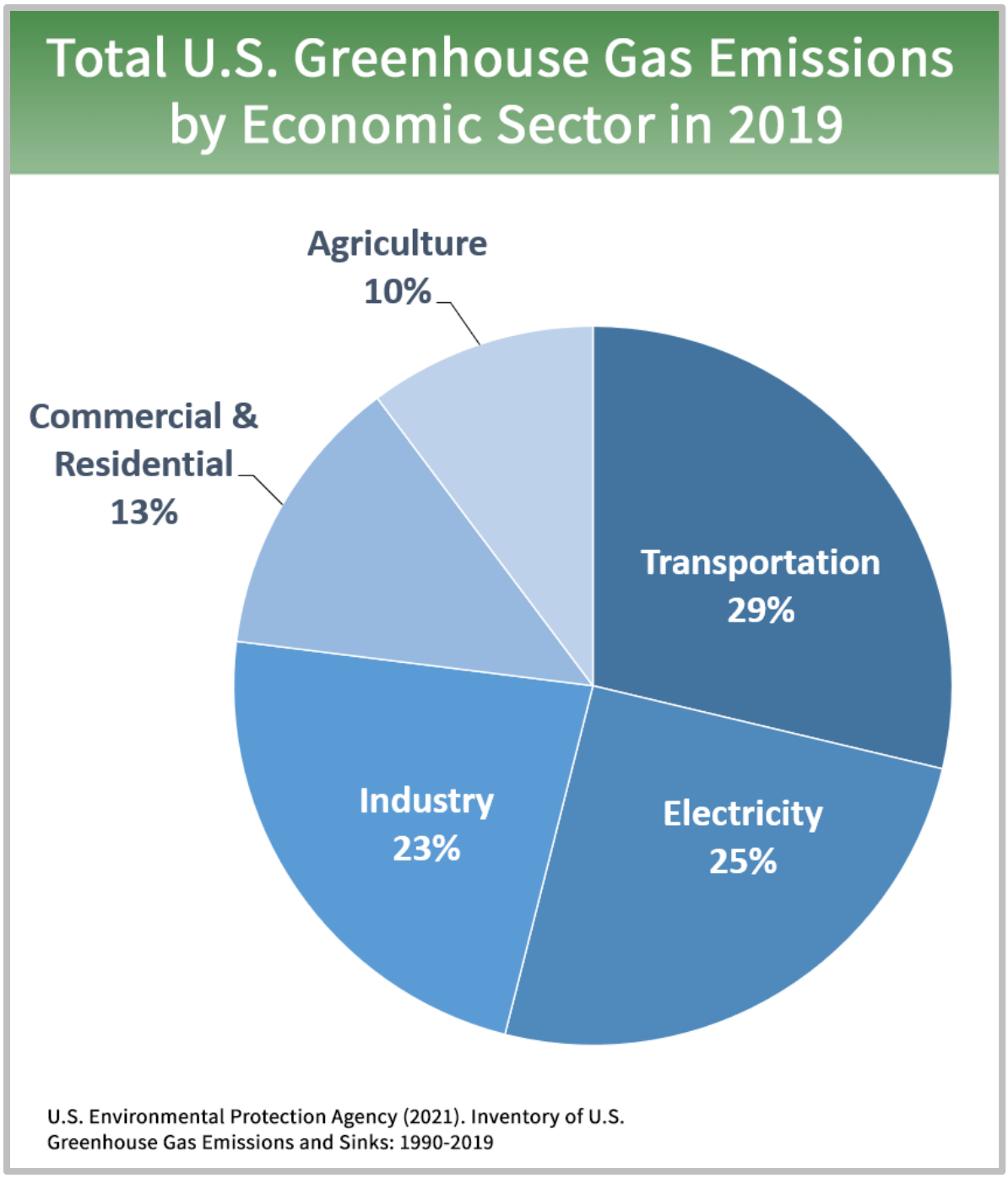

Figure 3. U.S. 2019 Greenhouse Gas Emissions (Source: U.S. EPA 2021d)

State GHG Inventory

CARB 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 2021 edition of the GHG emissions inventory reported emissions trends from 2000 to 2019. It found total California emissions were 418.2 $MMTCO_2e$ in 2019, a reduction of 7.2 $MMTCO_2e$ since 2018 and almost 13 $MMTCO_2e$ below the statewide 2020 limit of 431 $MMTCO_2e$. The transportation sector (including intrastate aviation and off-road sources) was responsible for about 40 percent of direct GHG emissions, a 3.5 $MMTCO_2e$ decrease from 2018 (Figure 4). Overall statewide GHG emissions declined from 2000 to 2019 despite growth in population and state economic output (Figure 5) (CARB 2021a).

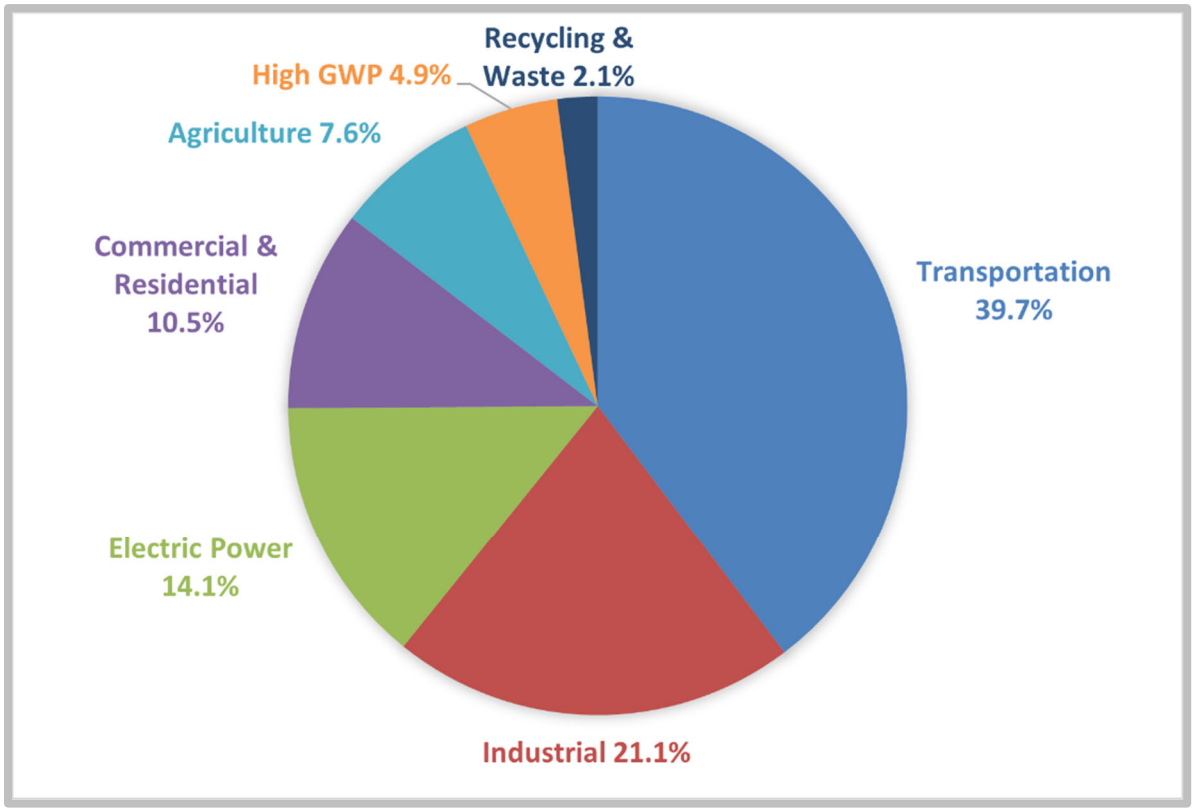

Figure 4. California 2019 Greenhouse Gas Emissions by Economic Sector

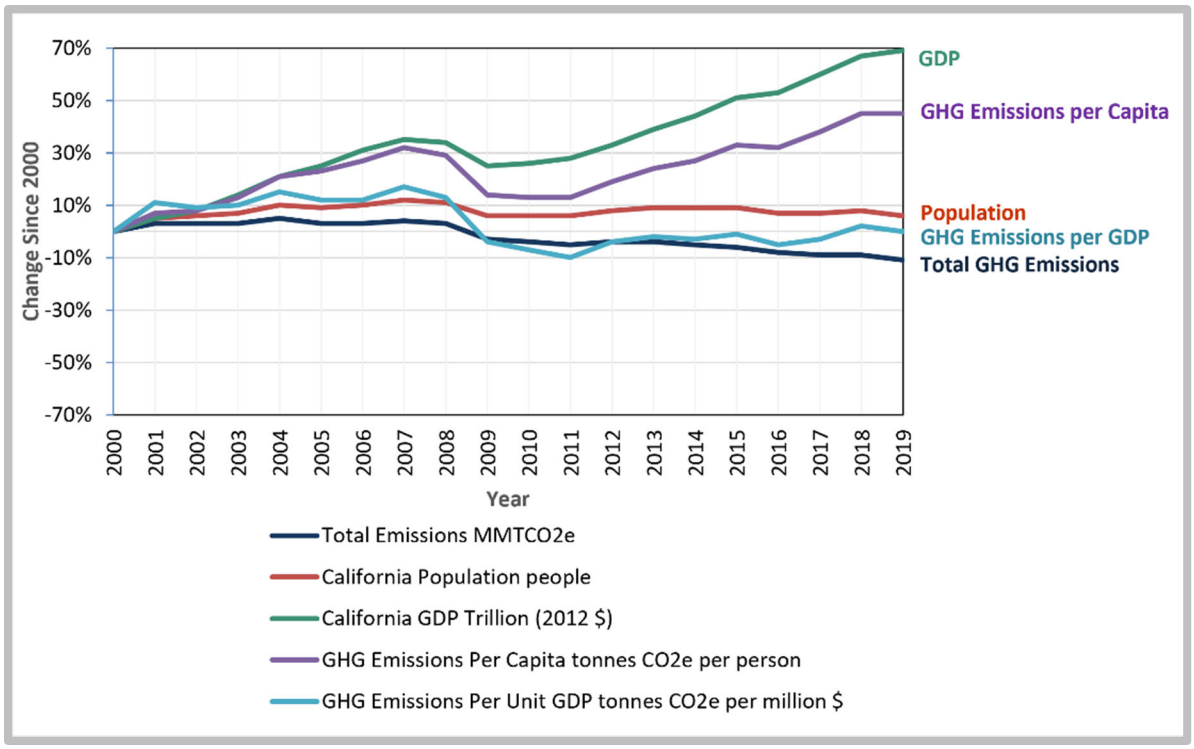

Figure 5. Change in California GDP, Population, and GHG Emissions since 2000 (Source: CARB 2021a)

AB 32 required CARB 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. CARB 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

CARB sets regional GHG reduction targets for California's 18 metropolitan planning organizations (MPOs) to achieve through planning future projects that will cumulatively achieve those goals, and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The project area is not within the jurisdiction of an MPO and therefore not subject to CARB GHG reduction targets. However, the Tehama County Transportation Commission is the regional transportation planning agency (RTPA) for the project area. The 2019 Tehama County RTP identifies several GHG Reduction policies strategies, which are provided in Table 5.

Table 5. Regional and Local Greenhouse Gas Reduction Plans

Title	GHG Reduction Policies or Strategies
Tehama County Transportation Commission *2019 Tehama County Regional Transportation Plan* (adopted May 2019 – Amended April 2020)	Policy Element - Regional Goals: • Goal 1: Provide and maintain a safe and efficient transportation system for the movement of people and goods within the region and connect to points beyond. • Goal 6: Create vibrant, people-centered communities. • Goal 7: Provide an integrated, multimodal range of practical transportation choices.
Tehama County Transportation Commission *2019 Active Transportation Plan* (adopted May 2019 – Amended April 2020)	Goals 1 through 9. Efforts to enhance walking, biking, and multimodal mobility throughout Tehama County.
Tehama County General Plan (adopted March 2009)	Open Space and Conservation Element

2.8.4 Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation of the State Highway System (SHS) (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH_4 and N_2O. A small amount of HFC emissions related to refrigeration is also included in the transportation sector.

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

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

Operational Emissions

The purpose of the proposed project is to perform pavement rehabilitation activities, which would not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the project would not increase the number of travel lanes on SR 99, no increase in vehicle miles traveled (VMT) would occur. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

Construction Emissions

Construction GHG emissions would result from material processing and transportation, 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.

Use of long-life pavement, improved traffic management plans, and changes in materials, can also help offset emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

The Caltrans Construction Emission Tool (CAL-CET2020) was used to estimate average carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and hydrofluorocarbons (HFCs) emissions from construction activities (Caltrans, 2022b). Table 6 summarizes estimates of GHG emissions during the construction period for the project.

Table 6. Maximum Greenhouse Gas Emissions from Construction

Construction Year 2024	CO_2	CH_4	N_2O	HFC	CO_2e
Total: (U.S. Tons)	687	0.021	0.040	0.029	797.976

The following standards would be included in the project scope:

- 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 CARB emission reduction regulations.

- Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes.
- Common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.

CEQA Conclusion

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

Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

2.8.5 Greenhouse Gas Reduction Strategies

Statewide Efforts

In response to AB 32, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Climate change programs in California are effectively reducing GHG emissions from all sectors of the economy. These programs include regulations, market programs, and incentives that will transform transportation, industry, fuels, and other sectors, to take California into a sustainable, low-carbon and cleaner future, while maintaining a robust economy (CARB 2022).

Major sectors of the California economy, including transportation, will need to reduce emissions to meet 2030 and 2050 GHG emissions targets. The Governor's Office of Planning and Research identified five sustainability pillars in a 2015 report: (1) Increasing the share of renewable energy in the State's energy mix to at least 50 percent by 2030; (2) Reducing petroleum use by up to 50 percent by 2030; (3) Increasing the energy efficiency of existing buildings by 50 percent by 2030; (4) Reducing emissions of short-lived climate pollutants; and (5) Stewarding natural

resources, including forests, working lands, and wetlands, to ensure that they store carbon, are resilient, and enhance other environmental benefits (OPR 2015).

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). Reducing today's petroleum use in cars and trucks is a key state goal for reducing greenhouse gas emissions by 2030 (California Environmental Protection Agency 2015).

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.

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and in particular low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency released Natural and Working Lands Climate Smart Strategy Draft for public comment in October 2021.

Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the CARB 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.

Climate Action Plan for Transportation Investments

The California Action Plan for Transportation Infrastructure (CAPTI) builds on executive orders signed by Governor Newsom in 2019 and 2020 targeted at reducing GHG emissions in transportation, which account for more than 40 percent of all polluting emissions, to reach the state's climate goals. Under CAPTI, where feasible and within existing funding program structures, the state will invest discretionary transportation funds in sustainable infrastructure projects that align with its climate, health, and social equity goals (California State Transportation Agency 2021).

California Transportation Plan

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The CTP 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan’s climate goal is to achieve statewide GHG emissions reduction targets and increase resilience to climate change. It demonstrates how GHG emissions from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more efficient land use and development practices; and continued shifts to telework (Caltrans 2021f).

Caltrans Strategic Plan

The Caltrans 2020–2024 Strategic Plan includes goals of stewardship, climate action, and equity. Climate action strategies include developing and implementing a Caltrans Climate Action Plan; a robust program of climate action education, training, and outreach; partnership and collaboration; a VMT monitoring and reduction program; and engaging with the most vulnerable communities in developing and implementing Caltrans climate action activities (Caltrans 2021g).

Caltrans Policy Directives and Other Initiatives

Caltrans Director’s Policy 30 (DP-30) Climate Change (June 22, 2012) established a Department policy to ensure coordinated efforts to incorporate climate change into

Departmental decisions and activities. Caltrans Greenhouse Gas Emissions and Mitigation Report (Caltrans 2020) provides a comprehensive overview of Caltrans' emissions. The report documents and evaluates current Caltrans procedures and activities that track and reduce GHG emissions and identifies additional opportunities for further reducing GHG emissions from Department-controlled emission sources, in support of Departmental and State goals.

Project-Level GHG Reduction Strategies

The following measures will also be implemented in the project to reduce GHG emissions and potential climate change impacts from the project.

GHG-1: Caltrans Standard Specification "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality.

GHG-2: Compliance with Title 13 of the California Code of Regulations includes restricting idling of diesel-fueled commercial motor vehicles and equipment with gross weight ratings of greater than 10,000 pounds to no more than five minutes.

GHG-3: Caltrans Standard Specification "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resource Board (CARB).

GHG-4: Use of a Transportation Management Plan (TMP) to minimize vehicle delays and idling emissions. As part of this, construction traffic would be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along the highway during peak travel times.

2.8.6 Adaptation

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded

slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

Federal Efforts

Under NEPA Assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance.

The 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."

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

FHWA order 5520 (Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events, December 15, 2014) established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2019).

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. A number of state policies and tools have been developed to guide adaptation efforts.

California's Fourth Climate Change Assessment (Fourth Assessment) (2018) is the state's effort to "translate the state of climate science into useful information for action." It provides information that will help decision makers across sectors and at

state, regional, and local scales protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The State's approach recognizes that the consequences of climate change occur at the intersections of people, nature, and infrastructure. The Fourth Assessment reports that if no measures are taken to reduce GHG emissions by 2021 or sooner, the state is projected to experience a 2.7 to 8.8 degrees Fahrenheit increase in average annual maximum daily temperatures, with impacts on agriculture, energy demand, natural systems, and public health; a two-thirds decline in water supply from snowpack and water shortages that will impact agricultural production; a 77% increase in average area burned by wildfire, with consequences for forest health and communities; and large-scale erosion of up to 67% of Southern California beaches and inundation of billions of dollars' worth of residential and commercial buildings due to sea level rise (State of California 2018).

Sea level rise is a particular concern for transportation infrastructure in the coastal zone. Major urban airports will be at risk of flooding from sea level rise combined with storm surge as early as 2040; San Francisco airport is already at risk. Miles of coastal highways vulnerable to flooding in a 100-year storm event will triple to 370 by 2100, and 3,750 miles will be exposed to temporary flooding. The Fourth Assessment's findings highlight the need for proactive action to address these current and future impacts of climate change.

In 2008, then-governor Arnold Schwarzenegger recognized the need when he issued EO S-13-08, focused on sea level rise. Technical reports on the latest sea level rise science were first published in 2010 and updated in 2013 and 2017. The 2017 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. This EO also gave rise to the California Climate Adaptation Strategy (2009), updated in 2014 as Safeguarding California: Reducing Climate Risk (Safeguarding California Plan), which addressed the full range of climate change impacts and recommended adaptation strategies. The Safeguarding California Plan was updated in 2018 and again in 2021 as the California Climate Adaptation Strategy, incorporating key elements of the latest sector-specific plans such as the Natural and Working Lands Climate Smart Strategy, Wildfire and Forest Resilience Action Plan, Water Resilience Portfolio, and the CAPTI (described above). Priorities in the 2021 California Climate Adaptation Strategy include acting in partnership with California Native American Tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, nature-based

climate solutions, use of best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2021).

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 in addition to 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.

AB 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group to help actors throughout the state address the findings of California's Fourth Climate Change Assessment. It released its report, *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*, in 2018. 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 (Climate Change Infrastructure Working Group 2018).

Caltrans Adaptation Efforts

Caltrans Vulnerability Assessments

Caltrans completed climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects of precipitation, temperature, wildfire, storm surge, and sea level rise.

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 guide analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

Project Adaptation Analysis

Sea Level Rise

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

Precipitation and Flooding

According to the FEMA Flood Map Service Center (Panels 06103C1165H, 06103C1480H, 06103C1485H, 06103C1495H, and 06103C1525H, effective July 20, 2016), the project site is located within several designated flood hazard zones. The Caltrans District 2 Climate Change Vulnerability Assessment (Caltrans 2018) mapped projected changes in 100-year storm precipitation under a business-as-usual GHG emissions scenario. The 100-year storm metric is commonly used in highway design. The project area would be subject to a less than 5 percent increase in 100-year storm precipitation through 2085. The proposed culverts have been sufficiently sized to maintain flows and would accommodate the relatively small projected increase in 100-year storm events.

Wildfire

According to CalFire's Fire Hazard Severity Zone mapping tool (CalFire, 2022), the project site is primarily comprised of Local and State Responsibility Areas. The State Responsibility Area's hazard severity zone designation is considered "moderate". Pavement rehabilitation and appurtenant infrastructure would be confined to the project footprint and would not introduce structures or users into the area that would be vulnerable to wildfire. To minimize potential wildfire damage to highway infrastructure, guardrail replacement would include steel posts, while culvert replacement would consist of concrete or corrugated steel pipes. Further, Caltrans Standard Specifications mandate fire prevention procedures, including a fire prevention plan, to avoid accidental fire starts during construction. Based on the above information, the project would not cause or exacerbate the risk of wildfire, regardless of climate conditions.

Temperature

The District Climate Change Vulnerability Assessment does not indicate temperature changes during the project's design life that would require adaptive changes in pavement design or maintenance practices.

2.9 Hazards and Hazardous Materials

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

2.9.1 Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, and the Resource Conservation and Recovery Act (RCRA) of 1976. The purpose of CERCLA, often referred to as "Superfund," is to identify and cleanup abandoned contaminated sites so that public health and welfare are not compromised. The RCRA provides for "cradle to grave" regulation of hazardous waste generated by operating entities. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order (EO) 12088, Federal Compliance with Pollution Control Standards, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

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 cleanup of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and cleanup of 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.

2.9.2 Environmental Setting

An Initial Site Assessment (ISA) was completed on November 2, 2021 (Caltrans, 2021h). The purpose of the ISA was to identify any hazardous wastes/materials within and adjacent to the project area that could affect the design, constructability, feasibility, and/or the cost of the project. The records review included a review of federal, state, and local databases and maps. A field review was also conducted. As documented in the ISA, lead-contaminated soils may exist throughout the project limits due to the historical use of leaded gasoline on the roadway, pollutants may be present in treated wood, and lead/chromium may be present in yellow and white road striping.

2.9.3 Discussion of CEQA Question 2.9—Hazards and Hazardous Materials

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The project would not result in any long-term impacts related to the transport of hazardous materials. During construction activities, it is anticipated that limited quantities of hazardous substances, such as gasoline, diesel fuel, etc., would temporarily be brought into the project area.

As documented in the ISA, lead-contaminated soils may exist throughout the project limits due to the historical use of leaded gasoline on the roadway. Additionally, pollutants may be present in treated wood (i.e., guardrail posts). Further, hazardous levels of lead and chromium are known to exist in the yellow color traffic stripes. Project construction would require excavation of soil adjacent to the roadway, pavement rehabilitation, removal/ replacement of existing treated guardrail posts, and culvert replacement. As discussed in Section 1.4, implementation of standard measures for lead contamination (Standard Measure HW-1), treated wood posts (Standard Measure HW-2), traffic strip paint (Standard Measure HW-3) would

address such activities. Further, construction contractors would be required to comply with applicable federal and State environmental and workplace safety laws and implement BMPs for the storage, use, and transportation of hazardous materials. Therefore, impacts would be less than significant.

b) Would the project 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?

Project construction could potentially result in the accidental release of hazardous substances into the environment, such as spilling petroleum-based fuels used for construction equipment. However, construction contractors would be required to comply with applicable federal and State environmental and workplace safety laws and implement BMPs for the storage, use, and transportation of hazardous materials. Therefore, the project is not expected to create a significant hazard to the public or the environment involving the release of hazardous materials into the environment. Thus, there would be no impact.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

According to the Tehama County Office of Education, Los Molinos High School and Los Molinos Elementary School are located approximately 0.25 miles east of the project site. As described under Questions A and B, the project would not result in any long-term impacts related to the transport of hazardous materials. Although project construction would involve the use of relatively small quantities of hazardous substances, work would be conducted in accordance with these existing requirements, and potential impacts could occur only during construction activities. Thus, impacts would be less than significant.

d) Would the project 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?

The Cortese List is prepared in accordance with California Government Code §65962.5. The following databases were reviewed to locate "Cortese List" sites (CalEPA, 2021):

- List of Hazardous Waste and Substances sites from the Department of Toxic Substances Control (DTSC) EnviroStor database
- SWRCB GeoTracker Database

The EnviroStor database indicates the closest reported site to the project location is Pavia Farms located approximately 3.3 miles southwest of the project site terminus. Site remediation was certified as complete in 2012. The Geotracker database indicates the closest cleanup sites to the project location are the Crosslands Country Market and the Chico Aerial Applicators facility. The Crosslands Country Market cleanup site is located approximately 0.45 miles north of the project site; the Chico Aerial Applicators cleanup site is located on SR 99 near Rowles Road. The Market cleanup case was closed in 1998, while the Applicators cleanup case was closed in 2005. Project activities would not occur on or near an active site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Thus, there would be no impact.

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?

According to the Federal Aviation Administration (FAA, 2022), the nearest airport is Corning Municipal Airport, approximately 5.5 miles west of the project site. Due to the distance between the airport and the project site, there would be no impact.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The proposed project does not involve a use or activity that could interfere with long-term emergency response or emergency evacuation plans for the area. A temporary increase in traffic could occur during construction and could interfere with emergency response times. However, construction-related traffic would be spread over the duration of the construction schedule and would be minimal on a daily basis. In addition, construction activities would be subject to a Traffic Management Plan (TMP) (Standard Measure TT-1) (Section 1.4). Furthermore, Caltrans would

notify and coordinate with local emergency authorities to ensure the proper function of public services. With implementation of a TMP, and advanced coordination with local emergency authorities, the project would not impair or physically interfere with an adopted emergency response or emergency evacuation plan. Therefore, impacts during construction would be less than significant.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

As part of the proposed project, the contractor would prepare an Emergency Evacuation Plan (EEP) for work activities that restrict passage through the work zone. The EEP would outline protocol for ensuring safe evacuation of local residents and the traveling public in the event of a fire or other natural disaster. With preparation and implementation of the EEP, the project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Thus, there would be no impact.

2.9.4 Cumulative Impacts

The project's impact on hazards and hazardous materials would be minimal and when these impacts are considered along with impacts on hazards and hazardous materials resulting from other Caltrans projects on SR 99 in Tehama County constructed in the last 20 years or that are reasonably foreseeable, they would not contribute to have an adverse cumulative impact. Therefore, the project's impact on hazards and hazardous materials would be individually limited but not cumulatively considerable.

2.9.5 Mitigation Measures

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

2.10 Hydrology and Water Quality

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

2.10.1 Regulatory Setting

The primary laws and regulations governing hydrology and water quality include:

- Federal Clean Water Act (CWA), 33 USC 1344
- Federal Executive Order for the Protection of Wetlands (EO 11990)
- State Sections 1600–1607 of the California Fish and Game Code (CFGC)
- State Porter-Cologne Water Quality Control Act, § 13000 et seq.

2.10.2 Environmental Setting

The project area is located within the Sacramento Hydrologic Basin Planning Area, which is located within the Sacramento River watershed and is managed by the Central Valley Regional Water Quality Control Board. The project area receives moderate rainfall. The average annual precipitation recorded at Orland between 1903 and 2016 is 19.95 inches.

The project site supports wetlands and other waters (e.g., streams) of the U.S. occur along the length of the corridor, while wetlands are concentrated along the southern portion of the site (PM 0.0 to 5.0). On-site streams are tributary to the Sacramento River, which is located west of the site.

As documented in the Water Quality Assessment Report (Caltrans, 2022i), beneficial uses in the Sacramento River for the project area are identified as:

- **Municipal and Domestic Supply (MUN)**—Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.
- **Agricultural Supply (AGR)**—Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation (including leaching of salts), stock watering, or support of vegetation for range grazing.
- **Water Contact Recreation (REC-1)**—Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.

- **Non-Contact Water Recreation (REC-2)**—Uses of water for recreational activities involving proximity to water, but where there is generally no body contact with water, nor any likelihood of ingestion of water. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
- **Warm Freshwater Habitat (WARM)**—Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.
- **Cold Freshwater Habitat (COLD)**—Uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- **Migration of Aquatic Organisms (MIGR)**—Uses of water that support habitats necessary for migration or other temporary activities by aquatic organisms, such as anadromous fish.
- **Spawning, Reproduction, and/or Early Development (SPWN)**—Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.
- **Wildlife Habitat (WILD)**—Uses of water that support terrestrial or wetland ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats or wetlands, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

2.10.3 Discussion of CEQA Question 2.10—Hydrology and Water Quality

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

The proposed project would avoid direct impacts to wetlands and other waters of the U.S. As discussed in Section 1.4, Standard Measure WQ-1 and WQ-2 would be implemented (e.g., silt fencing, straw wattles, gravel berms, rock check dams, and revegetating disturbed areas through hydroseeding or other similar measure) during construction activities. To help maintain long-term water quality, permanent BMPs

(i.e., Design Pollution Prevention Infiltration Areas (DPPIA)) would be installed as part of the proposed project. The DPPIAs would serve to treat road runoff through infiltration. The DPPIAs would be installed approximately three feet from the edge of pavement, would be three to ten feet wide, and would be 100 to 2,000 feet long depending on the location.

With BMPs for erosion and sediment control being implemented in accordance with standard practices, and installation of permanent BMPs to help maintain long-term water quality, the project would not violate any water quality standards or otherwise substantially degrade surface or groundwater quality. With implementation of temporary and permanent BMPs, potential impacts to water quality would be less than significant.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The proposed project would not require groundwater supplies for construction or operation. As part of the proposed project, an estimated 3.5 miles of roadway would be widened (4 to 8 feet) to improve public safety. Widening activities would result in approximately 13.87 acres of new impervious area. As the new impervious area would be spread out along miles of roadway, shoulder widening activities would not interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Thus, there would be no impact.

c) Would the project 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?

Project activities would primarily be performed within the existing road prism, minimizing the potential for substantial soil erosion or the loss of topsoil. Additionally, as discussed in Section 1.4, Standard Measure WQ-1 and WQ-2 would be implemented during construction activities. Because BMPs for erosion and sediment control would be implemented in accordance with standard practices, the potential for substantial erosion or siltation on-or off-site would be less than significant.

(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

As stated in Question B, shoulder widening activities would increase the amount of impervious surface, which would result in a minor increase in surface runoff. Further, new impervious surfaces would increase the runoff rate. However, with shoulder widening representing a narrow margin along an estimated 3.5 miles of roadway, the project would not substantially increase the rate or amount of surface runoff, nor would it result in flooding on- or off-site. Thus, the project would result in a less-than-significant impact.

(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?

The existing SR 99 drainage system, including the proposed drainage improvements exhibit sufficient flow capacity to accommodate the minor increase in runoff. Further, the proposed project includes Design Pollution Prevention Infiltration Areas to pretreat runoff before discharging to waters of the U.S. and adjacent upland areas. The project would not provide substantial additional sources of polluted runoff, nor would it exceed the capacity of existing or planned stormwater drainage facilities. Thus, there would be no impact.

(iv) impede or redirect flood flows?

The proposed culverts have been sufficiently sized to maintain flows associated with the 100-year storm event. The project would not impede or redirect flood flows; thus, there would be no impact.

d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

A tsunami is a wave generated in a large body of water (typically the ocean) by fault displacement or major ground movement. Given that the Pacific Ocean is approximately 90 miles west of the project area, there is no risk of inundation of the project area by a tsunami. (California Department of Conservation, 2021g). A seiche is a large wave generated in an enclosed body of water in response to ground shaking. The closest large body of water to the project site is the Sacramento River, located approximately 0.65 miles to the west. It is not expected that seismic activity

could create a large wave in the Sacramento River that would inundate the project area. Therefore, there is no potential for release of pollutants due to inundation by seiche or tsunami.

According to the FEMA Flood Map Service Center (Panels 06103C1165H, 06103C1480H, 06103C1485H, 06103C1495H, and 06103C1525H, effective July 20, 2016), the project site is located within several designated flood hazard zones. There is a possibility of accidental release of hazardous substances in flood zones due to project inundation. In accordance with Standard Measure WQ-1, the project would be subject to a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would include such measures as stockpiling materials, storing liquid waste containers, washing vehicles and equipment, and fueling/maintaining vehicles and equipment at least 100 feet from a concentrated flow of stormwater, a drainage course, or an inlet within the floodplain; or at least 50 feet outside the floodplain. Compliance with existing state regulations would ensure there is no potential for release of pollutants due to inundation by a flood. Thus, there would be no impact.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The proposed project would avoid direct impacts to wetlands and other waters of the U.S. The project would not violate a water quality control plan or sustainable groundwater management plan. Thus, there would be no impact.

2.10.4 Cumulative Impacts

The project's impact on hydrology and water quality would be minimal and when these impacts are considered along with impacts on hydrology and water quality resulting from other Caltrans projects on SR 99 in Tehama County constructed in the last 20 years or that are reasonably foreseeable, they would not contribute to have an adverse cumulative impact. Therefore, the project's impact on hydrology and water quality would be individually limited but not cumulatively considerable.

2.10.5 Mitigation Measures

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

2.11 Land Use and Planning

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

2.11.1 Regulatory Setting

The primary law governing land use and planning is CEQA.

2.11.2 Environmental Setting

The project is located in a rural part of Tehama County. Land use in the project vicinity consists of annual grassland (zoned agriculture), agricultural production, the Nature Conservancy Vina Plains Preserve, and a minor amount of commercial and rural residential in the community of Los Molinos. Los Molinos is located along the northern limits of the project site.

2.11.3 Discussion of CEQA Question 2.11—Land Use and Planning

a) Would the project physically divide an established community?

Land use impacts are considered significant if a proposed project would physically divide an existing community (a physical change that interrupts the cohesiveness of the neighborhood). Pavement rehabilitation, sidewalk installation, and drainage improvements proposed in Los Molinos would not create a barrier for existing or planned development. Therefore, there would be no impact.

b) Would the project 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?

As discussed in each resource section of this Initial Study, the proposed project is consistent with applicable laws and regulations. Therefore, the proposed project would not conflict with any plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect.

2.11.4 Mitigation Measures

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

2.12 Mineral Resources

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

2.12.1 Regulatory Setting

The primary laws governing mineral resources are CEQA and the Surface Mining and Reclamation Act (PRC, Sections 2710-2796).

2.12.2 Environmental Setting

Historically, the Sacramento River in the City of Red Bluff served as a major hub for steamboats transporting goods and people. Goods were transferred to wagons and mules and carried overland to mining camps in Shasta and Trinity Counties. Today, Tehama County continues to support various sand and gravel extraction operations.

2.12.3 Discussion of CEQA Question 2.12—Mineral Resources

a) Would the project 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?

According to the Department of Conservation (Department of Conservation, 2022h), two active mines, Pine Creek and TCR-2 (sand and gravel operations), occur within two miles of the project site. The Pine Creek Mine is located on Pine Creek approximately 1.5 miles east of the site, while the TCR-2 Mine is located on Thomes Creek approximately two miles west of the site. Project implementation would have no impact on nearby mining operations. Further, according to the California Geologic

Survey, there are no designated Mineral Resource Zones in Tehama County (Department of Conservation, 2022i). Based on the above information, the proposed project would not result in the loss of availability of a known mineral resource. Thus, there would be no impact.

b) Would the project 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?

According to the Tehama County General Plan (2009), mineral resources are defined as lands on which known deposits of commercially viable mineral or aggregate deposits exist. As stated in Question A, the project site does not support mines or mineral resource zones. As such, the project would not result in the loss of availability of locally-important mineral resource recovery sites. Thus, there would be no impact.

2.12.4 Mitigation Measures

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

2.13 Noise

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

2.13.1 Regulatory Setting

The primary laws governing noise are CEQA and NEPA.

2.13.2 Environmental Setting

State Route 99 within the project area is subject to a moderate level of noise disturbance on a daily basis due to vehicle traffic traveling at high speed on SR 99 and occasionally from the operation of helicopters at CalFire's Vina Helitack Base located on SR 99 approximately a half-mile south of South Avenue. Based on surrounding land uses, the project site is exposed to moderate background noise levels.

In noise/vibration studies, the following are considered sensitive receptors: hospitals, schools, homes, daycare facilities, elderly housing, and convalescent facilities. These are areas where the occupants are more susceptible to the adverse effects of

exposure to noise and vibration. Several sensitive receptors (i.e., homes) occur within a 1/4-mile radius of the project site within the community of Los Molinos.

2.13.3 Discussion of CEQA Question 2.13—Noise

a) Would the project result in 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?

The project would not involve the introduction of permanent noise-producing activities. According to the Noise Study (Caltrans, 2022j), temporary noise impacts would occur from the use of mobile construction equipment and vehicles during construction. Construction vehicles and equipment could include excavators, compressors, generators, haul trucks, pavers, and material loaders. Project construction noise levels would fluctuate depending on the construction phase, equipment type, and quantity and duration of use. Project construction would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project, nor would it substantially impact sensitive receptors. As discussed in Section 1.4, Standard Measure N-1 would be implemented to control and monitor noise from work activities. Although the proposed project would result in elevated noise levels during construction activities, such noise levels would not be in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Therefore, impacts would be less than significant.

b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Once built, the project would not be a source of permanent groundborne vibrations. Although groundborne vibrations may occur during construction, they would be temporary in duration and minimal in magnitude and would not be considered excessive. Thus, there would be no impact.

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?

The nearest airport is the Corning Municipal Airport, located approximately 5.5 miles west of the project site. Due to the distance between the airport and the project site, the project would not expose people residing or working in the project area to excessive noise levels. Thus, there would be no impact.

2.13.4 Cumulative Impacts

The project's noise impacts would be minimal and temporary and when these impacts are considered along with noise impacts resulting from other Caltrans projects on SR 99 in Tehama County constructed in the last 20 years or that are reasonably foreseeable, they would not contribute to have an adverse cumulative impact. Therefore, the project's noise impacts would be individually limited but not cumulatively considerable.

2.13.5 Mitigation Measures

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

2.14 Population and Housing

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

2.14.1 Regulatory Setting

The primary law governing population and housing is CEQA.

2.14.2 Environmental Setting

Based on 2021 census (U.S. Census Bureau, 2022), Tehama County supports a population of 65,498. Based on 2021 census data, the number of housing units was 27,429. Housing in the project vicinity is primarily limited to the community of Los Molinos, which supports standard residential lots.

2.14.3 Discussion of CEQA Question 2.14—Population and Housing

a) Would the project 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)?

Because the proposed project does not involve construction of residences or businesses, nor does it include applicable infrastructure improvements, the project would not induce population growth. Therefore, there would be no impact.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Project activities are primarily comprised of pavement rehabilitation, culvert replacement, and underground fiber optic broadband installation. Project activities would not displace existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, there would be no impact.

2.14.4 Mitigation Measures

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

2.15 Public Services

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

2.15.1 Regulatory Setting

The primary law governing public services is CEQA.

2.15.2 Environmental Setting

The project site is located on SR 99, which facilitates public services for surrounding residential, commercial, and industrial users. Tehama Rural Area Express (TRAX) is Tehama County's public transit service provider. Other transportation service providers that operate within the project area include school districts that provide buses to transport students to and from schools. The nearest schools are located in the communities of Los Molinos and Vina. Emergency service providers that operate within the project area include various firefighting agencies (e.g., Tehama County Fire Department and CalFire); Tehama County Sheriff's Department and the California Highway Patrol (CHP); and ambulances that transport patients to local hospitals. The nearest medical facility is the St. Elizabeth Community Hospital in

Red Bluff, located approximately 12 road miles northwest of the proposed project site.

2.15.3 Discussion of CEQA Question 2.15—Public Services

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, police protection, schools, parks, or other public facilities.

Project implementation is primarily comprised of pavement rehabilitation, guardrail replacement, underground fiber optic broadband installation, and drainage improvements. These activities would not result in the need for new or physically altered facilities, including fire or police protection services, schools, parks, or other public facilities. Project implementation would result in a less-than-significant impact.

2.15.4 Mitigation Measures

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

2.16 Recreation

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				✓
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?				✓

2.16.1 Regulatory Setting

The primary law governing recreation is CEQA.

2.16.2 Environmental Setting

The project site, with the exception of Los Molinos, occurs along an undeveloped portion of SR 99. There are no developed recreation specific parks or facilities in the project vicinity.

2.16.3 Discussion of CEQA Question 2.16—Recreation

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?

Site development would not increase the use of existing neighborhood and regional parks or other recreation facilities. Therefore, there would be no impact.

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?

Site development does not include recreational facilities or require the construction or expansion of recreational facilities. Therefore, there would be no impact.

2.16.4 Mitigation Measures

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

2.17 Transportation

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

2.17.1 Regulatory Setting

The primary laws and regulations governing transportation and traffic are CEQA, 23 CFR 652, 49 CFR 27, 29 USC 794, and the Americans with Disabilities Act (42 USC § 12101).

2.17.2 Environmental Setting

State Route 99 is a primary south to north transportation route in California for the movement of people and freight. The route is a critical parallel corridor to Interstate 5. Within the project limits, the route serves and traverses a productive agricultural region.

Within the project area, SR 99 consists of two 12-foot-wide paved lanes each with a paved shoulder up to eight feet wide, has a posted speed limit of 65 miles per hour, and has an annual average daily traffic of 10,100 vehicles (Caltrans, 2022k). Within the community of Los Molinos, SR 99 includes bikeways and pedestrian sidewalks.

The project is consistent with transportation goals/objectives included in the Circulation Element of the Tehama County General Plan, as well as the Tehama County Transportation Commission's Regional Transportation and Active Transportation Plans.

2.17.3 Discussion of CEQA Question 2.17—Transportation

a) Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

With no proposed changes to highway operations, as well as preparation/ implementation of a TMP, the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system. Thus, there would be no impact.

b) Would the project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?

Section 15064.3 of the CEQA Guidelines describes the specific considerations for evaluating a project's transportation impacts. Generally, Vehicle Miles Traveled (VMT) is the most appropriate measure of transportation impacts. For the purposes of this section, VMT refers to the amount and distance of automobile travel attributable to a project.

Construction of the project would not increase capacity of the State Highway System or induce an increase in VMT. Therefore, an induced travel analysis for VMT is not required under CEQA. Once built, the project would result in no operational impacts on the traveling public. Project implementation includes the use of detours and one-way reversing traffic controls when partial closure of the roadway is required during construction. During one-way reversing traffic control, travel time through the work locations is expected to be delayed by only a few minutes for all modes of travel. As such, impacts to the traveling public (e.g., motorists, school buses transporting students to schools, bicyclists, and pedestrians) would be minimal. As described above, the project would not result in an increase in VMT; thus, there would be no impact.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The proposed project would not result in the geometric alteration of SR 99 or result in incompatible use and, therefore, would not substantially increase hazards to the traveling public. Thus, there would be no impact.

d) Would the project result in inadequate emergency access?

Emergency access would be maintained throughout construction. Further, all emergency response agencies in the project area would be notified of the project construction schedule and would have access to SR 99 throughout the construction period (Standard Measure UE-1) (Section 1.4). Although emergency personnel would be subject to traffic-control related measures, impacts would be less than significant.

2.17.4 Cumulative Impacts

The project's impact on transportation would be minimal and temporary and when these impacts are considered along with impacts on transportation resulting from other Caltrans projects on SR 99 in Tehama County constructed in the last 20 years or that are reasonably foreseeable, they would not contribute to have an adverse cumulative impact. Therefore, the project's impact on transportation would be individually limited but not cumulatively considerable.

2.17.5 Mitigation Measures

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

2.18 Tribal Cultural Resources

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, or 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: 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 § 5020.1(k), or				✓
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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				✓

2.18.1 Regulatory Setting

In addition to the laws identified in Section 2.5 (Cultural Resources), the primary law governing tribal cultural resources is AB 52 (Chapter 532, Statutes of 2014) (Public Resources Code [PRC] §21084.2).

2.18.2 Environmental Setting

The project area occurs within the aboriginal territory of the Paskenta Band of Nomlaki Indians. The Paskenta Band territory extended into parts of Tehama and Glenn Counties.

2.18.3 Discussion of CEQA Question 2.18—Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in the Public Resources Code § 21074 as

either a site, feature, place, or 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:

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 § 5020.1(k).**

Between July and August 2022, Caltrans contacted Nomlaki tribal representatives through e-mail, telephone, and letter correspondence to inform the tribe of the project. Caltrans provided detailed information on the proposed project. The tribe has not yet responded; however, consultation is on-going. No known tribal cultural resources are known to occur on the project site. Thus, there would be no impact.

b) **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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

Caltrans, as lead agency, has not identified any resources in the project area that would be significant to a California Native American tribe. Therefore, the project does not have the potential to cause a substantial adverse change in the significance of a tribal cultural resource. Thus, there would be no impact.

2.18.4 Mitigation Measures

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

2.19 Utilities and Service Systems

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

2.19.1 Regulatory Setting

The primary law governing utilities and service systems is CEQA.

2.19.2 Environmental Setting

The project site supports multiple service systems, including PG&E electrical, AT&T telephone and optic internet, Los Molinos Community Services District water, Los Molinos Mutual Water, and Caltrans storm drain facilities.

2.19.3 Discussion of CEQA Question 2.19—Utilities and Service Systems

a) Would the project 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?

Project implementation would include various drainage improvements along SR 99 and in the community of Los Molinos, electrical improvements in Los Molinos, and new telecommunication facilities (i.e., fiber optic) along SR 99. Additionally, minor utility relocations would occur in Los Molinos, including water, electrical, and telephone lines.

The proposed drainage improvements would serve to maintain/improve area drainage; electrical improvements consist of pedestrian lighting and would be performed in disturbed areas; and new telecommunications facilities (i.e., fiber optic) would be installed in the SR 99 right-of-way to connect homes and businesses with local networks. Stormwater drainage improvements, electrical improvements, fiber optic installation, and utility relocation activities are not expected to cause significant environmental effects. Therefore, impacts would be less than significant.

b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

As the project is primarily comprised of pavement rehabilitation activities, the project does not require a water supply. Thus, there would be no impact.

c) Would the project 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?

As the project is primarily comprised of pavement rehabilitation activities, the project does not require wastewater treatment facilities. Thus, there would be no impact.

d) Would the project 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?

The proposed project would generate solid waste, mainly from removal of pavement on SR 99. The construction contractor would be responsible for disposing of all construction waste in accordance with all federal, State, and local statutes related to solid waste disposal. Thus, there would be no impact.

e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Caltrans would ensure through contractual obligations that the contractor complies with all federal, State, and local statutes related to solid waste disposal. Thus, there would be no impact.

2.19.4 Cumulative Impacts

The project's impact on utilities and service systems would be minimal and temporary and when these impacts are considered along with impacts on utilities and service systems resulting from other Caltrans projects on SR 99 in Tehama County constructed in the last 20 years or that are reasonably foreseeable, they would not contribute to have an adverse cumulative impact. Therefore, the project's impact on utilities and service systems would be individually limited but not cumulatively considerable.

2.19.5 Mitigation Measures

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

2.20 Wildfire

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
If located in or near State Responsibility Areas or lands classified as very high fire hazard severity zones, would the project: a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			✓	
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?				✓
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 may result in temporary or ongoing impacts to the environment?				✓
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?				✓

SB 1241 required the Office of Planning and Research, the Natural Resources Agency, and the California Department of Forestry and Fire Protection to develop amendments to the "CEQA Checklist" for the inclusion of questions related to fire hazard impacts for projects located on lands classified as "very high" fire hazard severity zones. The 2018 updates to the CEQA Guidelines expanded this to include projects "near" these very high fire hazard severity zones.

2.20.1 Regulatory Setting

The primary law governing wildfire is CEQA.

2.20.2 Environmental Setting

The project site occurs in a rural part of Tehama County. Surrounding vegetation is primarily comprised of open grassland, planted orchards, and riparian vegetation at large stream crossings. Surrounding land uses and on-site plant communities present a low to moderate fire risk.

2.20.3 Discussion of CEQA Question 2.20—Wildfire

If located in or near State Responsibility Areas or lands classified as very high fire hazard severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

According to CalFire's Fire Hazard Severity Zone mapping tool (CalFire, 2022), the project site is primarily comprised of Local and State Responsibility Areas. The State Responsibility Area's hazard severity zone designation is considered "moderate".

As part of the proposed project, the contractor would prepare an Emergency Evacuation Plan (EEP) for work activities that restrict passage through the work zone. The EEP would outline protocol for ensuring safe evacuation of local residents and the traveling public in the event of a fire or other natural disaster. The project would not substantially impair an adopted emergency response or evacuation plan; thus, impacts would be less than significant.

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?

Project activities are limited to road rehabilitation activities; site occupancy is not applicable. Therefore, project implementation would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Thus, there would be no impact.

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 may result in temporary or ongoing impacts to the environment?

Project activities are primarily comprised of pavement rehabilitation, culvert replacement, and underground fiber optic broadband installation. The project does not include fuel breaks, emergency water sources, power lines, or other utilities that may exacerbate fire risk or result in temporary or ongoing impacts to the environment. Thus, there would be no impact.

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?

As discussed in Section 2.7 (Geology and Soils) under Question A(iv), no mapped slide areas occur within the project area. Although some sections of SR 99 are in a designated flood hazard area, the project does not include any components that would increase flood risks. Therefore, there is minimal risk for downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. Thus, there would be no impact.

2.20.4 Cumulative Impacts

The project's impact on wildfire conditions would be minimal and temporary and when these impacts are considered along with impacts on wildfire conditions resulting from other Caltrans projects on SR 99 in Tehama County constructed in the last 20 years or that are reasonably foreseeable, they would not contribute to have an adverse cumulative impact. Therefore, the project's impact on wildfire conditions would be individually limited but not cumulatively considerable.

2.20.5 Mitigation Measures

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

2.21 Mandatory Findings of Significance

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Does the project: a) 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?		✓		
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means 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.)			✓	
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			✓	

2.21.1 Discussion of CEQA Question 2.21—Mandatory Findings of Significance

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?

As discussed in Section 2.4, with implementation of the proposed mitigation measures, potential impacts would be less than significant.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means 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.)

As proposed, the project would not contribute to any potential cumulatively considerable impacts to waters. Project-related impacts to other resources referenced in this document would have a negligible contribution to any potential cumulatively considerable impacts. Thus, impacts would be less than significant.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

As discussed in the applicable environmental resource sections above, the proposed project is expected to result in environmental effects. However, these effects would not cause substantial adverse effects on human beings, either directly or indirectly. Thus, impacts would be less than significant.

Chapter 3 Agency and Public Coordination

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 meetings and interagency coordination meetings. 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

See Table 7 below.

Coordination with Property Owners

Caltrans met with Gallaghers Plumbing, Heating, and Air Conditioning on August 15, 2022, to discuss the provision of a bike lane and sidewalk along SR 99. Additional coordination is documented in Table 7.

Circulation

Following circulation of this draft document, including review and response to any public comments received, the project development team will decide how to move forward with the proposed project.

Table 7. Agency Coordination and Professional Contacts

Date	Personnel	Notes
November 12, 2021	Eric Rulison, Caltrans Biologist; USFWS Staff	Notify USFWS regarding the proposed project and Caltrans direction/intent moving forward.
January 25, 2022	Robyn Kramer, Caltrans Archaeologist; NEIC/CHRIS	Caltrans submitted records search to NEIC/CHRIS.
January 25, 2022	Robyn Kramer, Caltrans Archaeologist: NAHC	Caltrans submitted records search request to NAHC.
February 22, 2022	Robyn Kramer, Caltrans Archaeologist; NEIC/CHRIS	NEIC/CHRIS provided results of requested records search.
April 4, 2022	Robyn Kramer, Caltrans Archaeologist: NAHC	NAHC provided results of requested records search.
June 13, 2022	Eric Rulison, Caltrans Biologist; USFWS Acting Supervisor	Acting supervisor provided feedback regarding the project proposal and anticipated outcomes.
June 16, 2022	Eric Rulison, Caltrans Biologist; USFWS Staff	Caltrans contacted the Service for action area clarification; provided submittal update.
September 19, 2022	Eric Rulison, Caltrans Biologist; Stuart Fety, USFWS	Stuart Fety confirmed receipt of the Biological Assessment
October 20, 2022	Eric Rulison, Caltrans Biologist; Stuart Fety, USFWS	Eric Rulison requested a status update from the Service
October 21, 2022	Eric Rulison, Caltrans Biologist; Stuart Fety, USFWS	Stuart Fety requested clarification regarding aspects of the Biological Assessment.
October 24, 2022	Eric Rulison, Caltrans Biologist; Stuart Fety, USFWS	Eric Rulison responded to the Service's request for clarification.
November 14, 2022	Eric Rulison and Robert Meade, Caltrans Biologists; Stuart Fety, USFWS	Conducted site visit.
November 17, 2022	Eric Rulison, Caltrans Biologist; USFWS Staff	The Service informed Eric Rulison that they disagreed with the BA findings.

Date	Personnel	Notes
December 6, 2022	Eric Rulison and Robert Meade, Caltrans Biologists; Stuart Fety, Ian Perkins-Taylor, and Megan Cook, USFWS	Conducted conference call to discuss impact determinations and mitigation strategies.
December 21, 2022	Eric Rulison, Caltrans Biologist; Stuart Fety, USFWS	Eric Rulison notified the Service that the project had been redesigned to avoid filling or altering wetland hydrology. Provided update regarding pending submittal of amended BA.
February 15, 2023	Elizabeth Truman, Caltrans Archaeologist; Laverne Bill, Paskenta Band of Nomlaki Indians	Discussed draft finding of cultural document.

Chapter 4 List of Preparers

The following individuals performed the environmental work on the project:

California Department of Transportation, District 2

Name	Title	Contribution
Shaun Alexander	Engineer	Project Design
Alex Arevalo	Water Quality Specialist	Water Quality Assessment Memo
Julie Casey	Senior Engineer	Design Oversight
Rajive Chadja	Hazardous Waste Specialist	Initial Site Assessment Report
Young Cho	Transportation Engineer	Air Quality, Greenhouse Gas, Noise, and Energy Analyses
Sean Hang	Engineer	Project Design
Javed Iqbal	Project Manager	Project Management
Robyn Kramer	Archaeologist	Archaeological Survey Report
John Luper	Associate Environmental Planner	Document Writer
Steven Mintz	Engineer	Floodplain Evaluation Report Summary
Logan Moore	Landscape Architect	Visual Impact Assessment
Eric Rulison	Biologist	Natural Environmental Study
Alyson Sinclair	Engineer	Project Design
Carolyn Sullivan	Senior Environmental Planner	Document Oversight
Wesley Stroud	Environmental Office Chief	Document Oversight
Elizabeth Truman	Archaeologist	Archaeological Survey Report
Matthew Wayda	Engineer	Project Design

Chapter 5 Distribution List

Federal and State Agencies

California Department of Fish and Wildlife
601 Locust Street
Redding, CA 96001

Central Valley Regional Water Quality Control Board
11020 Sun Center Drive # 200
Rancho Cordova, CA 95670

California State Clearinghouse
P.O Box 3044
Sacramento CA 95812

Regional/County/Local Agencies

Scott Timboe
Tehama County Planning Department
444 Oak Street – Room I
Red Bluff, CA 96080

Jennifer Vise, County Clerk
Tehama County Clerk's Office
P.O. Box 250
Red Bluff, CA 96080

Tehama County Library
Los Molinos Branch
7881 State Highway 99E
Los Molinos, CA 96055

Local Elected Officials

John Leach
Tehama County Supervisor District 5
727 Oak Street
Red Bluff, CA 96080

Chapter 6 References

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Appendix A Project Layouts

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	099	0.0/12.5	1	48

INDEX OF PLANS

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

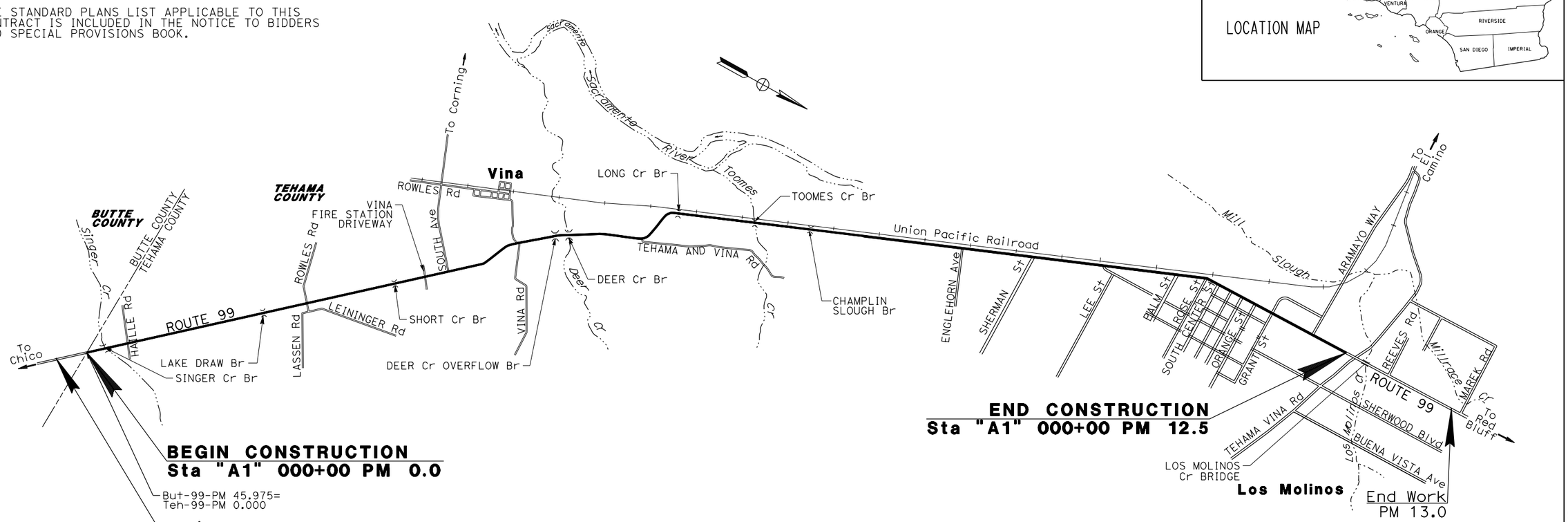
PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN TEHAMA COUNTY IN AND NEAR LOS MOLINOS FROM BUTTE COUNTY LINE TO LOS MOLINOS CR BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018

LOCATION MAP



BEGIN CONSTRUCTION
Sta "A1" 000+00 PM 0.0

But-99-PM 45.975=
Teh-99-PM 0.000

Begin Work
PM 45.4

END CONSTRUCTION
Sta "A1" 000+00 PM 12.5

End Work
PM 13.0

PRELIMINARY

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

NO SCALE

CONTRACT No.	02-3H7704
PROJECT ID	0218000039

LAST REVISION 07-06-22

DATE PLOTTED => 30-JAN-2023
TIME PLOTTED => 14:00

P:\proj\02\3h770\design\510_Plans\ESL Maps\3H770_ab001.dgn

DESIGN MANAGER: TOBY CRAWFORD
PROJECT MANAGER: JAVED IQBAL

BORDER LAST REVISED 8/1/2016 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => s151920 DGN FILE => 3H770_ab001.dgn | UNIT 0000 | PROJECT NUMBER & PHASE 02180000391

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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

LEGEND:

- Exist R/W
- ENVIRONMENTAL STUDY LIMIT
- ESA
- PROPOSED STAGING AREA
- CLEARING AND GRUBBING
- V — FIBER OPTIC SPLICE VAULT (48" x 48" x 48")
- FO — BROADBAND (FIBER OPTIC CONDUIT)
- PROPOSED GUARDRAIL
- PROPOSED REW
- PROPOSED CATCHLINE
- FULL DEPTH PAVEMENT RECONSTRUCTION
- Exist/PROPOSED DRAINAGE FEATURES
- X.XX — DRAINAGE SYSTEM NO
- ACQUIRE R/W - FEE
- ACQUIRE R/W - TCE
- ACQUIRE R/W - PERMIT
- DPPIA Treatment BMPs

ABBREVIATIONS:

REW	RAIL ELEMENT WALL
MGS	MIDWEST GUARDRAIL SYSTEM

NOTES:

1. UTILITIES SHOWN ARE EXISTING AND LOCATIONS ARE APPROXIMATE.
2. DRIVEWAYS AND ROAD CONNECTIONS THAT ARE OUTLINED WILL BE PAVED.

TYPICAL BROADBAND LOCATIONS ARE:

PM 0.0 TO 0.3	48" DEEP	10' Lt OF Rt R/W LINE OR FENCE
PM 0.3 TO 11.3	34" DEEP	4' Rt OF Rt ETW (CENTER OF PAVED SHOULDER)
PM 11.3 TO 11.8	48" DEEP	10' Lt OF Rt R/W LINE OR FENCE
PM 11.8 TO 12.5	96" DEEP	4' Lt OF Rt ETW (CENTER OF LANE)

UNLESS OTHERWISE NOTED IN THE PLANS.

LOCATIONS NOTED AS DIRECTIONAL DRILL WILL BE UP TO 10' DEEP.
UNLESS OTHERWISE NOTED IN THE PLANS.

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50' **L-1**

CALCULATED-DESIGNED BY	KARLIE SMITH	REVISED BY	
CHECKED BY	ALYSON SINCLAIR	DATE REVISED	
FUNCTIONAL SUPERVISOR	JULIE CASEY		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN		

P:\proj\02\3h770\design\510_Plans\ESL Maps\3H770_ea001.dgn

LAST REVISION 07-06-22 | DATE PLOTTED => 30-JAN-2023 | TIME PLOTTED => 14:01

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

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ESA 1A (WATERS OF THE U.S.)

0.4

PRIVATE DRIVEWAY

PM 0.3

PM 0.4

PM 0.5

ETW

4'

FO

ESL

V

50'

75'

MATCH LINE (L-1)

MATCH LINE (L-3)

ESA 1 (VERNAL SWALE)

DIRECTIONAL DRILL STAGING AREA

FULL RECONSTRUCT TRAVELED WAY THICKNESS (Typ)-
0.2' R-HMA
0.4' HMA-A
1.75' Cl 2 AB
SEG

FULL RECONSTRUCT SHOULDER THICKNESS (Typ)-
0.2' R-HMA
0.2' HMA-A
0.95' Cl 2 AB
SEG

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50'

L-2

CALCULATED-DESIGNED BY	KARLIE SMITH	REVISED BY	
CHECKED BY	ALYSON SINCLAIR	DATE REVISED	
FUNCTIONAL SUPERVISOR	JULIE CASEY		

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BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 DGN FILE => 3H770_ea002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

REGISTERED CIVIL ENGINEER DATE

XX-XX-17

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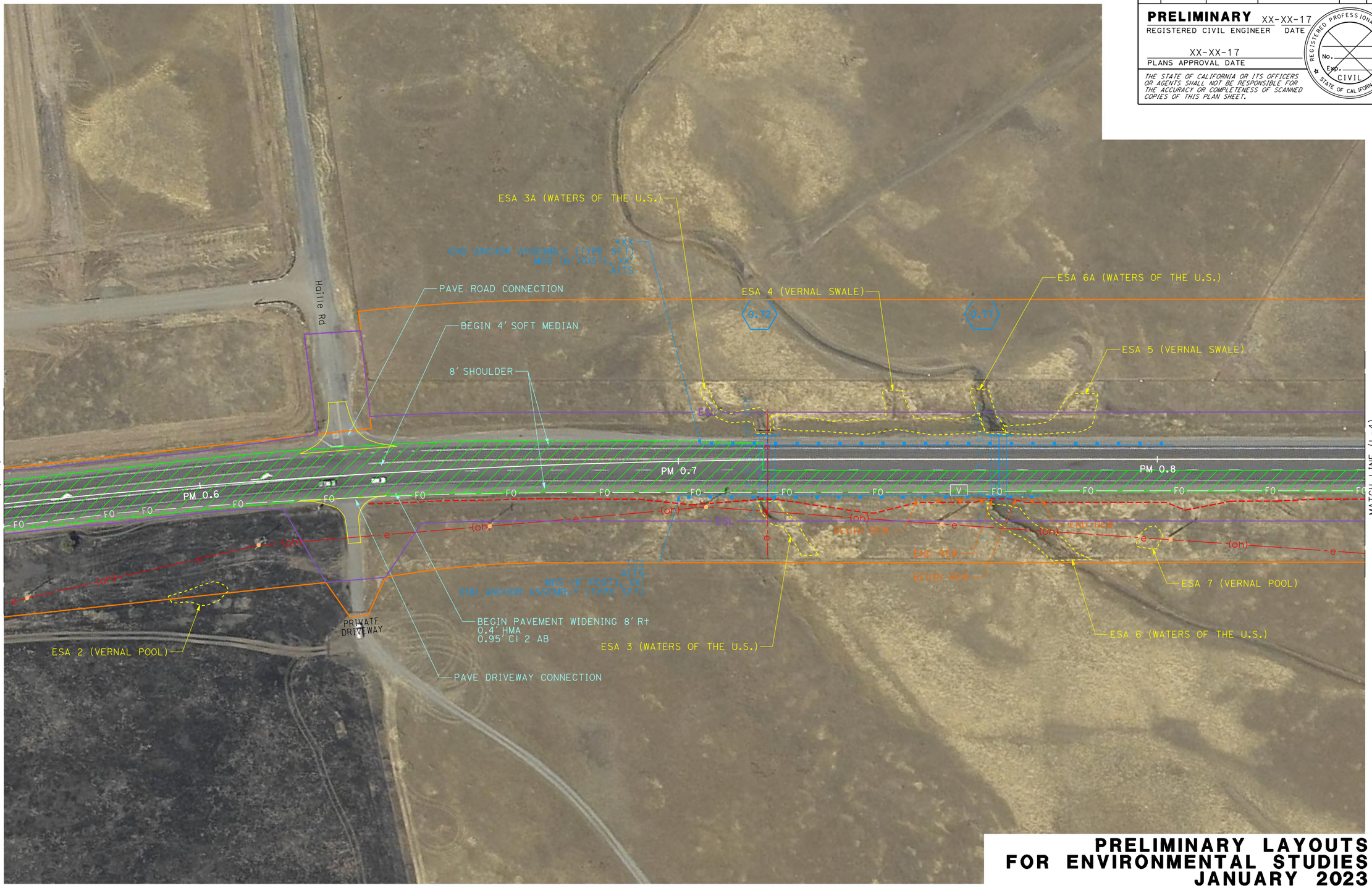

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50' **L-3**

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
KARLIE SMITH	ALYSON SINCLAIR		

FUNCTIONAL SUPERVISOR: JULIE CASEY

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BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_eq003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

REGISTERED CIVIL ENGINEER DATE

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PLANS APPROVAL DATE

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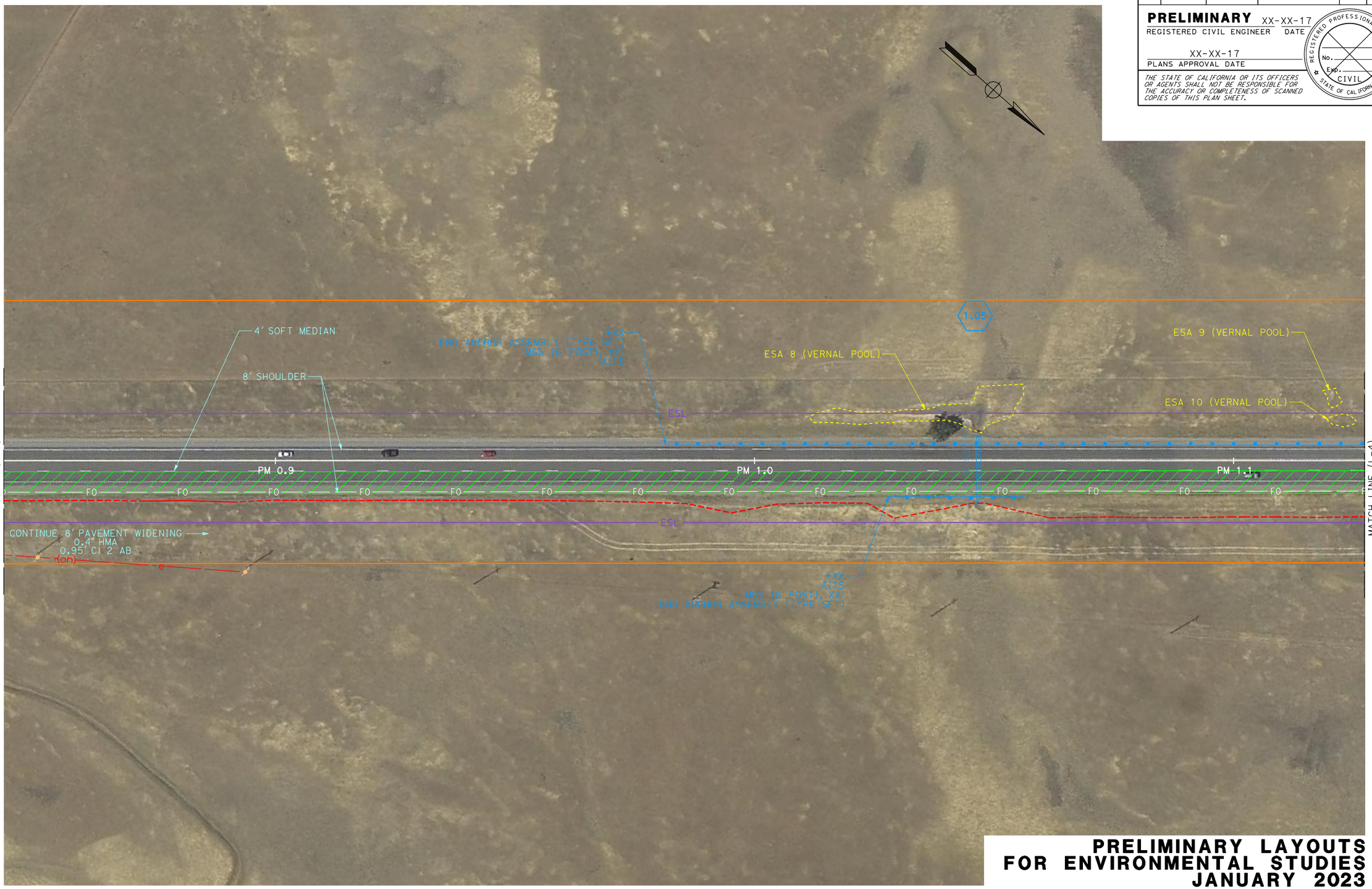

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50' **L-4**

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BORDER LAST REVISED 8/1/2016 | USERNAME => s151920, DGN FILE => 3H770_ea004.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

REGISTERED CIVIL ENGINEER DATE

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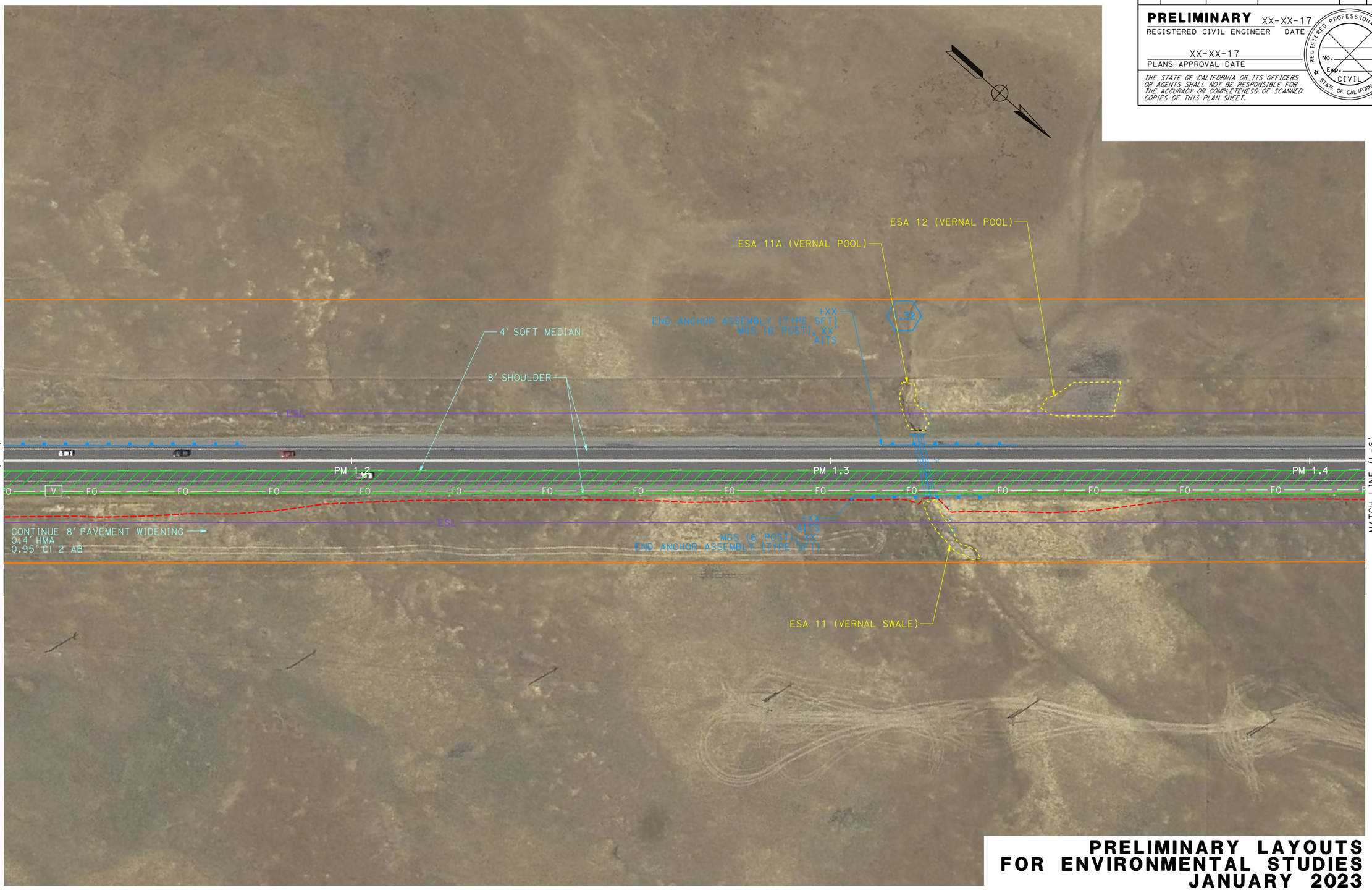

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50' **L-5**

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

REGISTERED CIVIL ENGINEER DATE

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PLANS APPROVAL DATE

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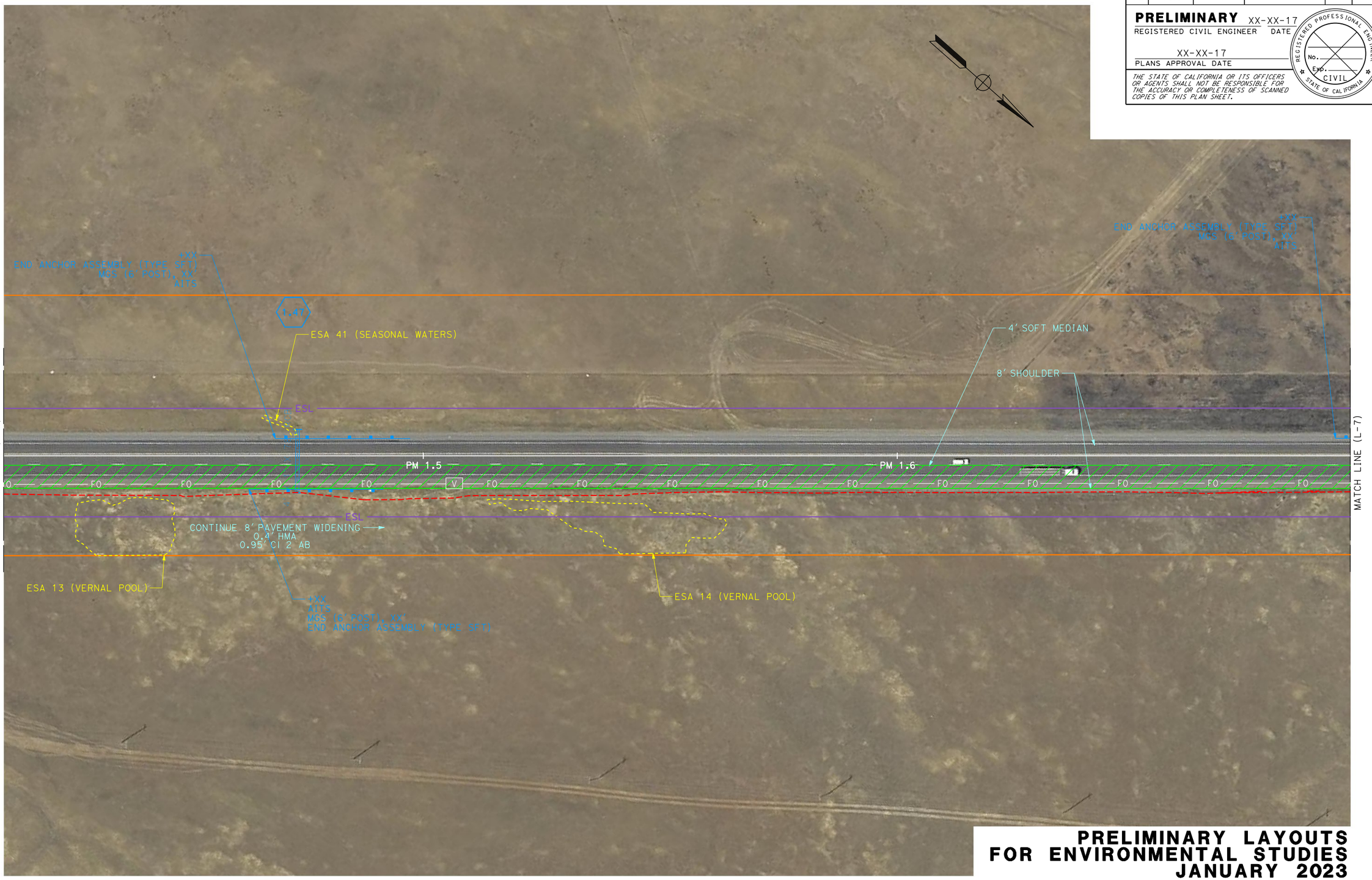

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50' **L-6**

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BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea006.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

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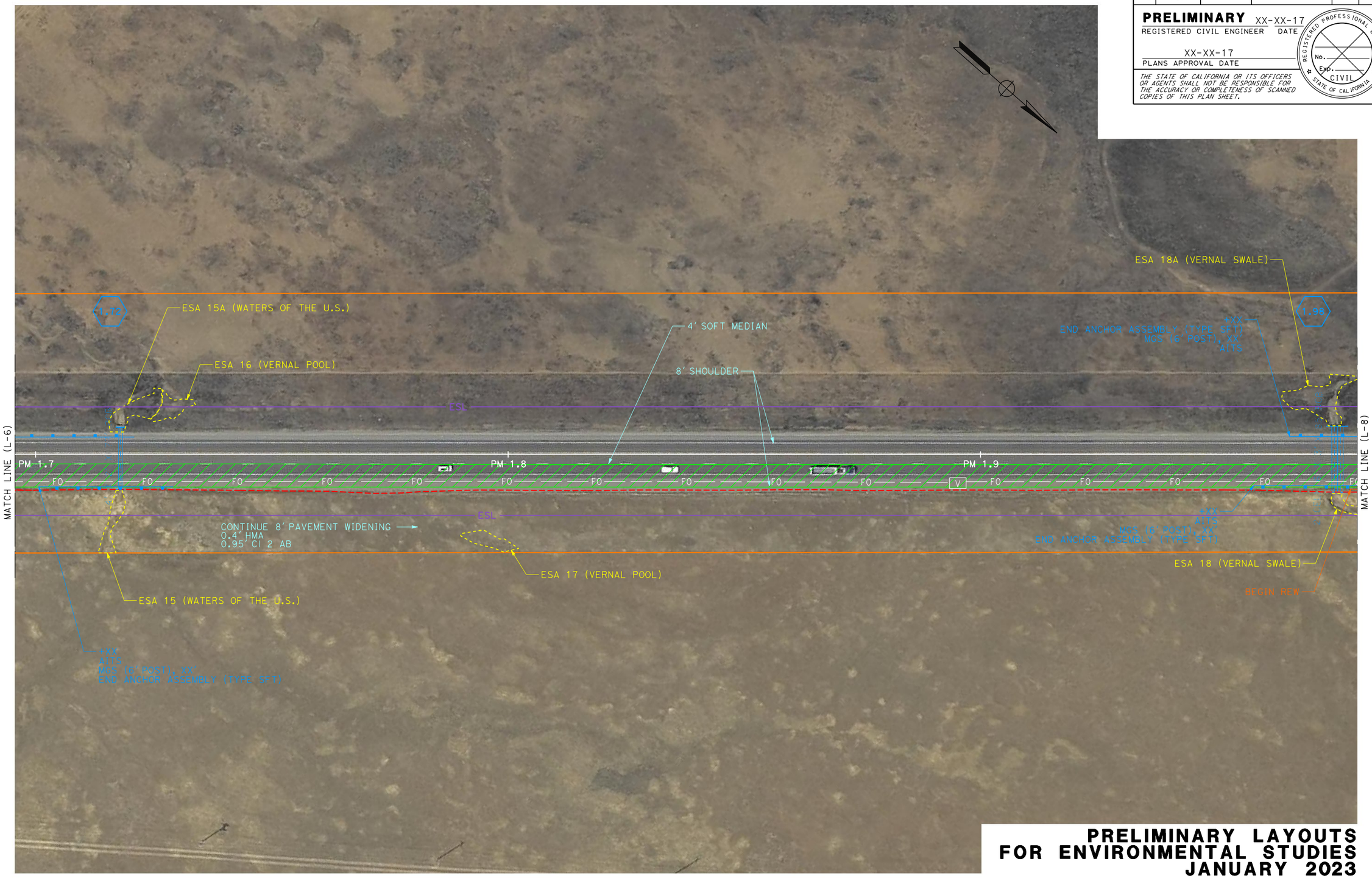

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50' **L-7**

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

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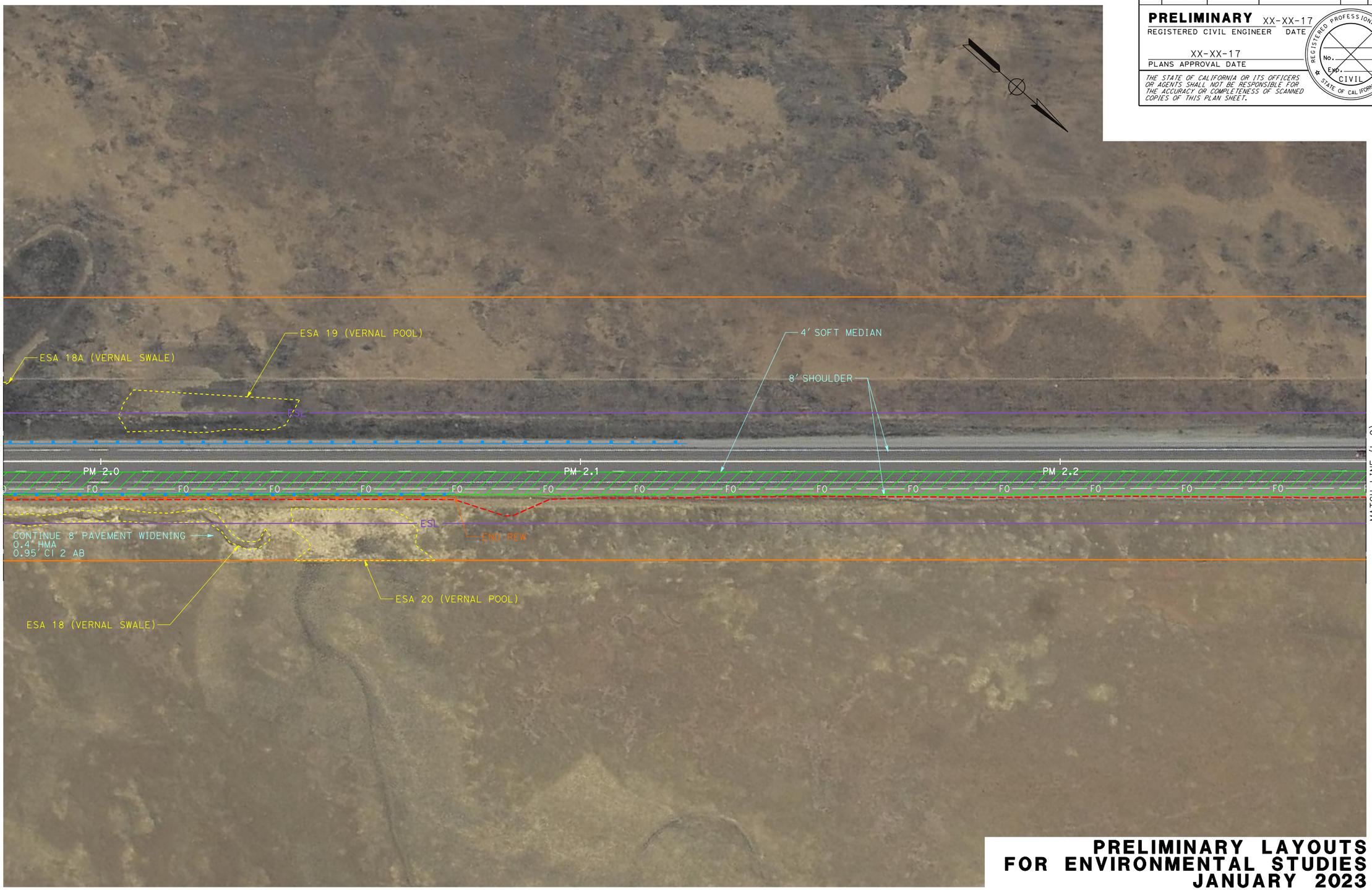

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50' **L-8**

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BORDER LAST REVISED 8/1/2016

USERNAME => s151920
DGN FILE => 3H770_ea008.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0316

PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
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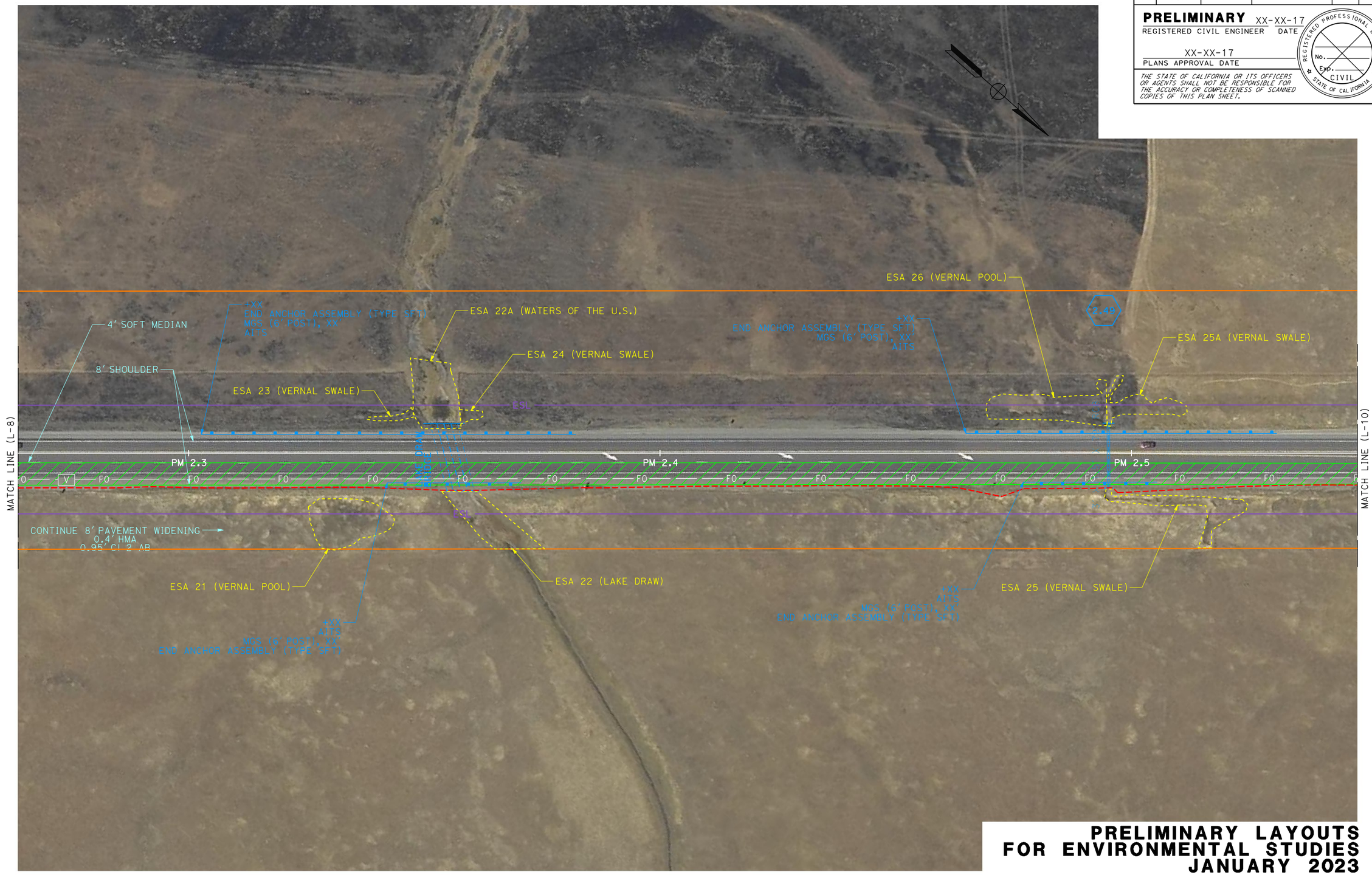

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50'

L-9

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BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea009.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

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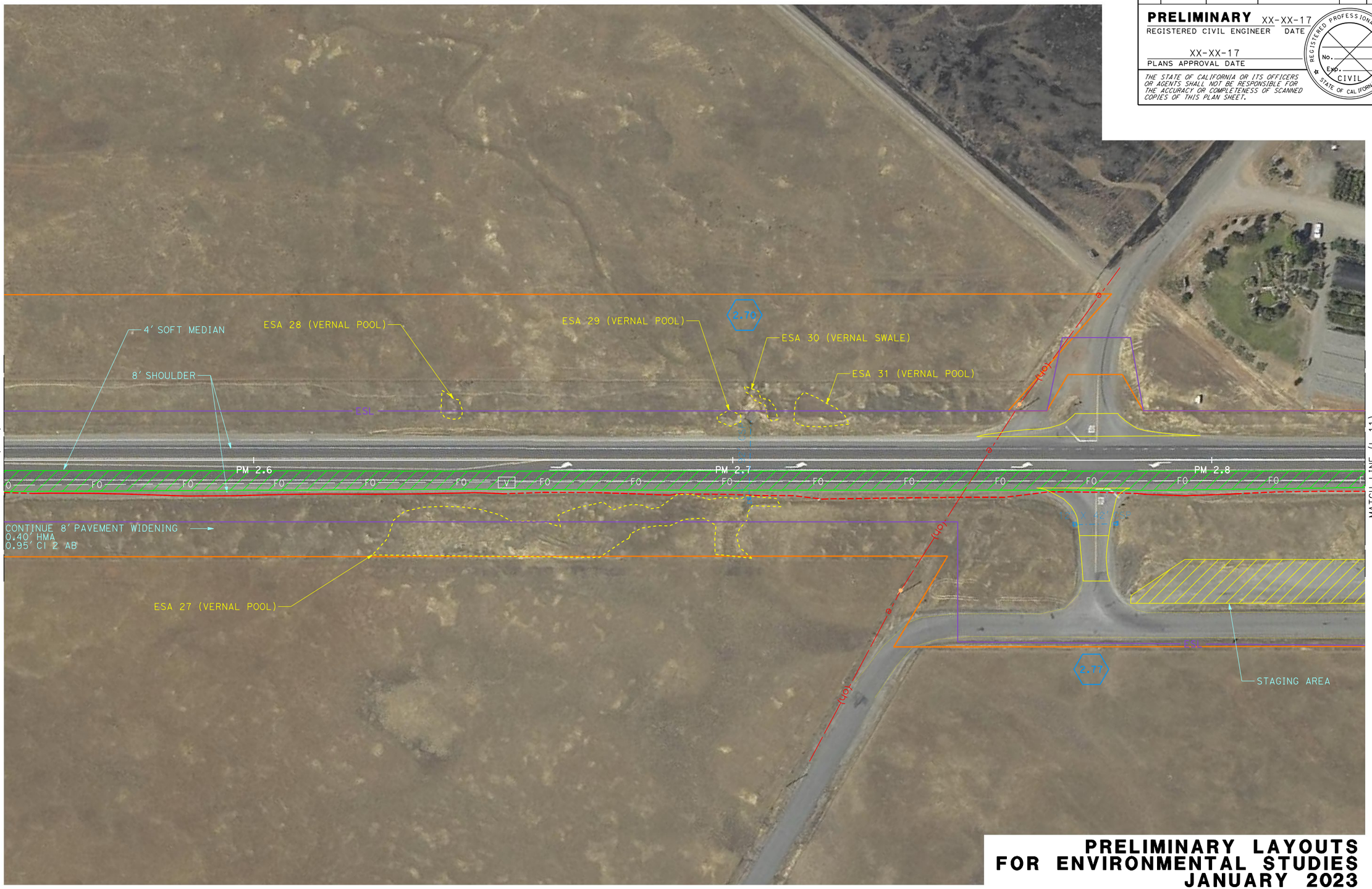

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50' **L-10**

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CHECKED BY: ALYSON SINCLAIR

FUNCTIONAL SUPERVISOR: JULIE CASEY

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

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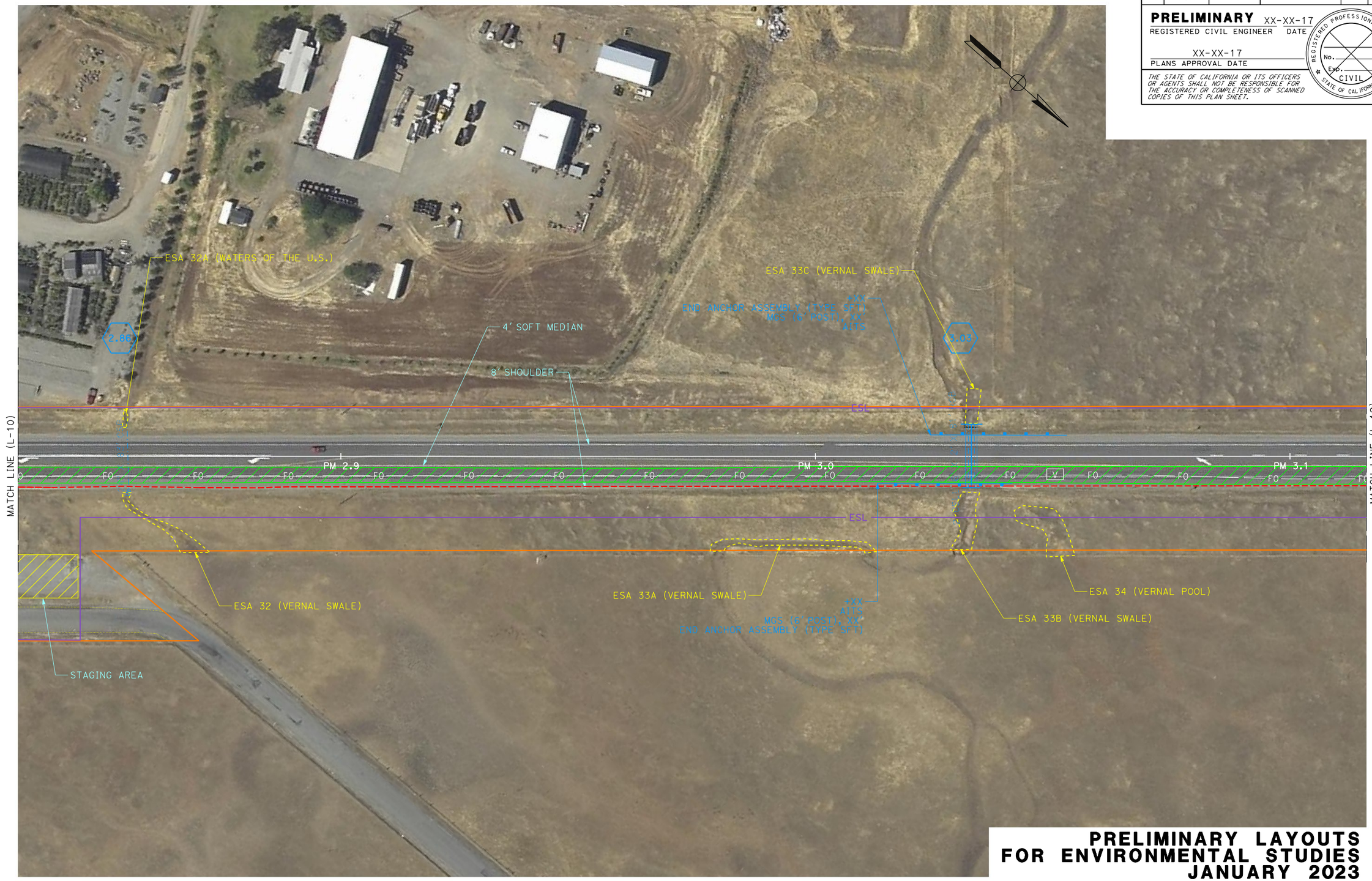

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50'

L-11

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

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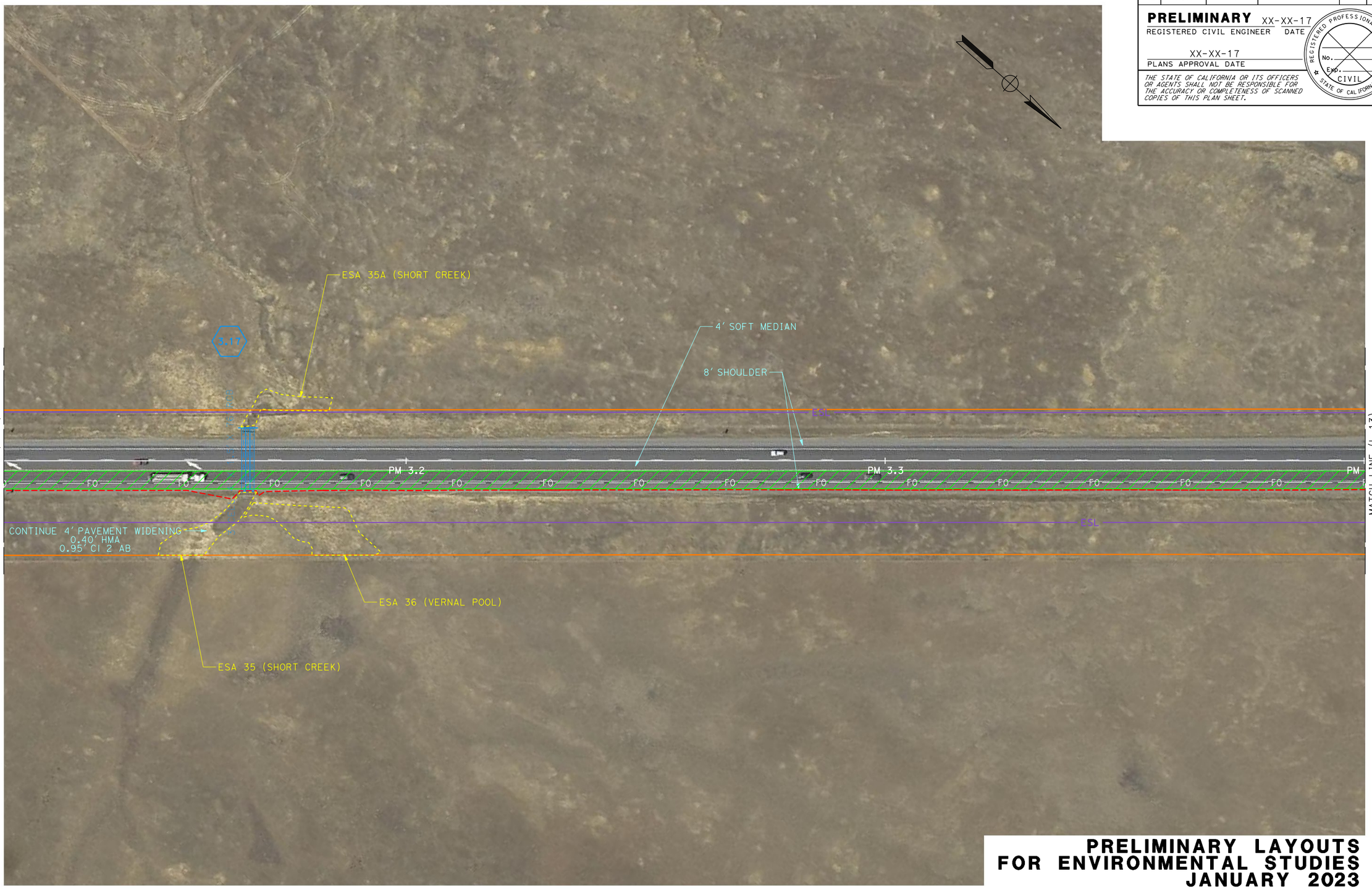

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50' **L-12**

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LAST REVISION DATE PLOTTED => 30-JAN-2023
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		1

PRELIMINARY XX-XX-17

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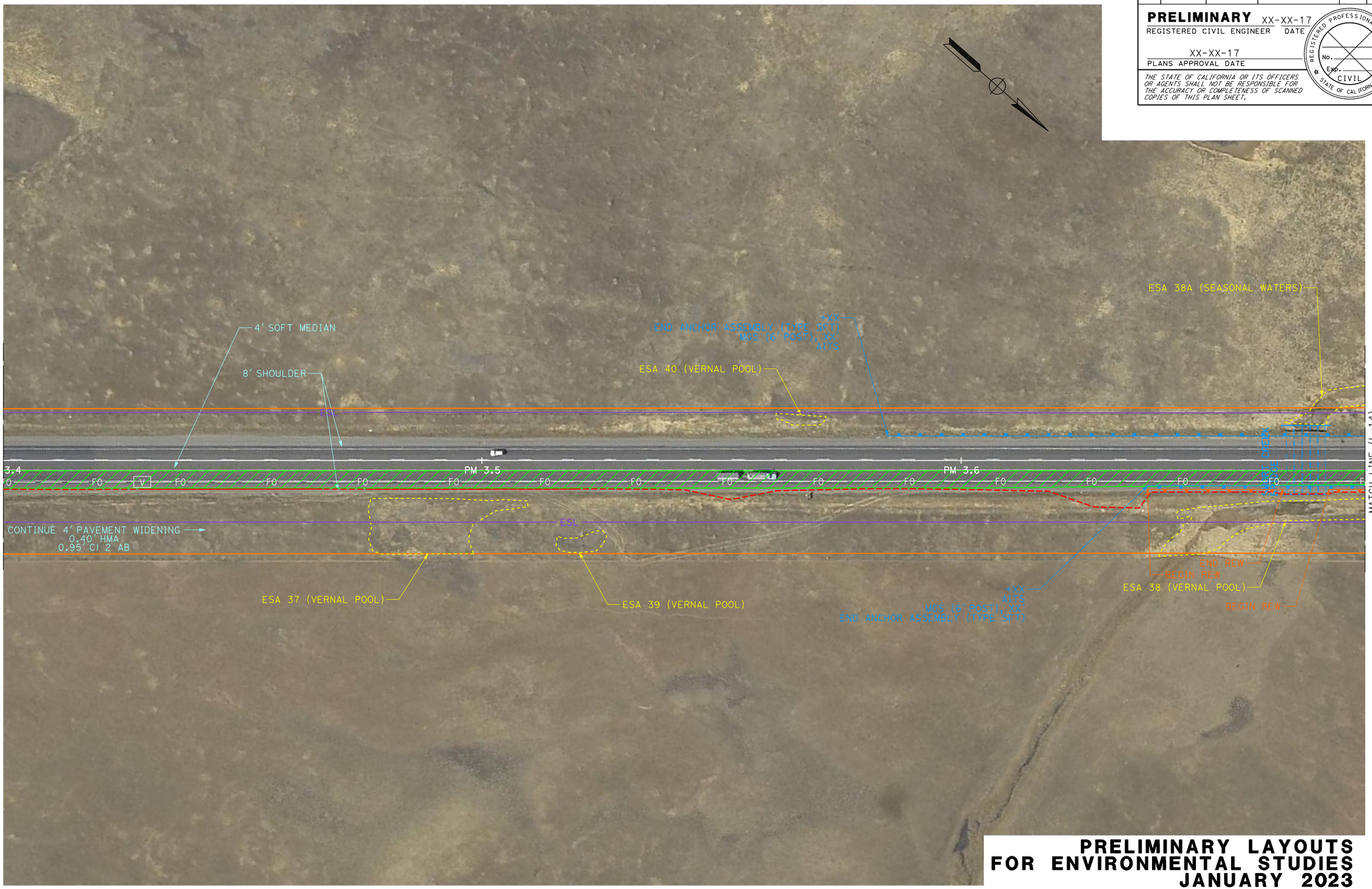

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50'

L-13

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

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PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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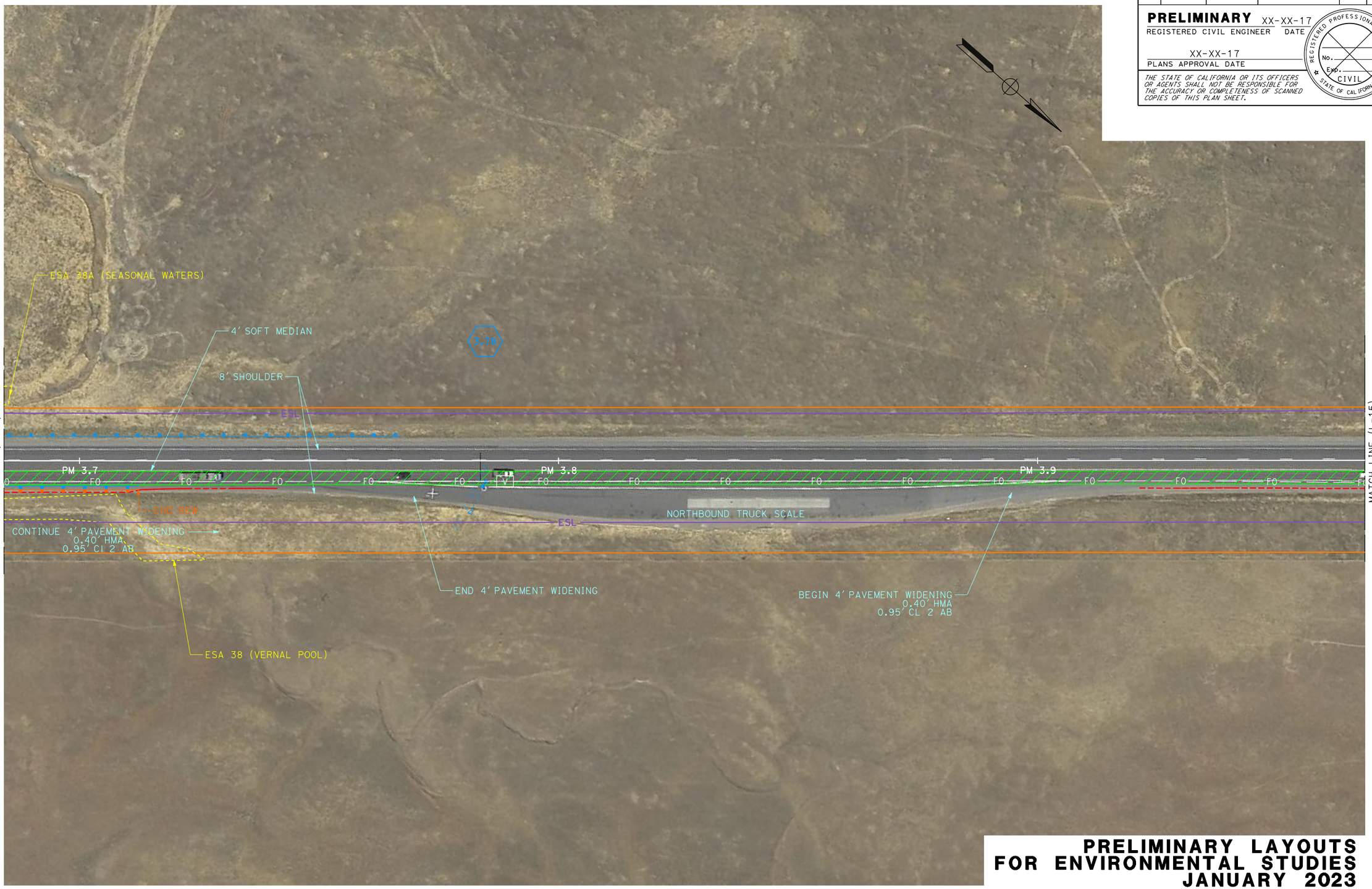

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50' **L-14**

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

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PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50′ **L-15**

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

REGISTERED CIVIL ENGINEER DATE

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PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50′ **L-16**

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07-06-22

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BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea016.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

REGISTERED CIVIL ENGINEER DATE

XX-XX-17

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50' **L-17**

CALCULATED-DESIGNED BY	KARLIE SMITH	REVISED BY	
CHECKED BY	ALYSON SINCLAIR	DATE REVISED	
FUNCTIONAL SUPERVISOR	JULIE CASEY		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN		

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LAST REVISION 07-06-22 | DATE PLOTTED => 30-JAN-2023 | TIME PLOTTED => 14:04

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea017.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

REGISTERED CIVIL ENGINEER DATE

XX-XX-17

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50′ **L-18**

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CHECKED BY	ALYSON SINCLAIR	DATE REVISED	
FUNCTIONAL SUPERVISOR	JULIE CASEY		
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LAST REVISION 07-06-22 | DATE PLOTTED => 30-JAN-2023 | TIME PLOTTED => 14:04

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea018.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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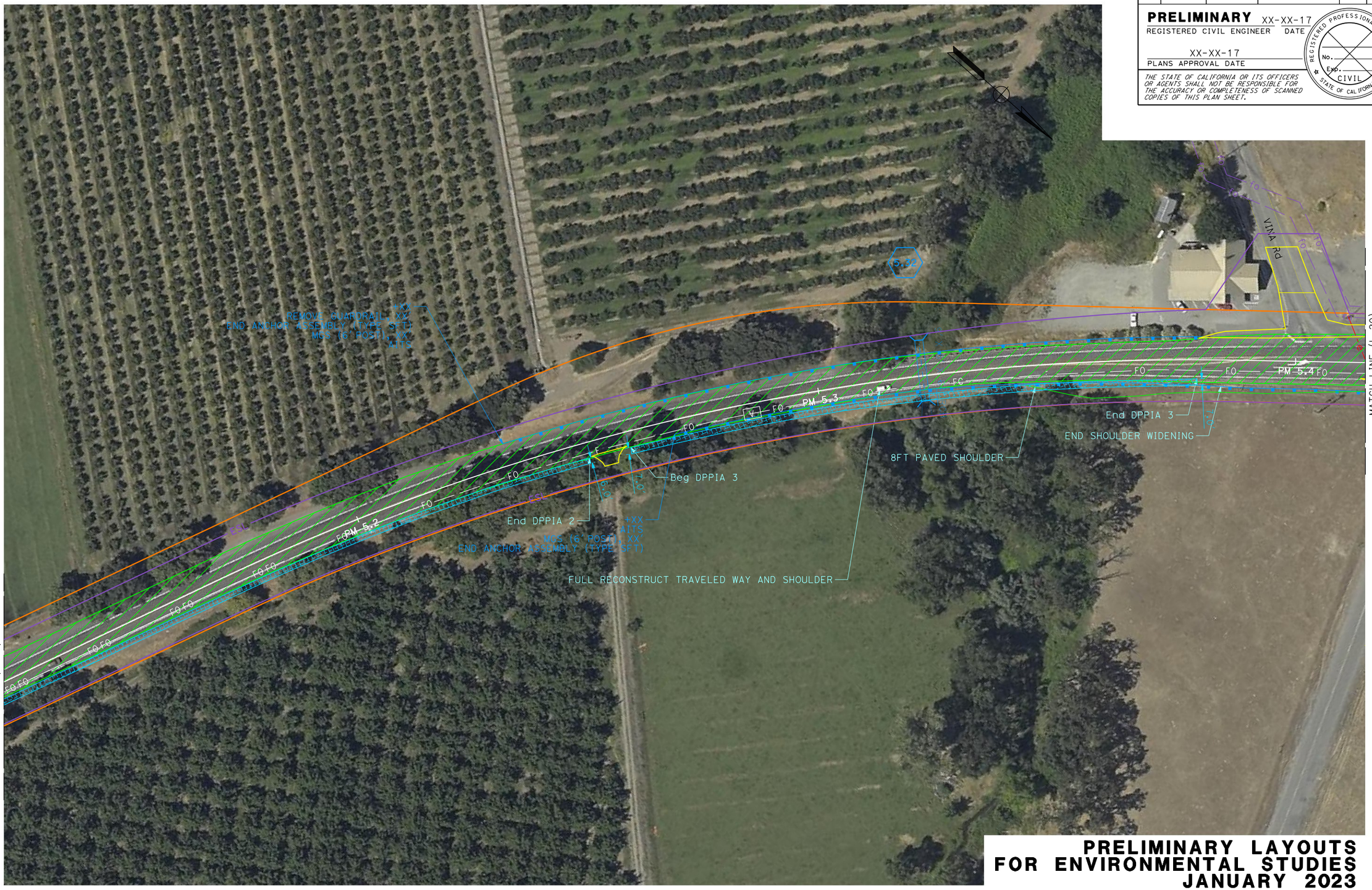

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50′ **L-19**

CALCULATED-DESIGNED BY	KARLIE SMITH	REVISED BY	
CHECKED BY	ALYSON SINCLAIR	DATE REVISED	

FUNCTIONAL SUPERVISOR: JULIE CASEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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LAST REVISION 07-06-22 — DATE PLOTTED => 30-JAN-2023 — TIME PLOTTED => 14:05

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea019.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

REGISTERED CIVIL ENGINEER DATE

XX-XX-17

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50′ **L-20**

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LAST REVISION 07-06-22 — DATE PLOTTED => 30-JAN-2023 — TIME PLOTTED => 14:05

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea020.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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MATCH LINE (L-20)

ESA 72 (ELDERBERRY)
ESA 71 (ELDERBERRY)
ESA 70 (ELDERBERRY)
ESA 69 (ELDERBERRY)
+XX
REMOVE GUARDRAIL, XX'
END ANCHOR ASSEMBLY (TYPE SFT)
MGS (6' POST), XX'
TRANSITION RAILING (TYPE WB)
End DPPIA 4
Beg DPPIA 6
ESA 44 (ELDERBERRY)
PRIVATE DRIVEWAY
End DPPIA 6
PM 5.8
DEER CREEK OVERFLOW
+XX
REMOVE GUARDRAIL, XX'
AITS
MGS (6' POST), XX'
TRANSITION RAILING (TYPE WB)
End DPPIA 5
DIRECTIONAL DRILL STAGING AREA
PM 5.82
DEER CREEK OVERFLOW
REPLACE EXISTING GUARDRAIL
AND TRANSITION RAILING
ESA 45 (ELDERBERRY)
ESA 46 (ELDERBERRY)
DEER CREEK OVERFLOW
+XX
REMOVE GUARDRAIL, XX'
TRANSITION RAILING (TYPE WB)
MGS (6' POST), XX'
END ANCHOR ASSEMBLY (TYPE SFT)
+XX
REMOVE GUARDRAIL, XX'
TRANSITION RAILING (TYPE WB)
MGS (6' POST), XX'
AITS
ESA 73 (ELDERBERRY)
PM 5.82
DEER CREEK OVERFLOW
REPLACE EXISTING GUARDRAIL
AND TRANSITION RAILING
ESA 47 (ELDERBERRY)
ESA 48 (ELDERBERRY)
ESA 50 (ELDERBERRY)
ESA 49 (ELDERBERRY)
DIRECTIONAL DRILL STAGING AREA
DIRECTIONAL DRILL STAGING AREA ACCESS
ESA 52 (ELDERBERRY)
Beg DPPIA 7
ESA 51 (ELDERBERRY)
PM 5.9
Beg DPPIA 8
End DPPIA 8
+XX
REMOVE GUARDRAIL, XX'
END ANCHOR ASSEMBLY (TYPE SFT)
MGS (6' POST), XX'
TRANSITION RAILING (TYPE WB)
+XX
REMOVE GUARDRAIL, XX'
AITS
MGS (6' POST), XX'
TRANSITION RAILING (TYPE WB)
ESA 53 (ELDERBERRY)
End DPPIA 7
PRIVATE DRIVEWAY
ESA 54 (ELDERBERRY)
PRIVATE DRIVEWAY (AGRICULTURAL ACCESS)
REPLACE HMA OVERSIDE DRAIN
PM 5.99
DEER CREEK
REPLACE EXISTING GUARDRAIL
AND TRANSITION RAILING
DIRECTIONAL DRILL STAGING AREA
ESA 55 (ELDERBERRY)
MATCH LINE (L-22)

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50' **L-21**

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
KARLIE SMITH	ALYSON SINCLAIR		

FUNCTIONAL SUPERVISOR: JULIE CASEY

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LAST REVISION: DATE PLOTTED => 30-JAN-2023 TIME PLOTTED => 14:05
07-06-22

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 DGN FILE => 3H770_ea021.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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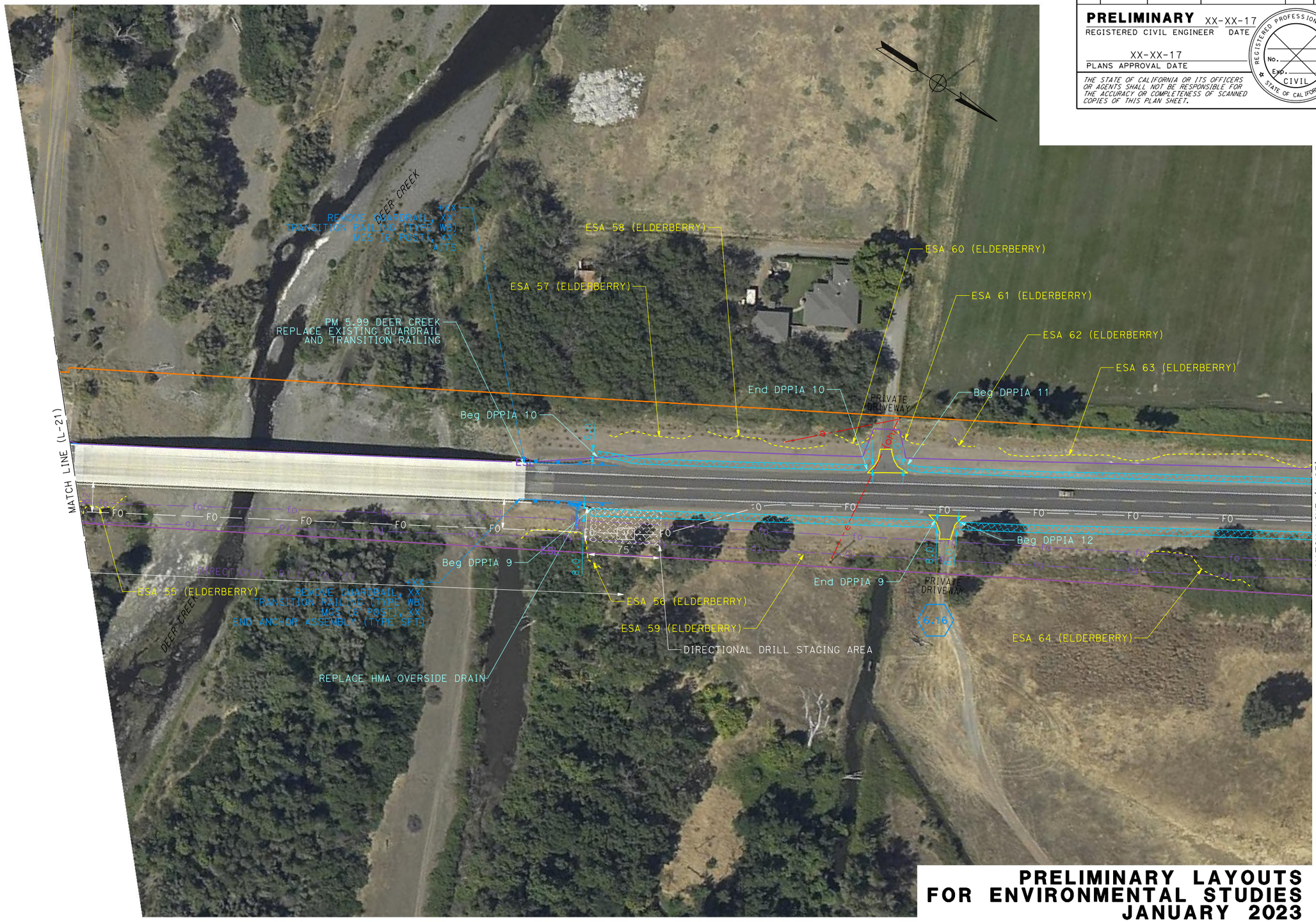

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50′ **L-22**

CALCULATED-DESIGNED BY	KARLIE SMITH
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FUNCTIONAL SUPERVISOR	JULIE CASEY
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LAST REVISION 07-06-22 DATE PLOTTED => 30-JAN-2023 TIME PLOTTED => 14:05

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BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 DGN FILE => 3H770_ea022.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50′ **L-23**

CALCULATED-DESIGNED BY	KARLIE SMITH	REVISED BY	
CHECKED BY	ALYSON SINCLAIR	DATE REVISED	
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LAST REVISION 07-06-22 | DATE PLOTTED => 30-JAN-2023 | TIME PLOTTED => 14:06

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea023.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. — CIVIL — STATE OF CALIFORNIA

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PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50'

L-24

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LAST REVISION 07-06-22 | DATE PLOTTED => 30-JAN-2023 | TIME PLOTTED => 14:06

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea024.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

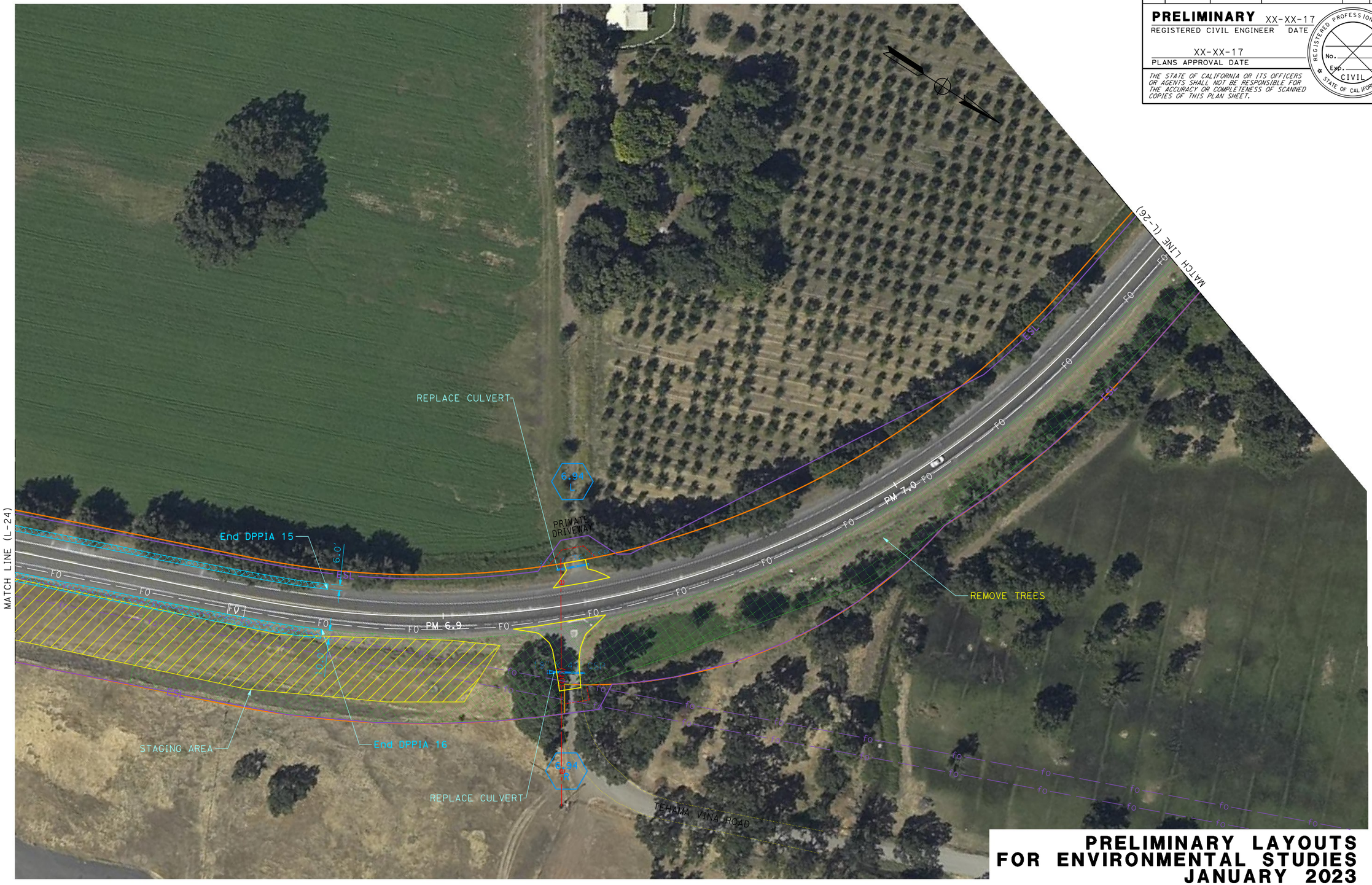
PRELIMINARY XX-XX-17

REGISTERED CIVIL ENGINEER DATE

XX-XX-17

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA



PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50'

L-25

CALCULATED-DESIGNED BY		
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KARLIE SMITH		REVISED BY
FUNCTIONAL SUPERVISOR	JULIE CASEY	
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BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea025.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
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PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES
JANUARY 2023

SCALE: 1" = 50'

L-26

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FUNCTIONAL SUPERVISOR: JULIE CASEY
CALCULATED-DESIGNED BY: KARLIE SMITH
CHECKED BY: ALYSON SINCLAIR
REVISED BY
DATE REVISED

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LAST REVISION 07-06-22
DATE PLOTTED => 30-JAN-2023
TIME PLOTTED => 14:06

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

REGISTERED CIVIL ENGINEER DATE

XX-XX-17

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50′ **L-27**

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: KARLIE SMITH

CHECKED BY: ALYSON SINCLAIR

FUNCTIONAL SUPERVISOR: JULIE CASEY

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LAST REVISION 07-06-22 | DATE PLOTTED => 30-JAN-2023 | TIME PLOTTED => 14:07

BORDER LAST REVISED 8/1/2016

USERNAME => s151920
DGN FILE => 3H770_ea027.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0316

PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

REGISTERED CIVIL ENGINEER DATE

XX-XX-17

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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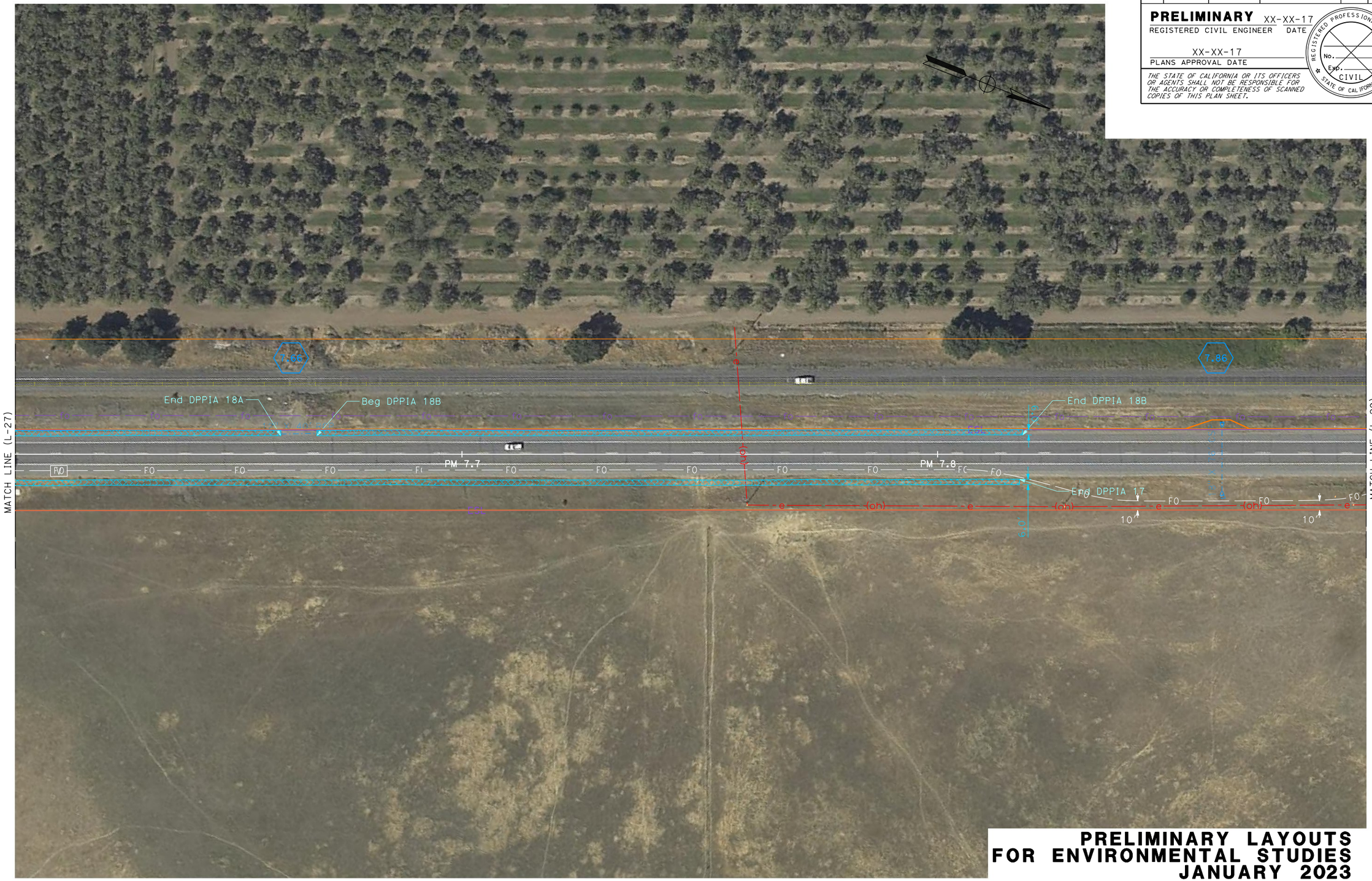

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50'

L-28

CALCULATED-DESIGNED BY	KARLIE SMITH	REVISED BY	
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FUNCTIONAL SUPERVISOR	JULIE CASEY		

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LAST REVISION: DATE PLOTTED => 30-JAN-2023 07-06-22 TIME PLOTTED => 14:07

BORDER LAST REVISED 8/1/2016

USERNAME => s151920
DGN FILE => 3H770_ea028.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0316

PROJECT NUMBER & PHASE 0218000039

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

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PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50'

L-29

MATCH LINE (X-XX)

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY: KARLIE SMITH
CHECKED BY: ALYSON SINCLAIR

FUNCTIONAL SUPERVISOR: JULIE CASEY

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LAST REVISION 07-06-22
DATE PLOTTED => 30-JAN-2023
TIME PLOTTED => 14:07
05-03-16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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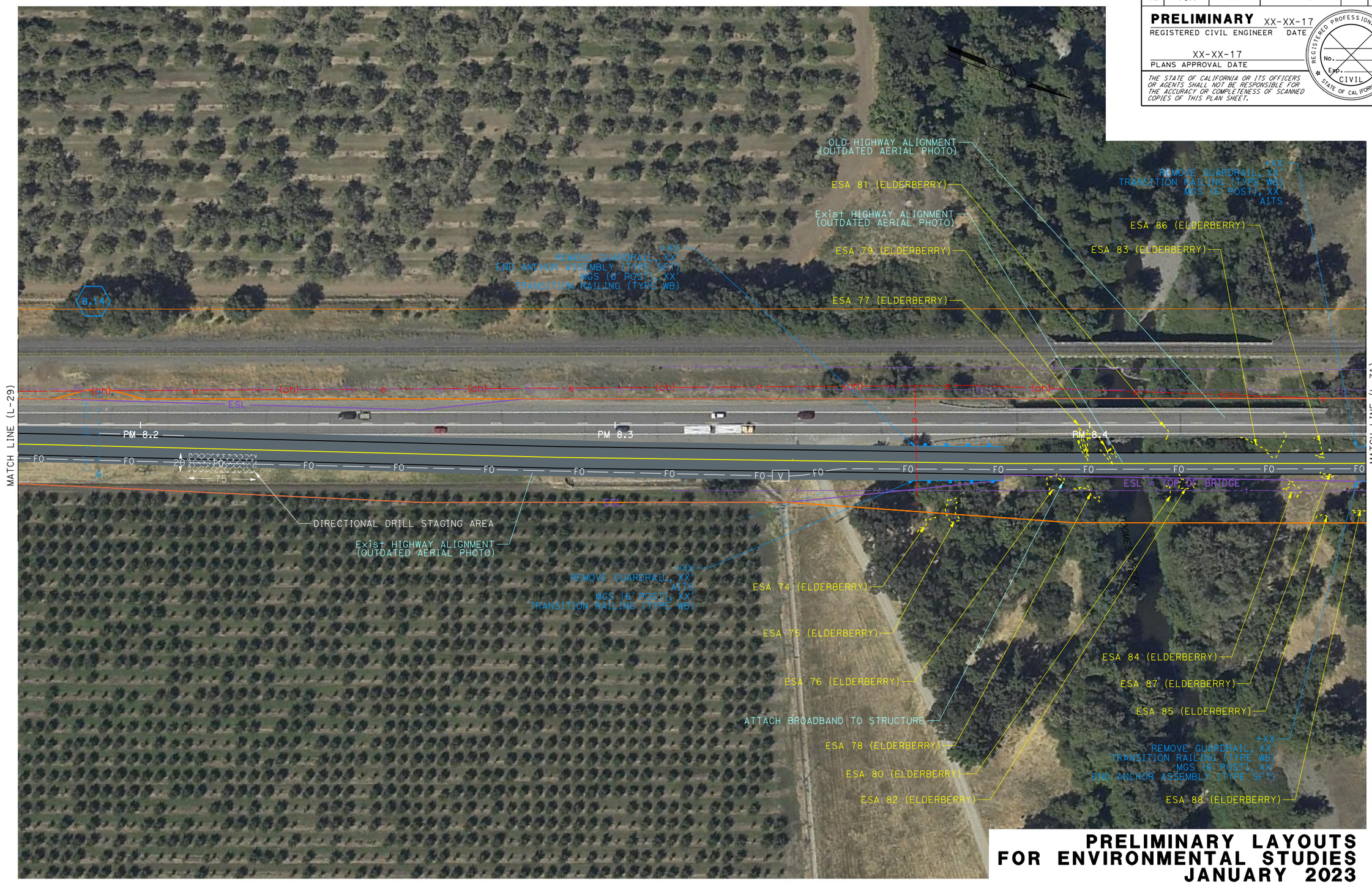

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50' **L-30**

CALCULATED-DESIGNED BY	KARLIE SMITH	REVISED BY	
CHECKED BY	ALYSON SINCLAIR	DATE REVISED	
FUNCTIONAL SUPERVISOR	JULIE CASEY		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN		

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LAST REVISION DATE PLOTTED => 30-JAN-2023
07-06-22 TIME PLOTTED => 14:07

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea030.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA

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PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES
JANUARY 2023

SCALE: 1" = 50'

L-31

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY: KARLIE SMITH
CHECKED BY: ALYSON SINCLAIR

FUNCTIONAL SUPERVISOR: JULIE CASEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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LAST REVISION 07-06-22
DATE PLOTTED => 30-JAN-2023
TIME PLOTTED => 14:08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

REGISTERED CIVIL ENGINEER DATE

XX-XX-17

PLANS APPROVAL DATE

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PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50'

L-32

CALCULATED-DESIGNED BY KARLIE SMITH

CHECKED BY ALYSON SINCLAIR

REVISED BY

DATE REVISED

FUNCTIONAL SUPERVISOR JULIE CASEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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LAST REVISION 07-06-22 | DATE PLOTTED => 30-JAN-2023 | TIME PLOTTED => 14:08

BORDER LAST REVISED 8/1/2016

USERNAME => s151920

DGN FILE => 3H770_ea032.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0316

PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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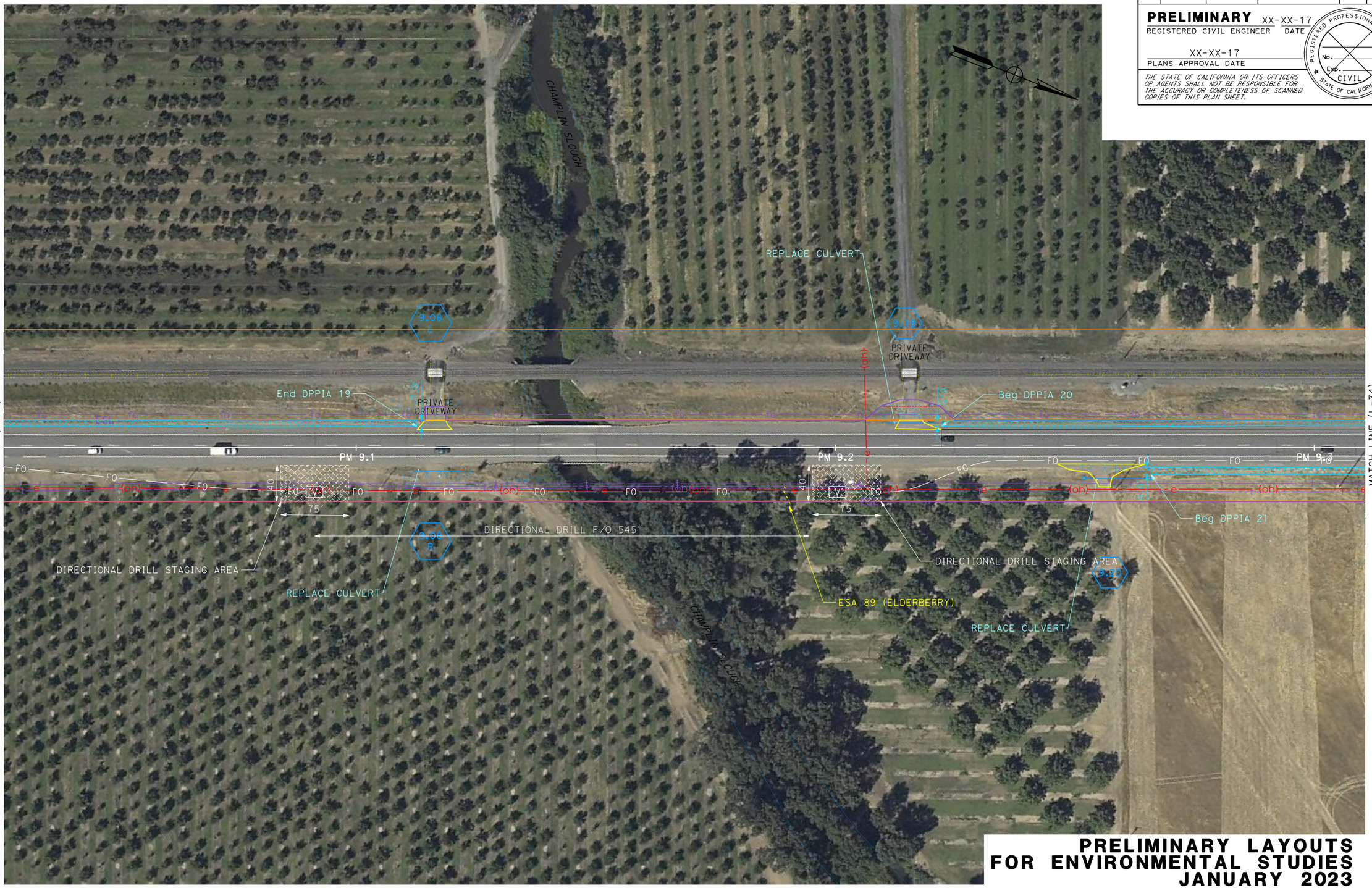

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50'

L-33

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
KARLIE SMITH	ALYSON SINCLAIR		

FUNCTIONAL SUPERVISOR: JULIE CASEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
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P:\proj3\02\3h770\design\510_Plans\ESL Maps\3H770_ea033.dgn

LAST REVISION 07-06-22 | DATE PLOTTED => 30-JAN-2023 | TIME PLOTTED => 14:08

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea033.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. — CIVIL — STATE OF CALIFORNIA

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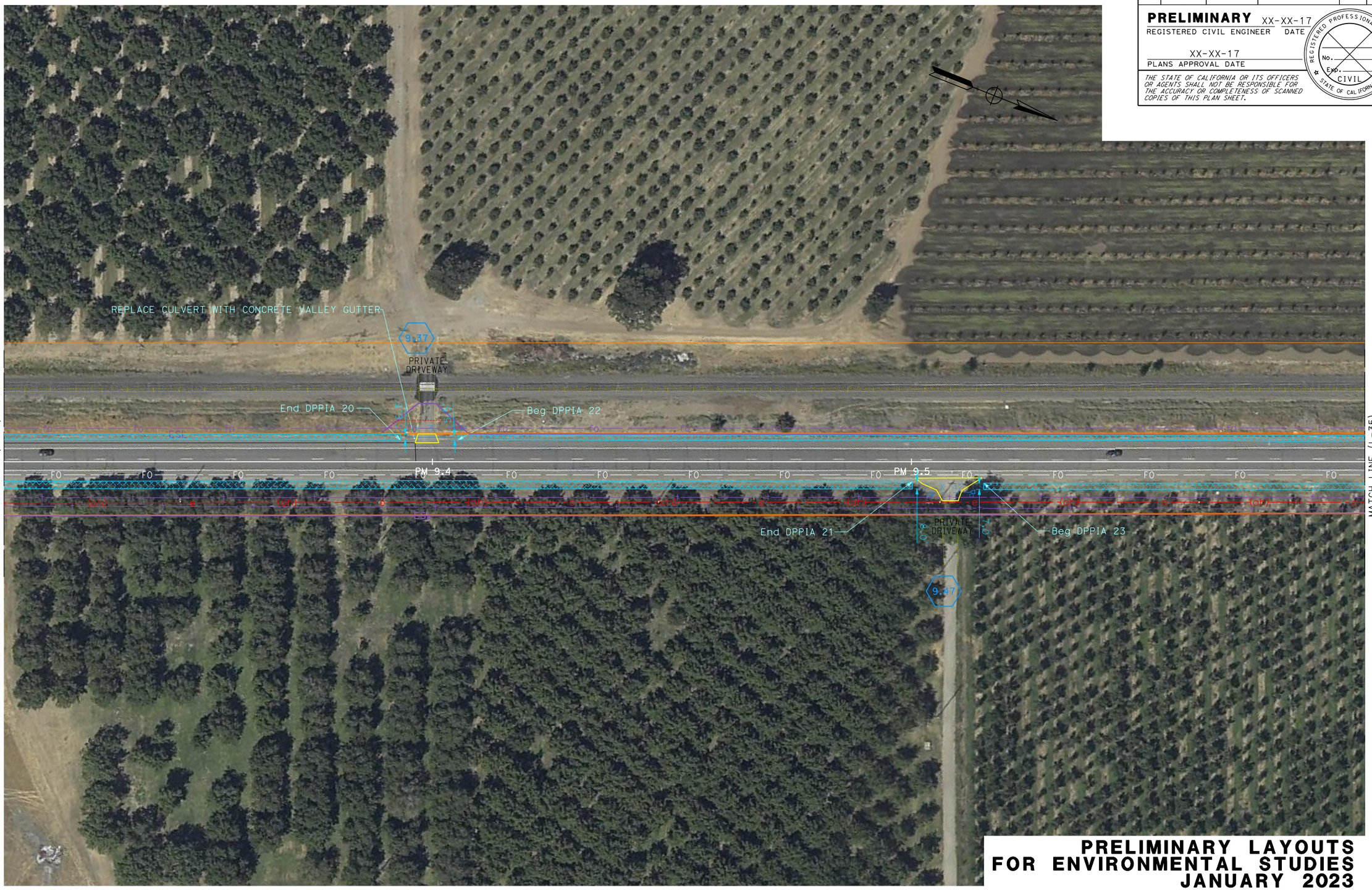

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50′ **L-34**

CALCULATED-DESIGNED BY	KARLIE SMITH
CHECKED BY	ALYSON SINCLAIR
FUNCTIONAL SUPERVISOR	JULIE CASEY
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN

REVISED BY	DATE REVISED

LAST REVISION DATE PLOTTED => 30-JAN-2023
07-06-22 TIME PLOTTED => 14:08

P:\proj3\02\3h770\design\510_Plans\ESL Maps\3H770_ea034.dgn

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea034.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50′ **L-35**

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
KARLIE SMITH	ALYSON SINCLAIR		

FUNCTIONAL SUPERVISOR: JULIE CASEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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LAST REVISION: DATE PLOTTED => 30-JAN-2023; TIME PLOTTED => 14:08; 07-06-22

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea035.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
No. Exp.
CIVIL
STATE OF CALIFORNIA

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PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50'

L-36

CALCULATED-DESIGNED BY	KARLIE SMITH	REVISED BY	
CHECKED BY	ALYSON SINCLAIR	DATE REVISED	
FUNCTIONAL SUPERVISOR	JULIE CASEY		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN		

LAST REVISION 07-06-22
DATE PLOTTED => 30-JAN-2023
TIME PLOTTED => 14:09

P:\proj3\02\3h770\design\510_Plans\ESL Maps\3H770_ea036.dgn

BORDER LAST REVISED 8/1/2016
USERNAME => s151920
DGN FILE => 3H770_ea036.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0316
PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA

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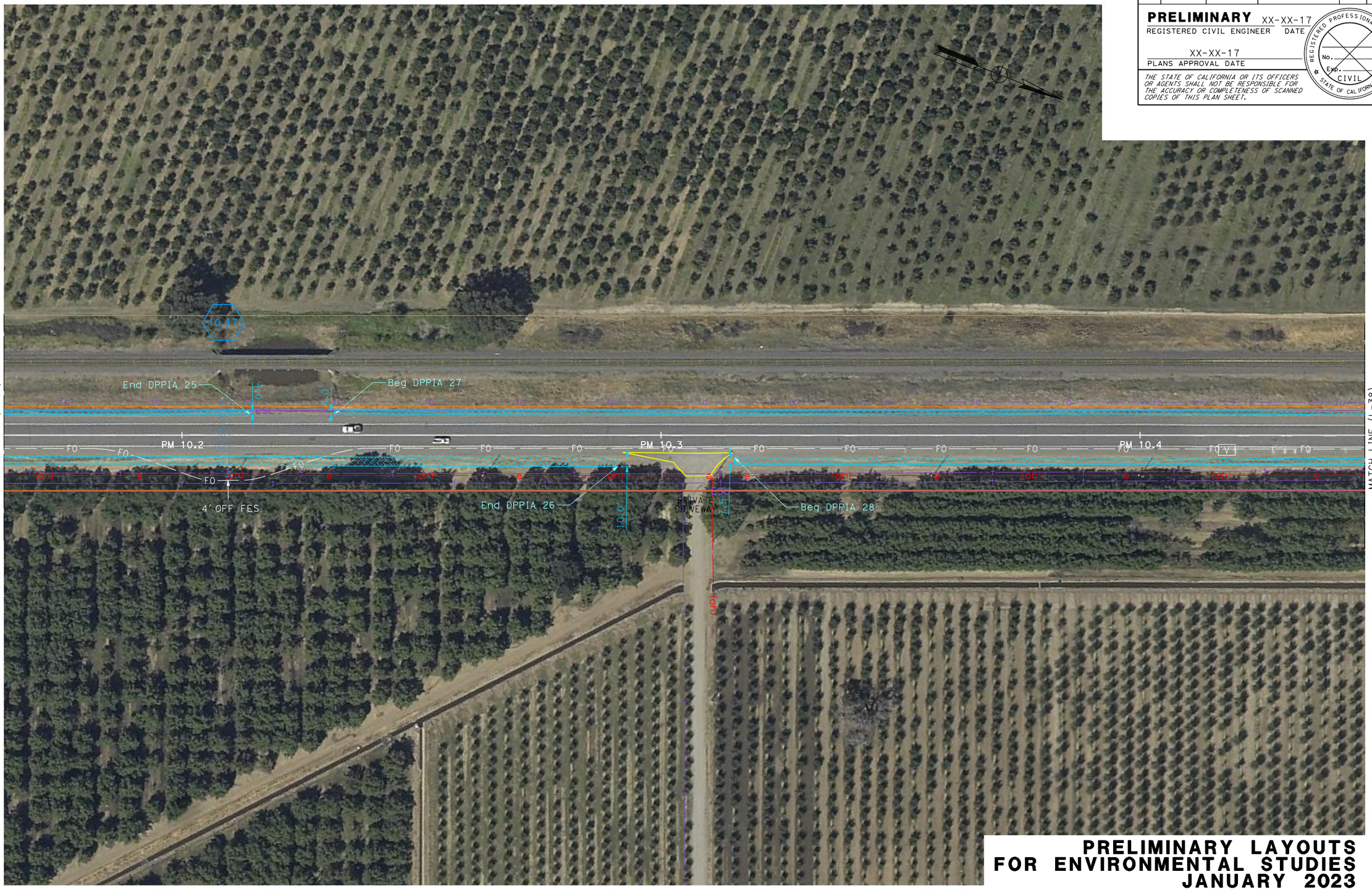

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50' **L-37**

CALCULATED-DESIGNED BY	KARLIE SMITH	REVISED BY	
CHECKED BY	ALYSON SINCLAIR	DATE REVISED	
FUNCTIONAL SUPERVISOR	JULIE CASEY		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN		

P:\proj\02\3h770\design\510_Plans\ESL Maps\3H770_ea037.dgn

LAST REVISION 07-06-22 | DATE PLOTTED => 30-JAN-2023 TIME PLOTTED => 14:09

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 DGN FILE => 3H770_ea037.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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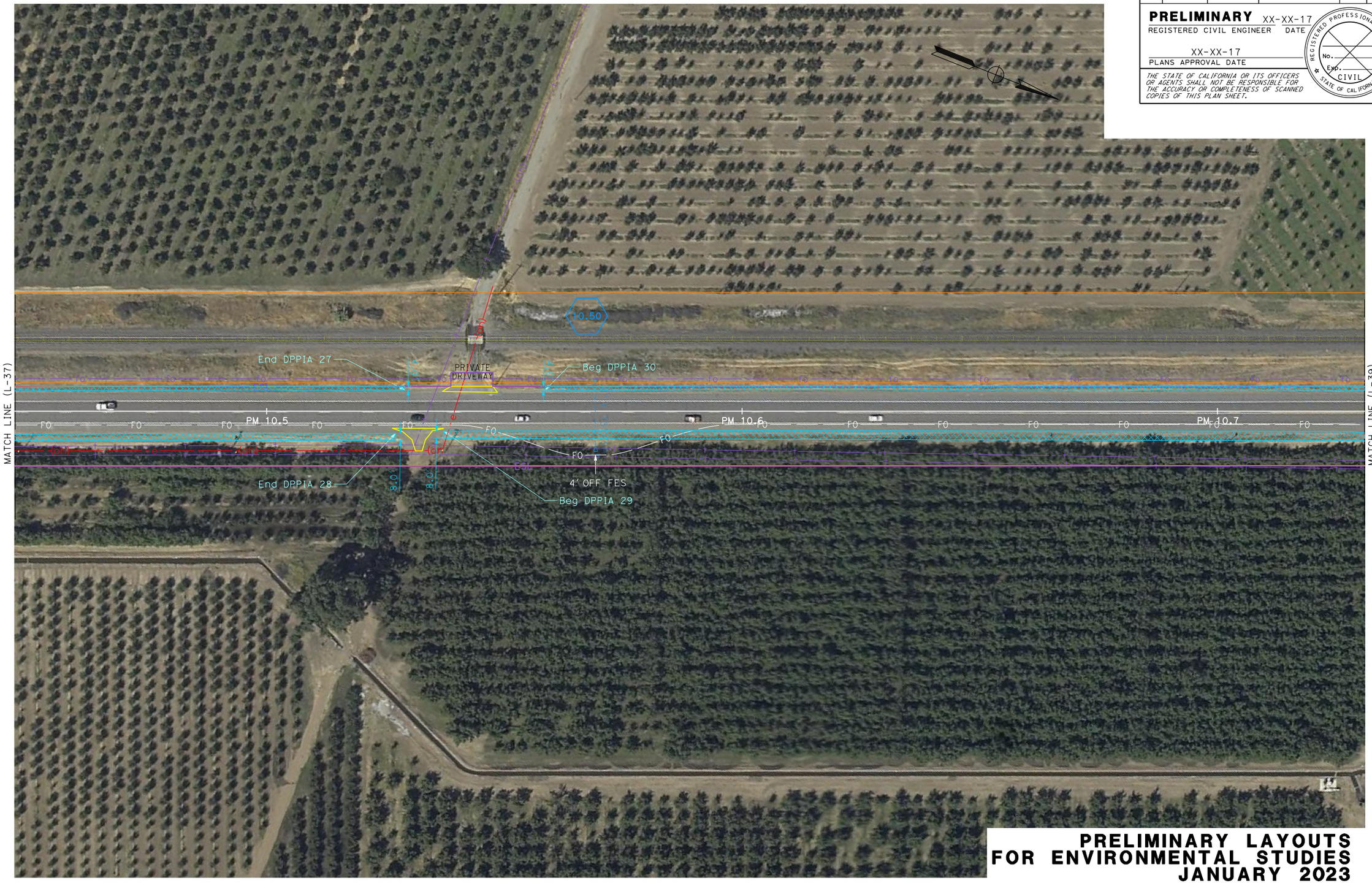

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50'

L-38

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
KARLIE SMITH	ALYSON SINCLAIR		

FUNCTIONAL SUPERVISOR: JULIE CASEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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P:\proj3\02\3h770\design\510_Plans\ESL Maps\3H770_ea038.dgn

LAST REVISION 07-06-22 | DATE PLOTTED => 30-JAN-2023 | TIME PLOTTED => 14:09

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea038.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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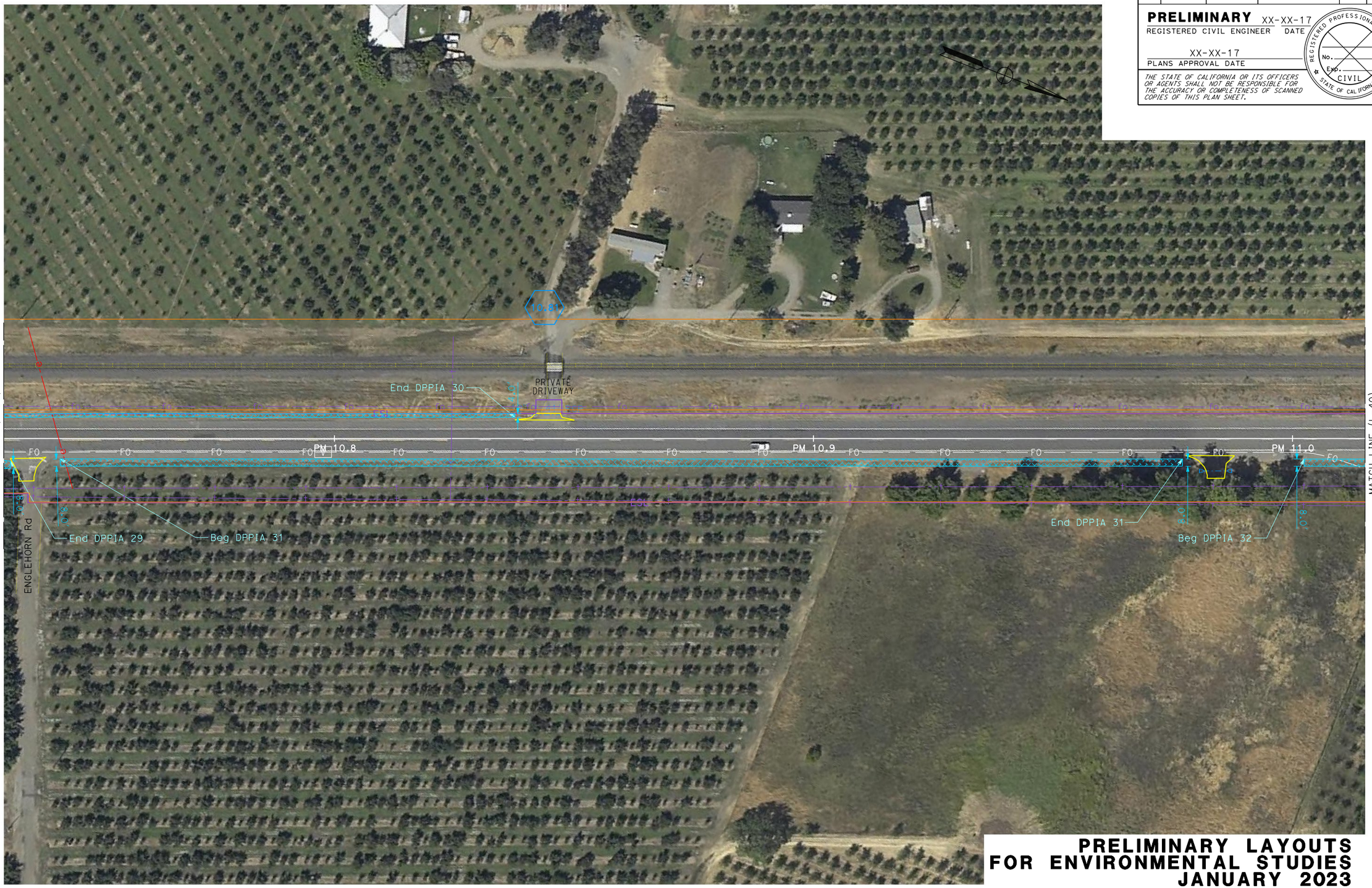

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50'

L-39

CALCULATED-DESIGNED BY
CHECKED BY
KARLIE SMITH
ALYSON SINCLAIR
REVISED BY
DATE REVISED
FUNCTIONAL SUPERVISOR
JULIE CASEY
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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Caltrans

LAST REVISION 07-06-22
DATE PLOTTED => 30-JAN-2023
TIME PLOTTED => 14:09

P:\proj3\02\3h770\design\510_Plans\ESL Maps\3H770_ea039.dgn

BORDER LAST REVISED 8/1/2016
USERNAME => s151920
DGN FILE => 3H770_ea039.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0316
PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

REGISTERED CIVIL ENGINEER DATE

XX-XX-17

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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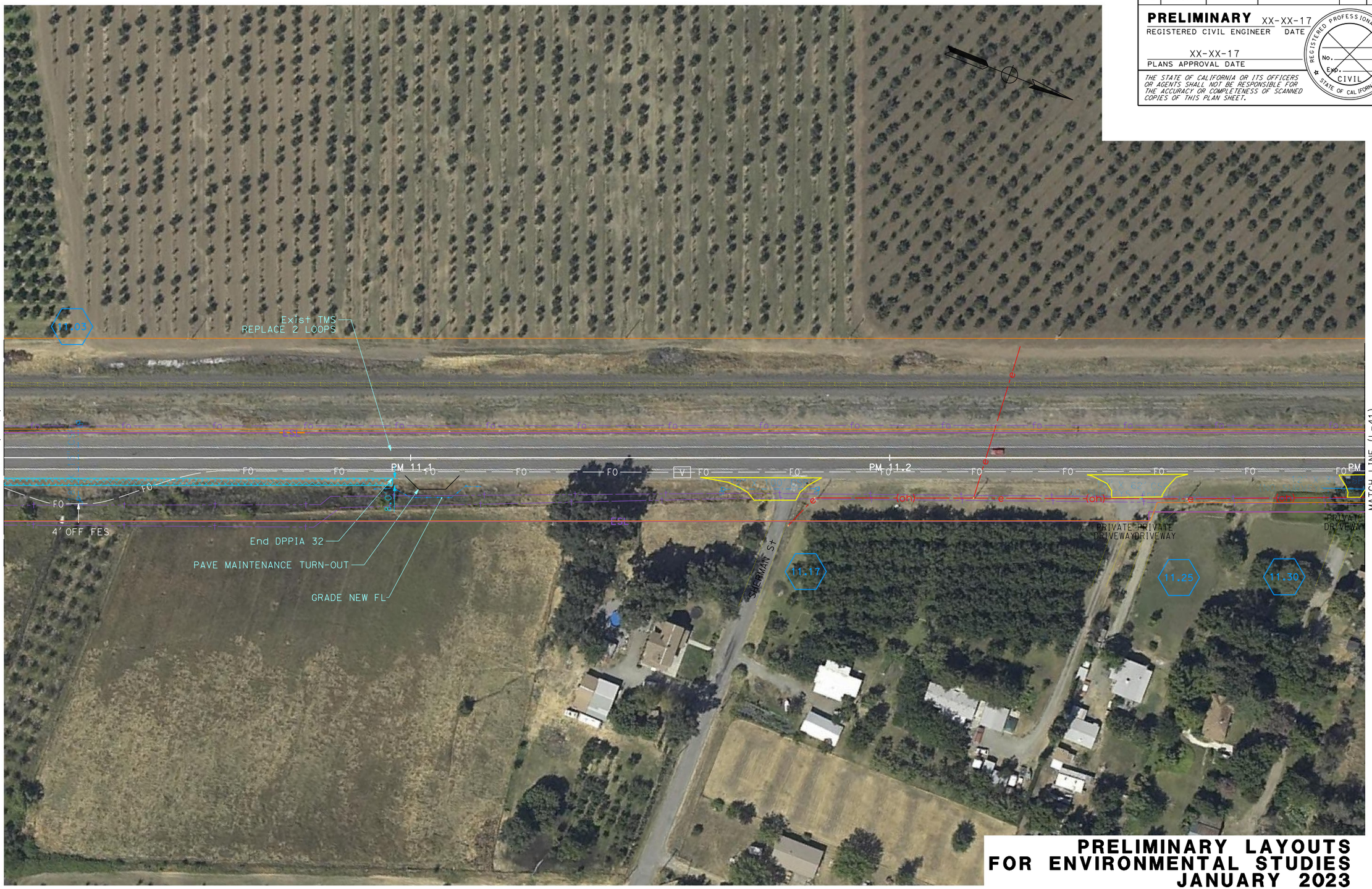

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50′

L-40

CALCULATED-DESIGNED BY	REVISED BY
CHECKED BY	DATE REVISED
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ALYSON SINCLAIR	
FUNCTIONAL SUPERVISOR	
JULIE CASEY	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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LAST REVISION DATE PLOTTED => 30-JAN-2023
07-06-22 TIME PLOTTED => 14:10

BORDER LAST REVISED 8/1/2016

USERNAME => s151920
DGN FILE => 3H770_ea040.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0316

PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. — CIVIL — STATE OF CALIFORNIA

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PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50'

L-41

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
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FUNCTIONAL SUPERVISOR: JULIE CASEY

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LAST REVISION: DATE PLOTTED => 30-JAN-2023
07-06-22 TIME PLOTTED => 14:10

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea041.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50'

L-42

CALCULATED-DESIGNED BY	KARLIE SMITH	REVISED BY	
CHECKED BY	ALYSON SINCLAIR	DATE REVISED	
FUNCTIONAL SUPERVISOR	JULIE CASEY		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN		

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LAST REVISION — DATE PLOTTED => 30-JAN-2023 — TIME PLOTTED => 14:10 — 07-06-22

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea042.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. — CIVIL — STATE OF CALIFORNIA

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REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: KARLIE SMITH
CHECKED BY: ALYSON SINCLAIR
FUNCTIONAL SUPERVISOR: JULIE CASEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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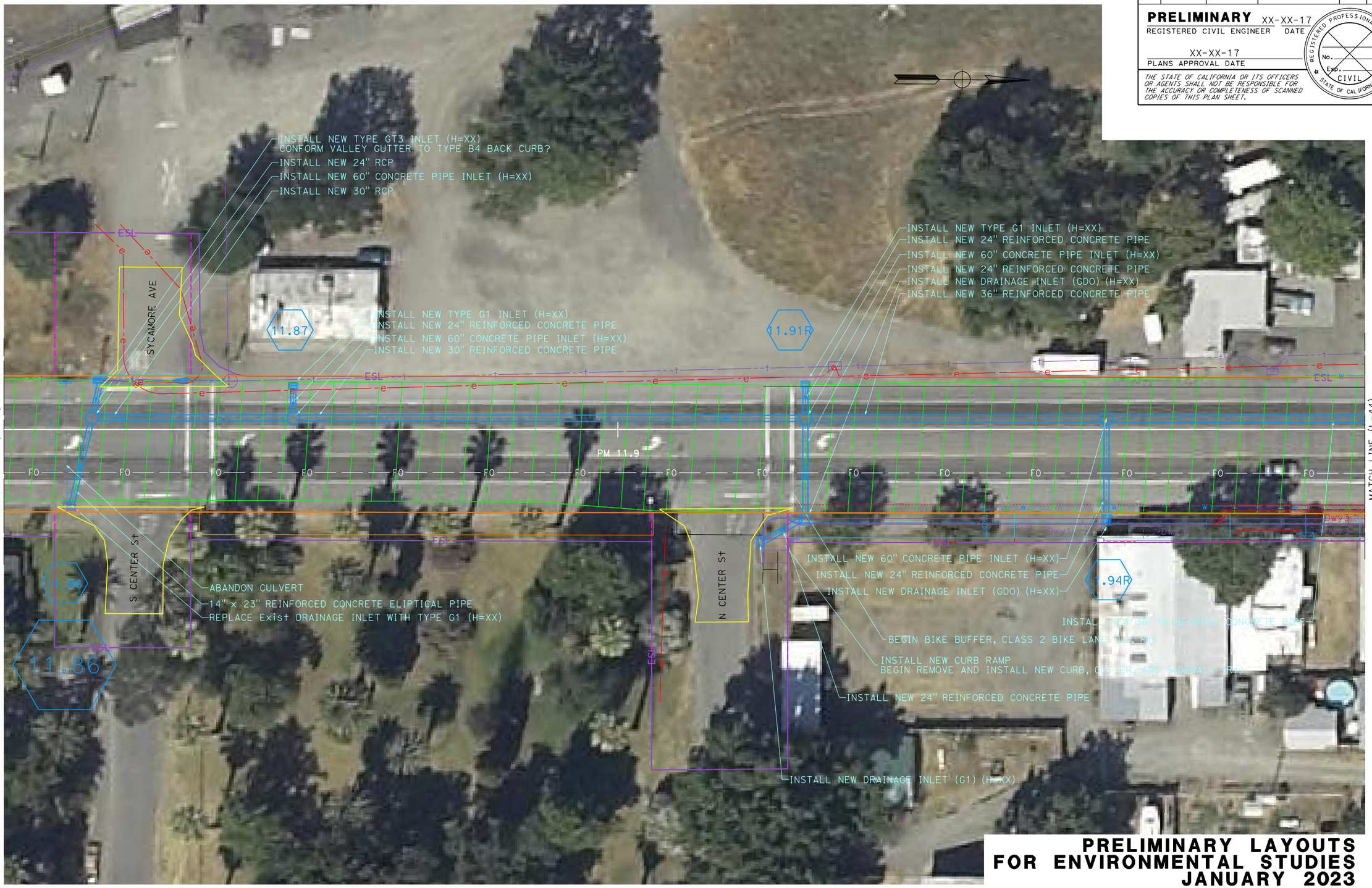

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 20'

L-43

LAST REVISION: DATE PLOTTED => 30-JAN-2023
07-06-22 TIME PLOTTED => 14:10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. — CIVIL — STATE OF CALIFORNIA

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REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY	CHECKED BY
KARLIE SMITH	ALYSON SINCLAIR

FUNCTIONAL SUPERVISOR: JULIE CASEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **DESIGN**

P:\proj3\02\3h770\design\510_Plans\ESL Maps\3H770_ea044.dgn

INSTALL NEW 36" REINFORCED CONCRETE PIPE
INSTALL NEW DRAINAGE INLET (GDO) (H=XX)
INSTALL NEW 24" REINFORCED CONCRETE PIPE
INSTALL NEW 60" CONCRETE PIPE INLET (H=XX)
INSTALL NEW 36" REINFORCED CONCRETE PIPE
INSTALL CURB RAMP
INSTALL NEW DRAINAGE INLET (GDO) (H=XX)
INSTALL NEW 24" REINFORCED CONCRETE PIPE
INSTALL NEW 60" CONCRETE PIPE INLET (H=XX)
INSTALL NEW 36" REINFORCED CONCRETE PIPE
INSTALL NEW 36" REINFORCED CONCRETE PIPE
ORANGE St
12.01
12.03
12.05
INSTALL NEW 24" REINFORCED CONCRETE PIPE
INSTALL NEW 60" CONCRETE PIPE INLET (H=XX)
REMOVE CULVERT
INSTALL NEW 36" REINFORCE CONCRETE PIPE
ESL
MATCH LINE (L-43)
MATCH LINE (L-45)
PM 12.0
FO
W
EXISTING BIKE BUFFER AND CLASS 2 BIKE LANES
INSTALL NEW 24" REINFORCED CONCRETE PIPE
INSTALL NEW 60" CONCRETE PIPE INLET (H=XX)
REMOVE CULVERT
END FULL DEPTH PAVEMENT RECONSTRUCT
BEGIN PAVEMENT REHABILITATION
11.96
11.97
END BIKE BUFFER, CLASS 2 BIKE LANE (R†, L†)
INSTALL NEW 18" REINFORCED CONCRETE PIPE
INSTALL NEW DRAINAGE INLET (G1) (H=XX)
END CURB, GUTTER, AND SIDEWALK (R†)
INSTALL NEW CURB RAMP
JOSEPHINE St
ORANGE St
INSTALL NEW 60" CONCRETE PIPE INLET (H=XX)
INSTALL NEW 24" REINFORCED CONCRETE PIPE
INSTALL NEW DRAINAGE INLET (GO) (H=XX)

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 20′ **L-44**

LAST REVISION DATE PLOTTED => 30-JAN-2023
07-06-22 TIME PLOTTED => 14:11

BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea044.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. — CIVIL — STATE OF CALIFORNIA

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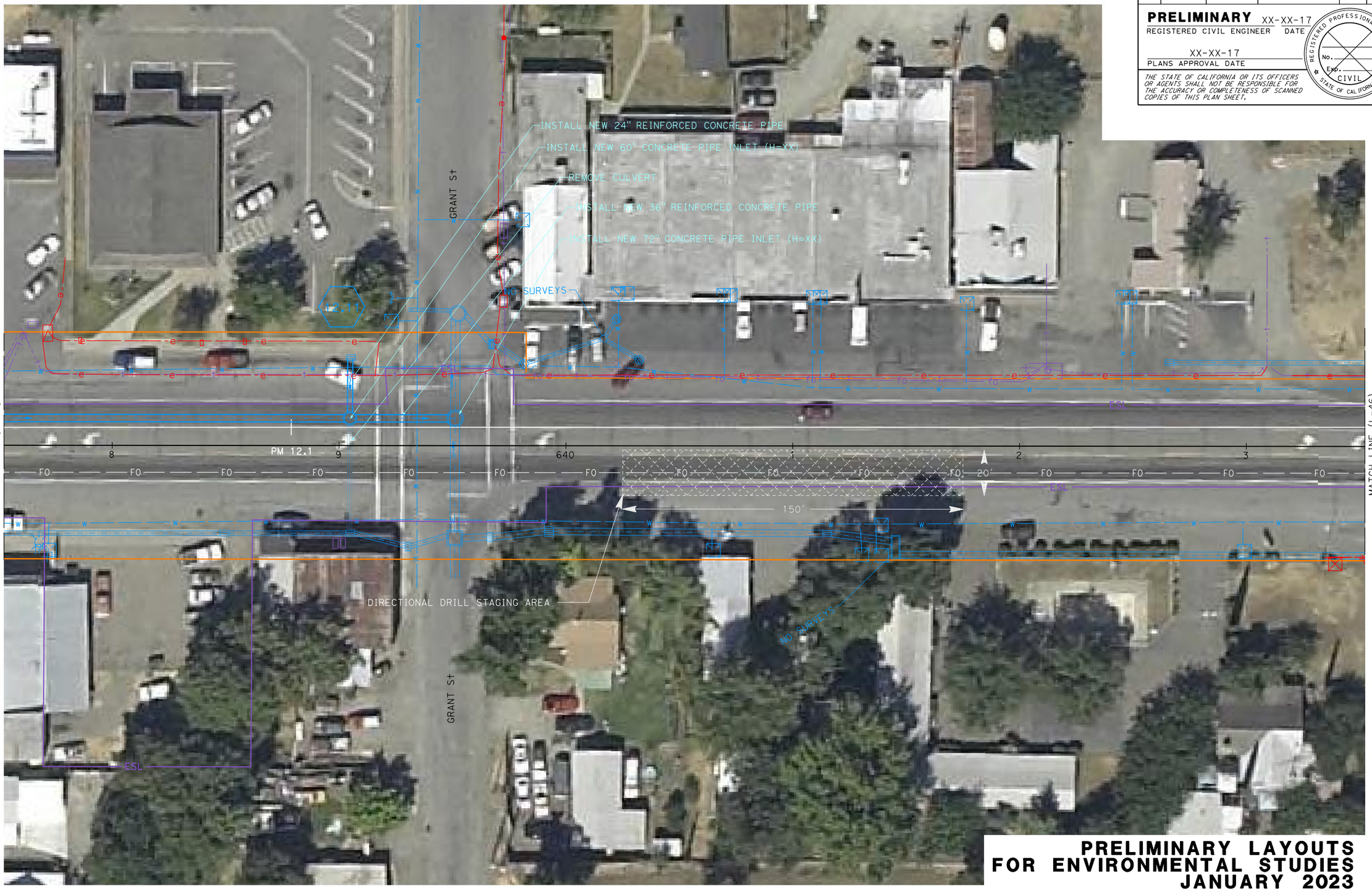

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 20'

L-45

CALCULATED-DESIGNED BY	CHECKED BY
KARLIE SMITH	ALYSON SINCLAIR

REVISED BY	DATE REVISED

FUNCTIONAL SUPERVISOR: JULIE CASEY

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LAST REVISION: DATE PLOTTED => 30-JAN-2023
07-06-22 TIME PLOTTED => 14:11

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BORDER LAST REVISED 8/1/2016 | USERNAME => s151920 | DGN FILE => 3H770_ea045.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0316 | PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17

REGISTERED CIVIL ENGINEER DATE

XX-XX-17

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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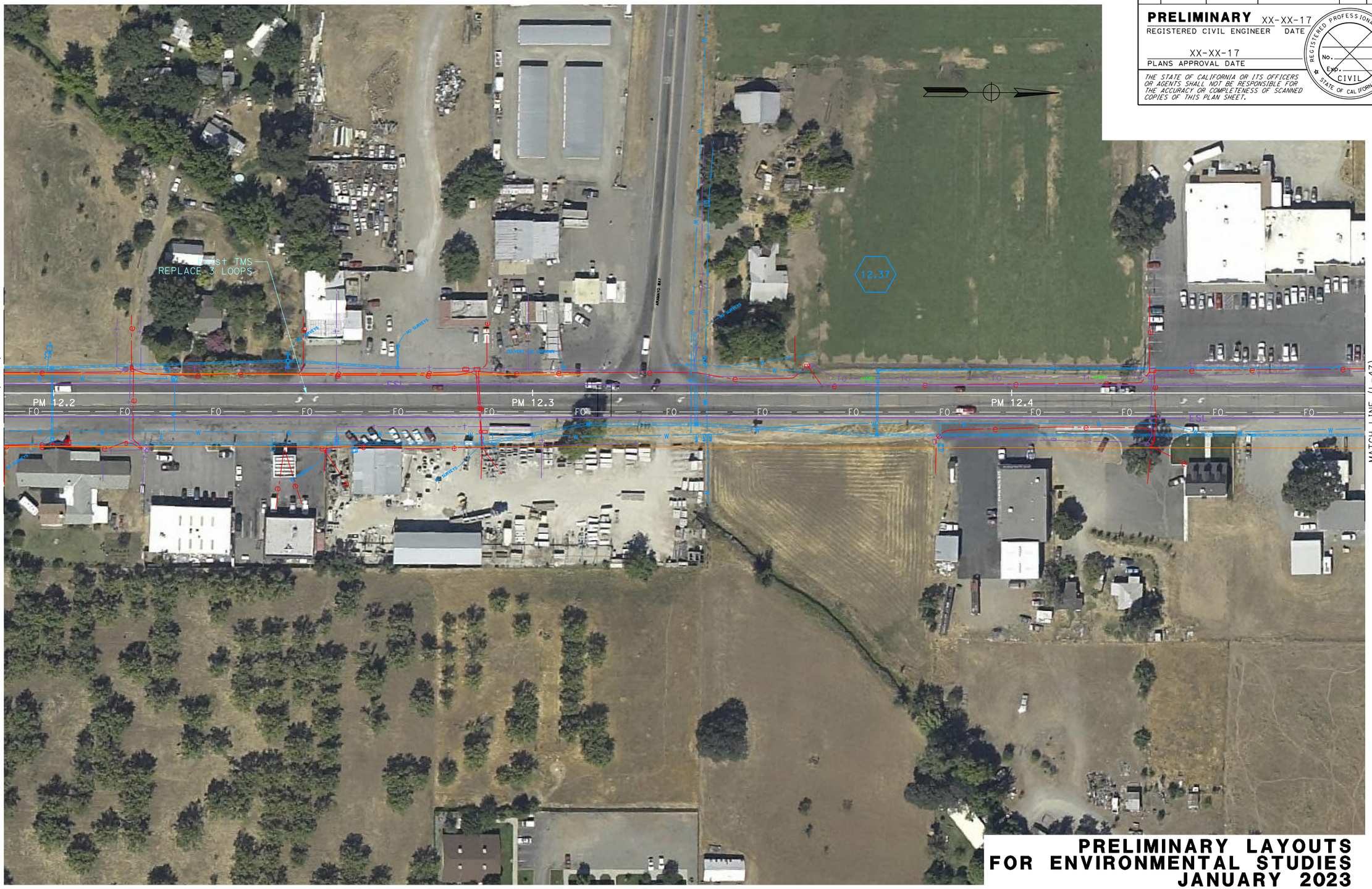

PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50′ **L-46**

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: KARLIE SMITH

CHECKED BY: ALYSON SINCLAIR

FUNCTIONAL SUPERVISOR: JULIE CASEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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LAST REVISION: DATE PLOTTED => 30-JAN-2023
07-06-22 TIME PLOTTED => 14:11

BORDER LAST REVISED 8/1/2016

USERNAME => s151920
DGN FILE => 3H770_ea046.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0316

PROJECT NUMBER & PHASE 0218000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	0.0/12.5		48

PRELIMINARY XX-XX-17
REGISTERED CIVIL ENGINEER DATE

XX-XX-17
PLANS APPROVAL DATE

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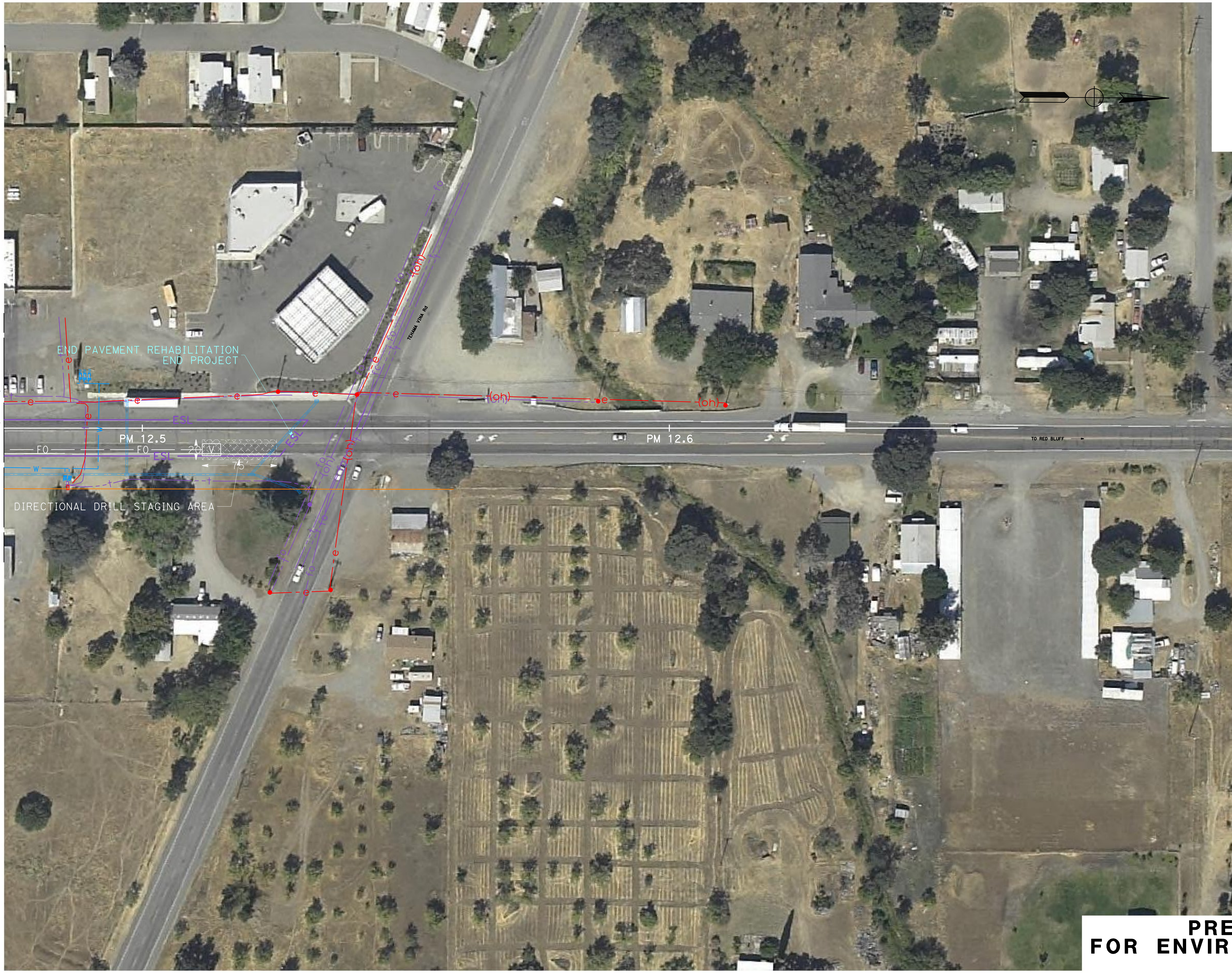
REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA



PRELIMINARY LAYOUTS FOR ENVIRONMENTAL STUDIES JANUARY 2023

SCALE: 1" = 50'

L-47

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

Caltrans

FUNCTIONAL SUPERVISOR: JULIE CASEY

CALCULATED-DESIGNED BY: KARLIE SMITH

CHECKED BY: ALYSON SINCLAIR

REVISED BY

DATE REVISED

P:\proj3\02\3H770\design\510_Plans\ESL Maps\3H770_ea047.dgn

LAST REVISION 07-06-22

DATE PLOTTED => 30-JAN-2023
TIME PLOTTED => 14:11

BORDER LAST REVISED 8/1/2016

USERNAME => s151920
DGN FILE => 3H770_ea047.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0316

PROJECT NUMBER & PHASE 0218000039

Appendix B Title VI Policy Statement

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

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

September 2022

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 non-discriminatory 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) 639-6392 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 PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 879-6768 (TTY 711); or at Title.VI@dot.ca.gov.

TONY TAVARES
Director

"Provide a safe and reliable transportation network that serves all people and respects the environment"

Appx. B Figure 1

Appendix C USFWS, NMFS, CNDDB, CNPS Species Lists

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:
Project Code: 2022-0069731
Project Name: Vina Plains Rehabilitation

January 12, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location 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, 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 U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

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.

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

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

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 Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Project Code: 2022-0069731
Project Name: Vina Plains Rehabilitation
Project Type: Road/Hwy - Maintenance/Modification
Project Description: Roadway Rehabilitation
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.90653025,-122.00399441926106,14z

Counties: Butte and Tehama counties, California

Endangered Species Act Species

There is a total of 11 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[1], 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 *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Greene's Tuctoria *Tuctoria greenei* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1573	Endangered
Hairy Orcutt Grass *Orcuttia pilosa* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2262	Endangered
Hoover's Spurge *Chamaesyce hooveri* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3019	Threatened
Slender Orcutt Grass *Orcuttia tenuis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1063	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: California Department of Transportation District 2
Name: Eric Rulison
Address: 1031 Butte Street, MS 30
City: Redding
State: CA
Zip: 96001
Email eric.rulison@dot.ca.gov
Phone: 5302252917

From: Rulison, Eric@DOT
To: nmfs.wcrca.specieslist@noaa.gov
Cc: Rulison, Eric@DOT
Subject: Vina Plains Rehabilitation 02-0H770
Date: Monday, February 6, 2023 12:34:21 PM

Quad Name Richardson Springs NW
Quad Number 39121-H8
ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) - X
SRWR Chinook Salmon ESU (E) - X
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - X
Eulachon (T) -
sDPS Green Sturgeon (T) -
ESA Anadromous Fish Critical Habitat

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

Range Black Abalone (E) -
Range White Abalone (E) -
ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -
ESA Sea Turtles

East Pacific Green Sea Turtle (T) -

Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -
ESA Whales

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

Guadalupe Fur Seal (T) -
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 Monica DeAngelis
monica.deangelis@noaa.gov
562-980-3232

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name Vina
Quad Number 39122-H1
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

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) -
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 Monica DeAngelis
monica.deangelis@noaa.gov
562-980-3232

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name Los Molinos
Quad Number 40122-A1
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

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) -
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 Monica DeAngelis
monica.deangelis@noaa.gov
562-980-3232

MMPA Cetaceans -
MMPA Pinnipeds -

Eric L. Rulison (He/Him/His) **What's This?**
Environmental Resource Specialist

California Department of Transportation, North Region

1031 Butte Street, MS 30
Redding, CA 96001
Phone: (530) 759-3421

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Imported file selection

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Acipenser medirostris pop. 1 green sturgeon - southern DPS	AFCAA01031	Threatened	None	G2T1	S1	
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
Branchinecta conservatio Conservancy fairy shrimp	ICBRA03010	Endangered	None	G2	S2	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Central Valley Drainage Fall Run Chinook Stream Central Valley Drainage Fall Run Chinook Stream	CARA2442CA	None	None	GNR	SNR	
Central Valley Drainage Valley Floor River Central Valley Drainage Valley Floor River	CARA2441CA	None	None	GNR	SNR	
Coccyzus americanus occidentalis western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2T3	S3	
Downingia pusilla dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Erethizon dorsatum North American porcupine	AMAFJ01010	None	None	G5	S3	
Euphorbia hooveri Hoover's spurge	PDEUP0D150	Threatened	None	G1	S1	1B.2
Fritillaria pluriflora adobe-lily	PMLIL0V0F0	None	None	G2G3	S2S3	1B.2
Gratiola heterosepala Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	G2	S2	1B.2
Great Valley Cottonwood Riparian Forest Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	G2	S2.1	
Great Valley Mixed Riparian Forest Great Valley Mixed Riparian Forest	CTT61420CA	None	None	G2	S2.2	
Great Valley Valley Oak Riparian Forest Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	G1	S1.1	
Great Valley Willow Scrub Great Valley Willow Scrub	CTT63410CA	None	None	G3	S3.2	
Lasthenia glabrata ssp. coulteri Coulter's goldfields	PDAST5L0A1	None	None	G4T2	S2	1B.1

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
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3	
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
Oncorhynchus tshawytscha pop. 7 chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	G5T1Q	S2	
Orcuttia pilosa hairy Orcutt grass	PMPOA4G040	Endangered	Endangered	G1	S1	1B.1
Orcuttia tenuis slender Orcutt grass	PMPOA4G050	Threatened	Endangered	G2	S2	1B.1
Pandion haliaetus osprey	ABNKC01010	None	None	G5	S4	WL
Paronychia ahartii Ahart's paronychia	PDCAR0L0V0	None	None	G3	S3	1B.1
Rana boylii pop. 1 foothill yellow-legged frog - north coast DPS	AAABH01051	None	None	G3TNRQ	S4	SSC
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	
Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
Spea hammondii western spadefoot	AAABF02020	None	None	G2G3	S3S4	SSC
Tuctoria greenei Greene's tuctoria	PMPOA6N010	Endangered	Rare	G1	S1	1B.1
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	

Record Count: 34

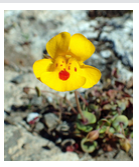
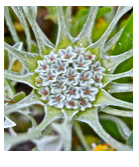
CNPS Rare Plant Inventory

California Native Plant Society

Search Results

19 matches found. Click on scientific name for details

Search Criteria: Quad is one of [**4012211:3912281:3912188**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Astragalus pauperculus	depauperate milk-vetch	Fabaceae	annual herb	Mar-Jun	None	None	G4	S4	4.3	Yes	1974-01-01	 ©2012 Tim Kellison
Cryptantha crinita	silky cryptantha	Boraginaceae	annual herb	Apr-May	None	None	G2	S2	1B.2	Yes	1980-01-01	 ©2009 Sierra Pacific Industries
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	GU	S2	2B.2		1980-01-01	No Photo Available
Erythranthe glaucescens	shield-bracted monkeyflower	Phrymaceae	annual herb	Feb-Aug(Sep)	None	None	G3G4	S3S4	4.3	Yes	1974-01-01	 Neal Kramer 2020
Euphorbia hooveri	Hoover's spurge	Euphorbiaceae	annual herb	Jul-Sep(Oct)	FT	None	G1	S1	1B.2	Yes	1974-01-01	No Photo Available
Euphorbia ocellata ssp. *rattanii*	Stony Creek spurge	Euphorbiaceae	annual herb	May-Oct	None	None	G4T2?	S2?	1B.2	Yes	1980-01-01	No Photo Available
Fritillaria pluriflora	adobe-lily	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	G2G3	S2S3	1B.2	Yes	1974-01-01	 © 2015 Steve Matson
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	None	CE	G2	S2	1B.2		1974-01-01	 ©2004 Carol W. Witham
Hesperevax caulescens	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	None	None	G3	S3	4.2	Yes	2001-01-01	 © 2017

												© 2017 John Doyen
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	Asteraceae	annual herb	Feb-Jun	None	None	G4T2	S2	1B.1		1994-01-01	 © 2013 Keir Morse
Limnanthes floccosa ssp. *floccosa*	woolly meadowfoam	Limnanthaceae	annual herb	Mar-May(Jun)	None	None	G4T4	S3	4.2		1980-01-01	 © 2021 Scot Loring
Navarretia heterandra	Tehama navarretia	Polemoniaceae	annual herb	Apr-Jun	None	None	G4	S4	4.3		1974-01-01	 ©2021 Scot Loring
Navarretia nigelliformis ssp. *nigelliformis*	adobe navarretia	Polemoniaceae	annual herb	Apr-Jun	None	None	G4T3	S3	4.2	Yes	2007-04-02	 © 2008 Zoya Akulova
Orcuttia pilosa	hairy Orcutt grass	Poaceae	annual herb	May-Sep	FE	CE	G1	S1	1B.1	Yes	1980-01-01	 © 2003 George W. Hartwell
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	FT	CE	G2	S2	1B.1	Yes	1974-01-01	 © 2013 Justy Leppert
Paronychia ahartii	Ahart's paronychia	Caryophyllaceae	annual herb	Feb-Jun	None	None	G3	S3	1B.1	Yes	1988-01-01	 © 2004 Carol W. Witham
Polygonum bidwelliae	Bidwell's knotweed	Polygonaceae	annual herb	Apr-Jul	None	None	G4	S4	4.3	Yes	1974-01-01	 ©2020 Neal Kramer
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	Yes	1984-01-01	 ©2013 Debra L. Cook
Tuctoria greenei	Greene's tuctoria	Poaceae	annual herb	May-Jul(Sep)	FE	CR	G1	S1	1B.1	Yes	1974-01-01	

greenei	tactoria	Jul(Sep)	01-01	©2008 F. Gauna

Showing 1 to 19 of 19 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 1 February 2023].

Appendix C. Table 1

Common Name/ Scientific Name	Status USFWS/ NMFS/ CDFW/ CNPS	General Habitat Description	Habitat Present/ Absent	Potential to Occur Within the Project Site
ANIMALS				
Amphibians				
Foothill yellow-legged frog *Rana boylii*	—/—/ SSC/—	In northern California, foothill yellow-legged frogs inhabit rocky perennial streams and rivers within a variety of forest types in the Coast Range, Klamath Mountains, and Sierra Nevada. The species is also found in perennial streams in the Sierra Nevada up to 6,370 feet in elevation.	Present	**None**. The project site contains suitable habitat for foothill yellow-legged frog. North of South Avenue there are numerous perennial streams. However, only a few of these perennial streams contain flow year-round. None of the streams contain appropriate breeding habitat. In the project site, one historical occurrence (1912) has occurred in Los Molinos but is considered extirpated. Work would avoid any impacts to streams or riparian habitat. No impacts are anticipated.
Western spadefoot *Spea hammondii*	—/—/ SSC/—	Western spadefoot breed from January through May in shallow, temporary pools that persist for at least three weeks. Breeding pools are generally absent of bullfrogs, fish, and crayfish. After breeding, adults seek shelter underground either by excavating a subterranean burrow or retreating into a small mammal burrow nearby. Tadpoles transform within three weeks. Following transformation, juveniles leave breeding pools and seek shelter underground. Western spadefoots remain underground until breeding pools form the following spring.	Present	**None**. The project site does not contain suitable habitat for western spadefoot toad. There are no temporary pools that persist long enough to allow for metamorphosis. Pools that do have a longer hydroperiod contain competition and predators. Work would avoid any seasonal or vernal habitats and no soil disturbance would occur in suitable habitat where burrows could occur. No impacts are anticipated.

Common Name/ Scientific Name	Status USFWS/ NMFS/ CDFW/ CNPS	General Habitat Description	Habitat Present/ Absent	Potential to Occur Within the Project Site
Birds				
Tricolor blackbird *Agelaius tricolor*	—/—/ ST,SSC/—	Tricolored blackbirds are colonial nesters and generally nest near open water. Nesting areas must be large enough to support a minimum colony of about 50 pairs. Tricolored blackbirds generally construct nests of dense cattails or tules, although they can also nest in thickets of willow, blackberry, wild rose and tall herbs.	Present	**Low**. The project site contains suitable habitat at two locations adjacent to a pond from PM 7.1 to 7.4. No birds were identified during surveys. Furthermore, no habitat would be removed. No impacts are anticipated.
Swainson's hawk *Buteo swainsoni*	—/—/ ST/—	Swainson's hawk is an uncommon raptor in the Central Valley, Klamath Basin, Northeastern Plateau, and Mojave Desert. Typical habitat is open desert, grassland, or cropland containing scattered, large trees or small groves. Nesting occurs in stands with few trees. The species forages in adjacent grasslands or suitable grain or alfalfa fields, or livestock pastures.	Present	**Low**. The project site provides suitable foraging habitat for Swainson's hawk. However, the area lacks breeding habitat. A transient or foraging individual may be in the area, but construction activities would not disturb these behaviors. There is one recorded observation in the project vicinity from 1988. There is no suitable nesting habitat and foraging habitat is limited in the project site. No impacts are anticipated.

Common Name/ Scientific Name	Status USFWS/ NMFS/ CDFW/ CNPS	General Habitat Description	Habitat Present/ Absent	Potential to Occur Within the Project Site
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT/—/ SE/—	The western yellow-billed cuckoo, a subspecies of the yellow-billed cuckoo, inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, and which abut slowly flowing watercourses, backwaters, or seeps. Nests typically in sites with at least some willow, dense low-level or understory foliage, high humidity, and wooded foraging spaces more than 300 feet in width and 25 acres in area.	Absent	**None**. The project site does not provide suitable habitat for the western yellow-billed cuckoo. In Tehama County, only riparian habitat near the Sacramento River provides habitat. Indirect effects from noise pollution generated from construction would dissipate prior to suitable habitat. There will be no effect to western yellow-billed cuckoo.
Osprey *Pandion haliaetus*	—/—/ WL—	Ospreys gravitate toward shallow fishing grounds, frequenting deep water only where fish schools are near the surface. Ospreys nest in a wide variety of locations. Osprey nesting habitat must include an adequate supply of accessible fish within a maximum of about 12 miles of the nest; open, usually elevated nest sites free from predatory mammals such as raccoons, and a long enough ice-free season to allow the young to fledge. Ospreys require nest sites in open surroundings for easy approach, with a wide, sturdy base and safety from ground predators.	Present	**High**. The project site contains an osprey platform that was not occupied during site visits. The current traffic conditions are heavy and ambient noise is loud. Construction would be slower moving and restricted to the roadway prism. Movement of paving and broadband installation should be short in duration (few days). If osprey occupy the nest during construction, work is not be expected to impact osprey behavior or reduce nesting success. No impacts are anticipated.

Common Name/ Scientific Name	Status USFWS/ NMFS/ CDFW/ CNPS	General Habitat Description	Habitat Present/ Absent	Potential to Occur Within the Project Site
Bank swallow *Riparia riparia*	—/—/ ST/—	Bank swallows require vertical banks and cliffs with fine-textured or sandy soils near streams, rivers, ponds, lakes, or the ocean for nesting.	Absent	**None**. The project site does not contain suitable habitat for bank swallow. In Tehama County, all observations occur adjacent to the Sacramento River. No impacts are anticipated.
Least Bell's vireo *Vireo bellii pusillus*	FE/—/ SE/—	Least Bell's vireo inhabits riparian habitats from sea level to 2,000 feet in elevation. In northern California, the species has been reported as far north as Tehama and Butte counties.	Absent	**None**. The project site does not contain suitable habitat for least Bell's vireo. The last recorded observation in the County was in 1928. No impacts are anticipated.
Crustaceans				
Conservancy fairy shrimp *Branchinecta conservatio*	FE/—/ —/—	Conservancy fairy shrimp are endemic to the grasslands of the northern two-thirds of the Central Valley. They inhabit large, turbid pools, and astatic pools located in swales formed by old, braided alluvium. The pools and swales are filled by winter/spring rains and last until June.	Present	**High**. The project site contains numerous vernal habitats. However, no direct impacts (i.e. filling of wetlands) is proposed. Thus, the species would not be impacted.
Vernal pool fairy shrimp *Branchinecta lynchi*	FT/—/ —/—	Vernal pool fairy shrimp are endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains. They inhabit astatic rain-filled pools; small, clear-water sandstone-depression pools; or grassed swale, earth slump, or basalt-flow depression pools.	Present	**High**. The project site contains numerous vernal habitats. However, no direct impacts (i.e. filling of wetlands) is proposed. Thus, the species would not be impacted.

Common Name/ Scientific Name	Status USFWS/ NMFS/ CDFW/ CNPS	General Habitat Description	Habitat Present/ Absent	Potential to Occur Within the Project Site
California linderiella *Linderiella occidentalis*	—/—/ —/—	Linderiella inhabit seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. They require water in the pools with very low alkalinity, conductivity, and total dissolved solids.	Present	**Low**. The project site contains numerous vernal habitats. However, no direct impacts (i.e. filling of wetlands) is proposed. Thus, the species would not be impacted,.
Vernal pool tadpole shrimp *Lepidurus packardi*	FE/—/ —/—	Vernal pool tadpole shrimp inhabit vernal pools and swales in the Sacramento Valley containing clear to high turbid water. The pools are commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	Present	**High**. The project site contains numerous vernal habitats. However, no direct impacts (i.e. filling of wetlands) is proposed. Thus, the species would not be impacted,.
Fishes				
Green sturgeon *Acipenser medirostris*	—/FT/ —/—	These are the most marine species of sturgeon. Abundance increases northward of Point Conception. Green sturgeon spawn in the Sacramento, Klamath, and Trinity Rivers. They require spawning temperatures between 46-57°F (8-14°C). The preferred spawning substrate is large cobble but can range from clean sand to bedrock.	Absent	**None**. The project site does not provide suitable habitat for green sturgeon. Thus, the species would not be impacted,.

Common Name/ Scientific Name	Status USFWS/ NMFS/ CDFW/ CNPS	General Habitat Description	Habitat Present/ Absent	Potential to Occur Within the Project Site
Delta Smelt *Hypomesus transpacificus*	FT/—/ SE/—	Delta smelt occur in the Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait, and San Pablo Bay. They are seldom found at salinities >10 ppt. Most often at salinities <2ppt.	Absent	**None**. The project site is located well outside the reported range of the delta smelt. Thus, the species would not be impacted.
California Central Valley steelhead trout *Oncorhynchus mykiss irideus*	—/FT/ —/—	Adult steelhead require high flows, with depths of at least 7 inches (18 cm) for passage. They require loose gravels at pool tail-outs for optimal conditions for redd construction and spawning success. Redds are usually built-in water depths of 0.33 to 4.9 feet (0.1 to 1.5 meters), where velocities are between 0.66 and 5.3 feet/second (0.2 and 1.6 meters/second). Optimal incubation temperature for embryos is in the range of 5 to 13° C. Fry and parr require cool, clear, fast-flowing water.	Absent	**None**. The project site has a few rivers that may provide suitable habitat for California Central Valley steelhead trout. However, no work would occur when these fish are using these waterways. Moreover, no work is occurring in these waters or their riparian areas. The project would have no effect on California Central Valley steelhead trout.
Sacramento River winter-run Chinook salmon *Oncorhynchus tshawytscha*	—/FE/ SE/—	Sacramento River winter-run Chinook salmon spawn almost exclusively in the Sacramento River, and not in tributary streams. Spawning generally occurs in swift, relatively shallow riffles or along the edges of fast runs where there is an abundance of loose gravel. Juveniles may rear in tributaries of the Sacramento River.	Absent	**None**. The project site has a few rivers that may provide suitable habitat for Sacramento River winter-run Chinook salmon. However, no work would occur when these fish are using these waterways. Moreover, no work is proposed in these waters or their riparian areas. The project would have no effect on winter-run Chinook salmon.

Common Name/ Scientific Name	Status USFWS/ NMFS/ CDFW/ CNPS	General Habitat Description	Habitat Present/ Absent	Potential to Occur Within the Project Site
Central Valley spring-run Chinook salmon *Oncorhynchus tshawytscha*	—/FT/ ST/—	Central Valley spring-run Chinook salmon enter the Sacramento-San Joaquin Delta in early January and enter natal streams between March and May. Upon entering fresh water, spring-run are sexually immature and must hold in cold water habitats through summer to mature. Typically, Central Valley spring-run Chinook salmon utilize mid- to high-elevation streams that provide sufficient flow, water temperature, cover, and pool depth to allow over-summering. Spawning occurs between September and October.	Absent	**None**. The project site has a few rivers that may provide suitable habitat for Central Valley spring-run Chinook salmon. However, no work would occur when these fish are using these waterways. Moreover, no work is occurring in these waters or their riparian areas. The project would have no effect on Central Valley spring-run Chinook.
Insects				
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT/—/ —/—	Valley elderberry longhorn beetle occurs only in the Central Valley of California, in association with blue elderberry (*Sambucus mexicana*). It prefers to lay eggs in elderberries 2-8 inches in diameter with some preference shown for "stressed" elderberries.	Present	**Moderate**. The project site contains suitable habitat for valley elderberry longhorn beetle. No elderberry shrubs would be trimmed or removed. Where work occurs off the roadway prism, shrubs would be protected by high visibility fencing. Due to the presence of elderberry, the beetle may be present.
Monarch Butterfly *Danaus plexippus*	FC/—/ —/—	Monarchs leave overwintering sites in February and March and typically reach the northern limit of their North American range in early to mid-June. Adult females lay eggs singly on milkweed species which the caterpillars rely upon for energy and	Absent	**None**. The project site contains suitable foraging habitat for Monarch because there are nectar producing pants. However, the quantity is low, and most bloom in the spring and early summer. Moreover, removal of flowering plants that provide food would be limited, as most work would occur on the

Common Name/ Scientific Name	Status USFWS/ NMFS/ CDFW/ CNPS	General Habitat Description	Habitat Present/ Absent	Potential to Occur Within the Project Site
		protective toxins. Milkweeds are critical for successful development of the caterpillar into an adult butterfly. Once an egg is laid, the full cycle to adulthood may last 20 to 35 days (sometimes longer) depending on temperature. The caterpillars develop and eventually form a chrysalis and pupating into an adult butterfly. During the spring and summer, an adult monarch spends its 2–5-week lifespan mating and nectaring on flowers, with females searching for milkweed upon which to lay their eggs. Multiple generations are produced during this time, with the final fall generation migrating to overwintering sites and living for 6–9 months. In September and early October monarchs migrate to wintering areas. During the winter, western monarchs aggregate in clusters at forested groves scattered along 620 miles of the Pacific coast from California's Mendocino County to Baja California, Mexico. Small aggregations inland from the coast have also been reported in Inyo and Kern Counties in California. Monarchs seek out very specific microclimate conditions, including dappled sunlight, high humidity, access to fresh water, and an absence of freezing temperatures or high winds.		pavement or roadway prism. There were no observed milkweed plants. There would be no effect to Monarch butterfly.

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Mammals				
North American porcupine *Erethizon dorsatum*	—/—/ —/—	The porcupine uses forested habitats in the Sierra Nevada, Cascade, and Coast ranges. It has scattered observations from forested areas in the Transverse Ranges. In California, porcupines are most common in montane conifer and wet meadow habitats. During spring and summer, they consume a varied diet of grasses, forbs, shrubs, wetland plants, and some agricultural crops. In winter, their diet consists largely of twigs, bark, and the cambium of hardwood and conifers trees.	Present	**Low**. The project site contains limited suitable habitat for porcupine. The project site has one record from 2013, north of Deer Creek on SR 99 (roadkill). This record is just outside the riparian corridor for the Sacramento River where more suitable habitat exists. The porcupine is an IUCN Least concern and is abundant in Northern Californian in suitable habitat. No impacts are anticipated from construction.
Reptiles				
Western pond turtle *Emys marmorata*	—/—/ SSC/—	Western pond turtles inhabit ponds, marshes, rivers, streams and irrigation ditches. Western pond turtles are reported from sea level to 6,000 feet in elevation.	Present	**High**. The project site contains streams and a few ponds. Western pond turtle was observed in one pond in the ESL. However, work would not be occurring off the roadway prism in this area. No soil disturbance to nesting habitat or impacts to aquatic habitat are anticipated.

Common Name/ Scientific Name	Status USFWS/ NMFS/ CDFW/ CNPS	General Habitat Description	Habitat Present/ Absent	Potential to Occur Within the Project Site
PLANTS				
Vascular Plants				
Depauperate milk-vetch *Astragalus pauperculus*	—/—/ —/4.3	Depauperate milkvetch is an annual herb inhabiting chaparral, cismontane woodland, and valley and foothill grassland. It typically occurs in vernally mesic areas with volcanic substrates. The species is reported between 195 and 3,985 feet in elevation. The flowering period is from March through June.	Absent	**None**. The project site does not contain suitable habitat for depauperate milk vetch. It was recorded on the adjacent property (Vina Plains) in 1984. There are no current records of the plant occurring. The species was not identified during botanical surveys. Further, no ground disturbance within suitable habitat is proposed. No impacts are anticipated from construction.
Silky cryptantha *Cryptantha crinita*	—/—/ —/1B.2	Silky cryptantha is an annual herb that occurs along low-gradient seasonal streams with broad floodplains, usually on the valley floor, where it is found on gravelly or cobbly substrates. The species also occurs in vernally moist uplands. The species is found between 200 and 4,000 feet in elevation. The flowering period is between April and May.	Present	**Low**. Suitable habitat for silky cryptantha occurs in the project vicinity. The species has been reported along Singer Creek, two miles east of SR 99. This species was not observed during botanical surveys. Further, no soil disturbance would occur in suitable habitat or in flowing streams. No impacts are anticipated.
Dwarf downingia *Downingia pusilla*	—/—/ —/2B.2	Dwarf downingia is an annual herb inhabiting vernal pools in mesic valley and foothill grasslands. The species is reported between 5 to 1460 feet. The flowering period is from March to May.	Present	**Low**. Suitable habitat for dwarf downingia is present in the project vicinity. Numerous vernal habitats occur. However, the last reported occurrence is from 1973. It has not specifically been reported since then. Additionally, no work would occur in any vernal habitat. No impacts are anticipated.

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Shield-bracted monkeyflower *Erythranthe glaucescens*	—/—/ —/4.3	Shield-bracted monkey flower is an annual herb inhabiting seeps, serpentinite, and sometimes streambanks. The species is reported between 195 to 4070 feet in elevation and flowers from February to August, sometimes into September.	None	**None**. The project site does not contain suitable habitat. No observations have been reported. No work would occur in riparian, stream, or any seeps. No impacts are anticipated.
Hoover's spurge *Euphorbia hooveri*	T/—/ —/1B.2	Hoover's spurge is an annual herb inhabiting vernal pools on volcanic mudflow or clay substrate. The species is reported between sea level and 500 feet in elevation. The flowering period is from July to September.	Present	**Low**. The project site is in the range for Hoover's spurge and the project location has potential habitat. The closest Calflora observations are within 1,640 feet on either side of the roadway. These observations come from the 1930s and 1980s with low to medium location quality. There is one observation location from 2013 that is within 300 feet of the roadway, but the description documents it as being widespread in the northern area of a large pool in the center of the Preserve (Pool 1). This location is beyond 1,500 feet from the roadway. CNDDB nearest original observations are about 984 to 1,640 feet east and west of the project location. It was originally observed in 2011 mostly in the Preserve. Subsequent surveys have not identified it (last was conducted in 1987) but is presumed extant. During focused botanical surveys this species was not observed. No impacts are anticipated.

Common Name/ Scientific Name	Status USFWS/ NMFS/ CDFW/ CNPS	General Habitat Description	Habitat Present/ Absent	Potential to Occur Within the Project Site
Stony Creek spurge *Euphorbia ocellata ssp. rattanii*	—/—/ —/1B.2	Stony Creek spurge is an annual herb inhabiting sandy or rocky soils within valley and foothill grasslands, chaparral, and riparian scrub. The species is reported between 250 and 1,700 feet in elevation. The flowering period is from May through October.	Absent	**None**. Suitable habitat for Stony Creek Spurge is not present on the project site. The project area has more clay soils than sandy or rocky. No occurrences have been reported in the project vicinity. No impacts are anticipated.
Adobe lily *Fritillaria pluriflora*	—/—/ —/1B.2	Adobe lily is a perennial bulbiferous herb inhabiting clay soils and serpentine sites within lower valley and foothill grasslands, chaparral, and cismontane woodlands. The species is reported between 150 and 3,100 feet in elevation. The flowering period is from February through April.	Present	**Low**. Suitable habitat for adobe lily is present on the project site. Adobe lily was recorded north of the project location near Deer Creek in 1969 and more recently in the adjacent lands (Vina Plains) in 1998. It was not observed during the botanical surveys and is not expected to be present. Soil disturbance would be limited to the roadway prism. No impacts are anticipated.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	—/—/ SE/1B.2	Boggs Lake hedge-hyssop is an annual herb that inhabits the margins of marshes, swamps, and vernal pools. The species is reported from sea level to 7,800 feet in elevation. The flowering period is April through August.	Present	**Low**. Suitable habitat for Boggs Lake hedge-hyssop is present on the project site. It has been recorded in the Nature Conservancy Vina Plains Preserve about 3,300 feet from the roadway in the southern termini of the project. These accounts are from 1995 and 2002 with questionable accuracy. This species was not observed during the botanical surveys. No work in suitable habitat is proposed. Boggs Lake hedge hyssop is not expected to be present.

Common Name/ Scientific Name	Status USFWS/ NMFS/ CDFW/ CNPS	General Habitat Description	Habitat Present/ Absent	Potential to Occur Within the Project Site
Hogwallow starfish *Hesperevax caulescens*	—/—/ —/4.2	Hogwallow starfish is an annual herb that inhabits valley and foothill grassland and vernal pool communities. They can sometimes be found in alkaline environments. The species is reported from sea level to 1655 feet in elevation and flowers from March to June.	Present	**Low**. Suitable habitat for hogwallow starfish is present on the project site. Calflora documents this species in the Nature Conservancy Vina Plains Preserve, over 3,300 feet from the roadway. There are no records in the CNDDB. This species was not observed during the botanical surveys. No work in suitable habitat is proposed. Hogwallow starfish is not expected to be present.
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	—/—/ —/1B.1	Coulter's goldfields is an annual herb that inhabits marshes and swamps and seasonal habitats such as vernal pools and playas. The species is reported from 5 to 4,005 feet in elevation and flowers from February to June.	Present	**Low**. Suitable habitat for Coulter's goldfields is present on the project site. It has been recorded in the Nature Conservancy Vina Plains Preserve at the southern termini of the project. The observation has no date. No recent observations have been recorded in CNDDB nor Calflora. This species was not observed during the botanical surveys. No work in suitable habitat is proposed. Coulter's goldfields is not expected to be present.
Woolly meadowfoam *Limnanthes floccose* ssp. *floccosa*	—/—/ —/1B.1	Woolly meadowfoam is an annual herb that inhabits vernal pools in chaparral, cismontane woodland, valley and foothill grassland habitats. The species is reported from 195 to 4380 feet in elevation and flowers from March to May, sometimes into June.	Present	**Low**. Suitable habitat for woolly meadowfoam is present on the project site. The nearest recorded observation is from 1985 and is over 4 miles from the roadway. This species was not observed during botanical surveys. No work in suitable habitat is proposed. Woolly meadowfoam is not expected to be present. No impacts are anticipated.

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Tehama navarretia *Navarretia heterandra*	—/—/ —/4.3	Tehama navarretia is an annual herb that inhabits mesic valley and foothill grassland and vernal pools. The species is reported from 100 to 3315 feet in elevation and flowers from April to June.	Present	**Low**. Suitable habitat for Tehama navarretia is present on the project site. The nearest recorded observation is from 2002 and is over 1,600 feet from the roadway (Calflora). The CNDDB has no records of this species in Tehama County. This species was not observed during botanical surveys. No work in suitable habitat is proposed. Tehama navarretia is not expected to be present. No impacts are anticipated.
Adobe navarretia *Navarretia nigelliformis* ssp. *nigelliformis*	—/—/ —/4.2	Adobe navarretia is an annual herb that inhabits mesic sites in grasslands, vernal pools, and clay depressions. The species is reported up to 3,300 feet in elevation. The flowering period is April to June.	Present	**Low**. Suitable habitat for adobe navarretia occurs on the project site. However, there are no observations from Calflora nor CNDDB. This appears to be the northern limits of this plant species. This species was not observed during botanical surveys. No work in suitable habitat is proposed. Adobe navarretia is not expected to be present. No impacts are anticipated.

Common Name/ Scientific Name	Status USFWS/ NMFS/ CDFW/ CNPS	General Habitat Description	Habitat Present/ Absent	Potential to Occur Within the Project Site
Hairy Orcutt grass *Orcuttia pilosa*	FE/—/ SE/1B.1	Hairy Orcutt grass is an annual grass that inhabits vernal pools within the Central Valley. The species is reported between 100 and 700 feet in elevation. The flowering period is from May through September.	Present	**Low**. The proposed project is in the range for hairy Orcutt grass. The project site may have potential habitat. The closest Calflora location is about 1,640 feet away, from 1974 with a low location quality. This annual grass blooms from May to September in vernal pools below 656 feet in elevation. Most reliable observations come from the interior of Vina Plains Preserve. CNDDB nearest original observation (Occurrence number 12) is about 984 feet west of the project site. It was originally observed in 2011. It was not observed during the botanical surveys and is not expected to be present.
Slender Orcutt grass *Orcuttia tenuis*	FT/—/ SE/1B.1	Slender Orcutt grass is an annual grass inhabiting vernal pools. The species is reported between sea level and 5,800 feet in elevation. The flowering period is from May to September.	Present	**Low**. The proposed project is in the range for slender Orcutt grass. The closest Calflora observation is 6,562 feet from the project site. The record information is from 1982 with medium location quality. Most reliable observations come from interior locations in the Vina Plains Preserve. CNDDB nearest original observation (Occurrence number 23) is about 5,610 feet west of the site. It was originally observed in 1981. Subsequent surveys have not detected it (last survey was 2011) but is presumed extant. It was not observed during the botanical surveys and is not expected to be present.

Common Name/ Scientific Name	Status USFWS/ NMFS/ CDFW/ CNPS	General Habitat Description	Habitat Present/ Absent	Potential to Occur Within the Project Site
Ahart's paronychia *Paronychia ahartii*	—/—/ —/1B.1	Ahart's paronychia is an annual herb that occurs in vernal pools within valley and foothill grassland and cismontane woodland habitats. This plant is typically found in nearly barren clay of swales and on higher ground around vernal pools from 100 to 1,700 feet in elevation. It also occurs in rocky soils. The flowering period is March through June.	Present	**Low**. The project site contains suitable habitat for this species. Ahart's paronychia was recorded on the adjacent property (Vina Plains) in 1987. An additional record comes north of Deer Creek, 3.1 miles from SR 99. The species was not identified during botanical surveys as the project site lacks barren clay swales. No work is proposed in suitable habitat. Ahart's paronychia is not expected to be present. No impacts are anticipated.
Bidwell's knotweed *Polygonum bidwelliae*	—/—/ —/4.3	Bidwell's knotweed is an annual herb that inhabits Chaparral, Cismontane woodland, and Valley and foothill grassland habitats. The species is reported between 195 to 3935 feet in elevation and flowers from April to July.	Absent	**None**. The project site does not contain suitable habitat for Bidwell's knotweed. It occurs in mostly three counties, Butte, Tehama, and Shasta. In these counties documented (Calflora) observations occur in the Cascade foothills. No observations are recorded in CNDDB. This species was not observed during botanical surveys. No work is proposed in suitable habitat. Bidwell's knotweed is not expected to be present. No impacts are anticipated.

Common Name/ Scientific Name	Status USFWS/ NMFS/ CDFW/ CNPS	General Habitat Description	Habitat Present/ Absent	Potential to Occur Within the Project Site
Sanford's arrowhead *Sagittaria sanfordii*	—/—/ —/1B.2	Sanford's arrowhead is a perennial rhizomatous emergent herb found in marshes and swamps. The species is reported from 0 to 2135 feet in elevation and flowers from May to October, sometimes into November. It is extirpated from southern California and mostly extirpated from the Central Valley.	Absent	**None**. Suitable habitat does not occur on the project site. This species requires ponds and ditches with nearly permanent water. Sanford's arrowhead species has not been reported in any of the USGS quadrangles of the project. CNDDB observations document a small area off SR 36 in Red Bluff as the closest location. This species was not observed during botanical surveys. Sanford's arrowhead is not expected to be present. No impacts are anticipated.
Greene's tuctoria *Tuctoria greenei*	FE/—/ R/1B.1	Greene's tuctoria is an annual grass inhabiting dry bottoms of vernal pools in open grasslands. The species is reported between 95 and 3510 feet in elevation. The flowering period is from May to July.	Present	**Low**. The project site may contain suitable habitat for this species. The proposed project is in the range for Greene's tuctoria. The closest Calflora observation is about 1,640 feet away from the 1960s with low location quality. More reliable locations from 1980s occur about 3,280 feet away southeast of the project locations in the interior of the Vina Plains Preserve. CNDDB nearest original observation (Occurrence number 4) is about 984 feet west of the project site. It was originally observed in 2007. Subsequent surveys have not been conducted but is presumed extant. During focused botanical surveys this species was not observed. No impacts are anticipated.

Common Name/ Scientific Name	Status USFWS/ NMFS/ CDFW/ CNPS	General Habitat Description	Habitat Present/ Absent	Potential to Occur Within the Project Site
COMMUNITIES				
Great Valley cottonwood riparian forest	-	-	Present	The project site supports the subject plant community. Project activities occurring in the vicinity of this community would be limited to the road prism. Thus, there would be no impacts.
Great Valley mixed riparian forest	-	-	Present	The project site supports the subject plant community. Project activities occurring in the vicinity of this community would be limited to the road prism. Thus, there would be no impacts.
Great Valley oak riparian forest	-	-	Present	The project site supports the subject plant community. Project activities occurring in the vicinity of this community would be limited to the road prism. Thus, there would be no impacts.
Great Valley willow scrub	-	-	Present	The project site supports the subject plant community. Project activities occurring in the vicinity of this community would be limited to the road prism. Thus, there would be no impacts.
Central Valley drainage fall run chinook stream	-	-	Present	The project site supports the subject plant community. Project activities occurring in the vicinity of this community would be limited to the road prism. Thus, there would be no impacts.
Central Valley Drainage Valley floor	-	-	Present	The project site supports the subject plant community. Project activities occurring in the vicinity of this community would be limited to the road prism. Thus, there would be no impacts.

Appendix D Response to Comment